we

EsG

Entertain — Support — Grow together

Netmarble ESG Report
2023

netmarble

netmarble

Netmarble ESG Report 2023

About This Report

Overview

Netmarble has published ESG reports annually since 2021 to transparently share our sustainability management activities and achievements. We will continue to reach out to a wide range of stakeholders and communicate our sincere commitment to advancing ESG management and creating sustainable value.

Scope of This Report

This report covers Netmarble's headquarters and parts of subsidiaries in outlining our sustainability management activities and achievements. The reporting scope may vary for some quantitative data. For further details on the reporting scope, please refer to the respective footnotes.

Credibility of This Report

This report was assured by the Korea Management Registrar(KMR) as an independent third-party assurance provider to ensure its credibility, and the assurance engagement was performed in accordance with KMR's SRV1000, and the AA1000AS(Type 2, Moderate Level).

Reporting Standards

This report was prepared in accordance with the GRI(Global Reporting Initiative) Standards 2021. This report also follows the disclosure recommendations set out for the Software & IT Services industry within the Technology & Communications sector pursuant to the SASB(Sustainability Accounting Standards Board)'s Industry Classification System. Furthermore, this report illustrates our progress towards the Ten Principles of the UN Global Compact and the UN Sustainable Development Goals(SDGs), and reflects the TCFD(Task Force on Climate-Related Financial Disclosures) guidelines in disclosing our climate-related business activities.

Reporting Period

This report covers the period between January 1 and December 31, 2022(fiscal year 2022), which extends to cover the first half of 2023 for some activities to provide timely information.

Additional Information

For more information or inquiries about this report, please contact us using the contact details below.

Interactive Report User Guide

Netmarble ESG Report 2023 is made available in interactive PDF format to provide diverse link connections to help readers conveniently access a wide array of data. This interactive PDF report enables readers to easily move to their desired page.

⌂ Move to cover page　　☰ Move to contents　　↩ Move to previous page　　🖶 Print　　🔗 Link to web page

Contact

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Contents

Netmarble's Corporate Disclosures

Netmarble transparently disclose management status and performance including ESG data to enhance stakeholder trust. Further information on Netmarble's business operations is available on Netmarble Company's website, Channel Netmarble, business reports, and corporate governance reports, etc.

PDF 2022 Corporate Governance Report   **PDF** 2022 Audit Report

PDF 2022 Business Report   **PDF** 2022 ESG Report

Netmarble's Official Websites

Netmarble Company Website

Netmarble Game Portal

Netmarble Cultural Foundation

OVERVIEW

Meta World: My City

CEO's Message

**Dear shareholders, users,
employees, and stakeholders,
I am Kwon Young-sig, CEO of Netmarble.**

Let me first express my gratitude to our stakeholders for their steadfast interest in and support for Netmarble.

Netmarble began its ESG journey in 2021 under the ESG vision of "We Entertain, Support, and Grow together".

In a short period of time, this journey has provided us with an invaluable opportunity to define sustainability at Netmarble in our own way, asking questions about how to truly unleash the value of ESG management with sincerity, and explore a range a solutions.

We at Netmarble, look past our achievements and the status quo to pursue innovation and move ahead to envision and materialize a world which was once only imagined. To this end, all of us at Netmarble will focus on the three priorities listed below throughout our ESG journey.

We will strengthen our communication.
We will ensure transparency in our business operations based on sound governance, and further bolster our disclosure and the overall communication system as the underpinning of ESG management. In particular, we will focus on compliance with domestic and international ESG disclosure standards and guidelines, and ensure a communication-driven management culture that engages stakeholders in the broad spectrum of decision-making.

We will bolster company-wide ESG capabiliities.
All Netmarble employees will bolster our ESG capabilities building on the consensus we have built on ESG management over the years. Above all, we will employ our expertise and experience we have accumulated in the gaming industry to identify and implement any necessary improvements, driving sustainable growth for all.

We will pursue transformation and innovation.
To secure fundamental competitiveness and lead the gaming industry, we have ceaselessly pursued transformation and innovation. For this year, we will go back to the drawing board, observe the market and competitor games, and better understand the needs and interests of our users.

We are pleased to present the third account of 'ESG for all', which illustrates Netmarble's commitments and initiatives to our stakeholders.

All of us at Netmarble hope that in our efforts to strengthen the Company to embrace innovation and rise to challenges through our distinctive ESG journey, we do our part in shaping a wholesome community that we all envision. We look forward to your encouragement as we reach each milestone to push the boundary and pursue innovation towards 'ESG for all'.

Kwon Young-sig CEO

ESG Committee Chair's Message

It's my great pleasure to greet everyone who encourage and support Netmarble. I am Lee Chan-hee, Chair of the ESG Committee at Netmarble.

Let me first thank our Netmarble family – our shareholders, investors, users, and employees – for their interest in and support for Netmarble in our progress towards 'a society where everyone can enjoy and grow together'.

The year 2022 hit a blow to our entire national economy with the prolonged pandemic and surging global inflation spikes.

The added volatility of the strong U.S. dollar, the war in Ukraine, and global value chain disruptions presented unprecedented headwinds for Netmarble as we endeavored to raise the profile of K-Games across overseas markets.

Netmarble has made a name for itself in rising to challenges and pursuing innovation to progress further ahead, undeterred by seemingly insurmountable challenges. Not only was our long-awaited game service license granted by Chinese authorities, but we are also well on track in preparing new games at our domestic and overseas operations. We are making the largest R&D investments in the industry, and are tapping into new business territories of blockchain and metaverse technology. Such initiatives once again confirm our potential as a successful global gaming and cultural business.

This also holds true for our commitment to sustainability. Being a late mover in ESG management, we efficiently advanced ESG with our CEO playing a pivotal role and quickly closed the gap through our agile decision-making and strategic task implementation. Our sincere approach to this sustainability journey led us to establish the foundation for ESG management over the mid-to-long term.

In 2022, we set the goal of 'initiating our ESG management' and engaged in a wide array of training and campaigns to raise ESG awareness across the board. We also established our ESG disclosure system and implemented improvement tasks based on our ESG ratings. Above all, we became the first gaming company to participate in the UN Global Compact, demonstrating our earnest commitment to shape a future where society can grow and flourish alongside the natural environment.

Dear Stakeholders who so faithfully support the growth of Netmarble, building on our execution and experience, Netmarble reorganized the ESG Committee into a committee under the Board of Directors in March 2023. Going forward, we will establish governance led by the Board of Directors to further improve our institution and capability to drive sustainability management over the long haul.

Under the belief that "a good company makes a good society", we, as members of the ESG Committee, myself included as the Chair, will further commit to bringing us closer to the fruition of our vision 'ESG for all'.

Thank you.

Lee Chan-hee Chair of the ESG Committee

Company Overview

About Netmarble

Since its inception in 2000, Netmarble has led the Korean gaming industry as the first company to introduce the publishing business model in its pursuit of innovation. From MMORPG to casual games, our game portfolio includes a wide spectrum of genres. We leverage our advanced game development capabilities to pair cutting-edge graphics with intriguing game content to release a large number of successful games and expand our market presence.
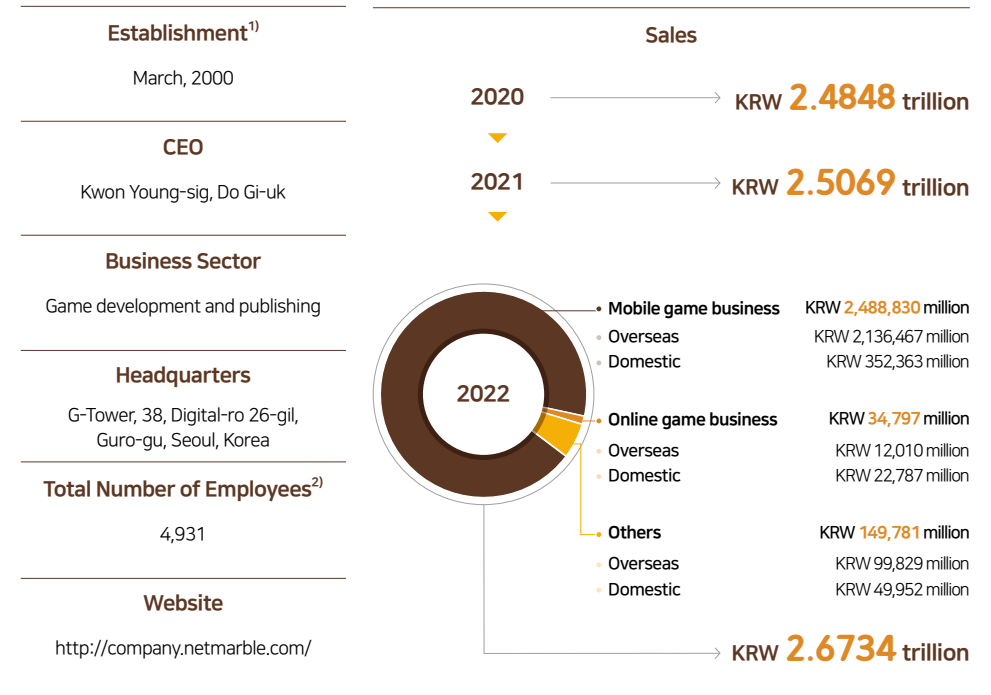
On the back of our exceptional competitive edge in development and publishing, Netmarble has successfully expanded its business globally and is working to diversify service locations. We develop games in a variety of genres and secure intellectual properties(IPs) in partnership with domestic and overseas developers to position ourselves as the truly global gaming company with 84% of our sales generated from overseas markets and to reach KRW 2.67 trillion in 2022 sales. We also proactively invest in AI, blockchain, metaverse and other innovative technologies to deliver the joy of gaming and advance our technology, boosting our competitive edge in the process.

Vision and Core Values

VISION	**GREAT GAME CULTURE COMPANY**
MISSION	**WE ENTERTAIN THE WORLD WITH FUN GAMES**

Challenge   Innovation

Passion   **netmarble** Spirit   Excellence

Corporate Profile
(as of the end of 2022)

Establishment[1]	March, 2000
CEO	Kwon Young-sig, Do Gi-uk
Business Sector	Game development and publishing
Headquarters	G-Tower, 38, Digital-ro 26-gil, Guro-gu, Seoul, Korea
Total Number of Employees[2]	4,931
Website	http://company.netmarble.com/

Sales

Year	
2020	KRW **2.4848** trillion
2021	KRW **2.5069** trillion

2022

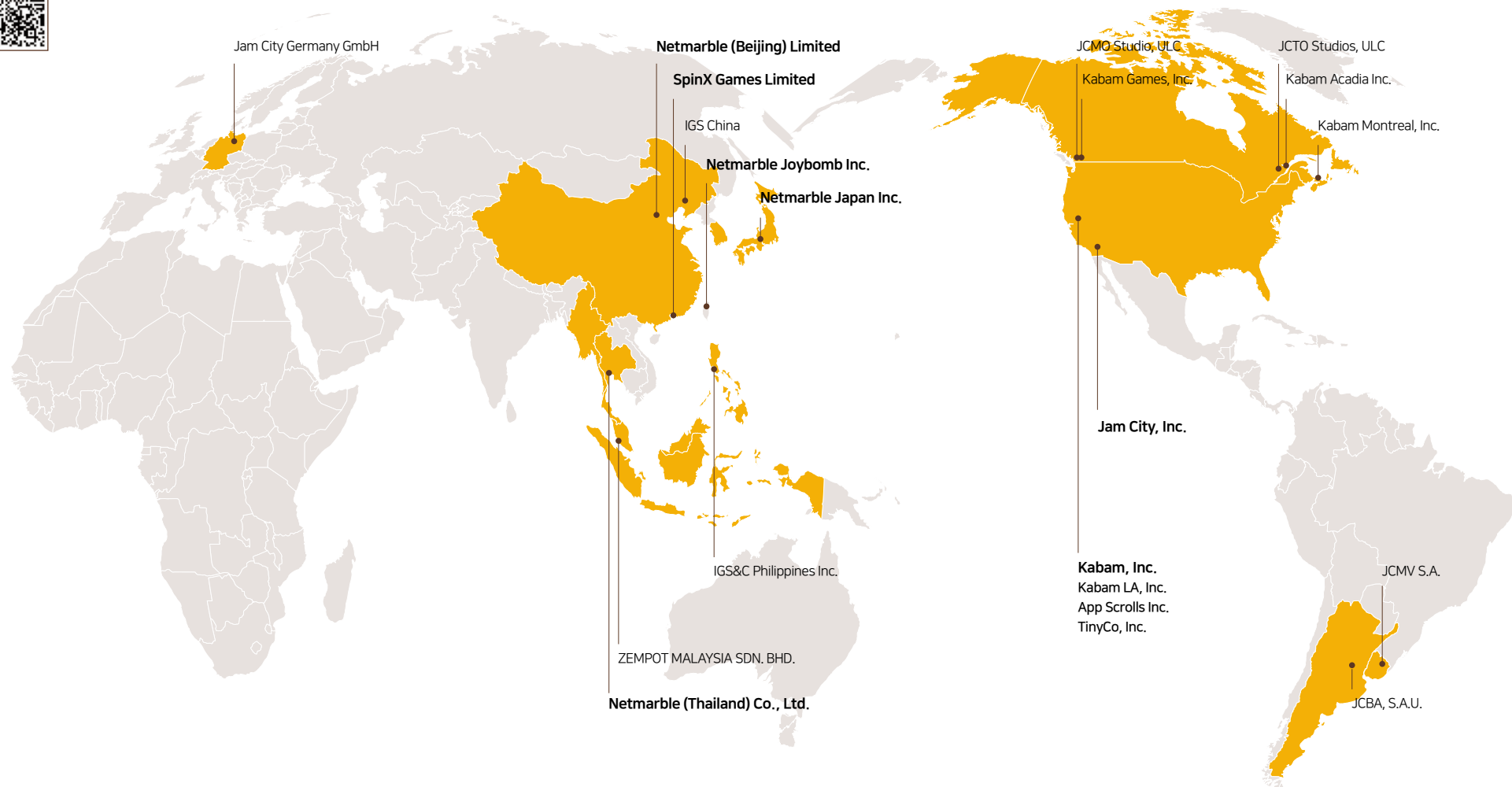|	
• **Mobile game business**	KRW **2,488,830** million
• Overseas	KRW 2,136,467 million
• Domestic	KRW 352,363 million
• **Online game business**	KRW **34,797** million
• Overseas	KRW 12,010 million
• Domestic	KRW 22,787 million
• **Others**	KRW **149,781** million
• Overseas	KRW 99,829 million
• Domestic	KRW 49,952 million

KRW **2.6734** trillion

1) Based on Netmarble Co., Ltd.   2) Employees at Netmarble and its affiliates in Korea(on a consolidated basis)

Global Network

Netmarble has a global network of affiliates across 12 regions including the US, Canada, China, and Japan. As Korea's leading global gaming company, we are committed to deliver the value of fun games to users worldwide.

Global Network Website

Jam City Germany GmbH

Netmarble (Beijing) Limited

SpinX Games Limited

IGS China

Netmarble Joybomb Inc.

Netmarble Japan Inc.

JCMO Studio, ULC

Kabam Games, Inc.

JCTO Studios, ULC

Kabam Acadia Inc.

Kabam Montreal, Inc.

Jam City, Inc.

IGS&C Philippines Inc.

Kabam, Inc.
Kabam LA, Inc.
App Scrolls Inc.
TinyCo, Inc.

JCMV S.A.

ZEMPOT MALAYSIA SDN. BHD.

Netmarble (Thailand) Co., Ltd.

JCBA, S.A.U.

(as of the first half of 2023)

Business Introduction

Game Publishing

As the industry's first to introduce the game publishing business model, Netmarble is taking the lead in the global mobile gaming industry. Leveraging our professional game marketing and user intimacy, we have accumulated publishing capabilities while publishing games for multiple developers and servicing games across diverse genres, from casual games to RPGs and MMORPGs. Netmarble has a balanced IP portfolio consisting of our own IPs and third-party IPs, and the well-balanced distribution of our sales across a number of games sets us apart from the competition in terms of sales stability and growth potential.
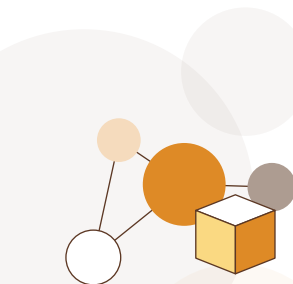
Game Development

Our key competitiveness stems from our excellent game development capabilities. Netmarble stands on the back of development capabilities we have accumulated through a large number of successful games to release high-quality games, and partners with domestic and global game developers to develop games across diverse genres and secure diversified IPs. We implement the localization strategy across key global game markets with the help of our game development subsidiaries to produce and launch games that meet the specific needs of respective countries, evolving into a global gaming company favored by game users across diverse cultures.
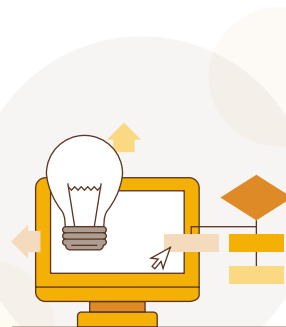
New Businesses

We pursue innovation and transformation to boost our competitiveness in blockchain and metaverse and to generate synergy between our games and these emerging technologies. We aim to expand our ecosystem as an end-to-end blockchain platform that covers a wide array of content. Aside from blockchain, we also focus on metahuman development to put our robust technology into use in creating synergy between games and blockchain & metaverse.

M&A and Global Business Capability

Based on our exceptional development and publishing capabilities, Netmarble made it to the top 10 in the global mobile games market as the only Korean company to do so, gaining recognition as the truly global gaming company. Specifically, we accelerate our market expansion by acquiring overseas leading gaming companies. Taking over gaming companies that fully understand the local market helps us successfully establish our presence across global markets and build competitiveness by harnessing the distinctive and diverse strengths of these companies.

Big Data and AI Technology

Netmarble leverages cutting-edge AI and big data technology to improve our service quality and expand personalized content service for various users. Currently, projects are on-going to harness AI generative models to create animations, conduct balancing validations to increase the coverage of in-game balancing tests, and make user-specific recommendations to improve users' in-game activities. We operate a dedicated R&D organization to proactively pursue technology development.
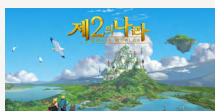
Game Portfolio

Domestic

Overseas

MMORPG

Lineage 2: Revolution

A3: Still Alive
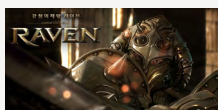

Ni No Kuni: Cross Worlds

Seven Knights 2

Blade & Soul Revolution

RPG

King of Fighters All Star

Raven

The Seven Deadly Sins: Grand Cross

MARVEL Future Fight

Seven Knights Revolution

Casual
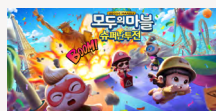
Modoo Marble

Sports

MaguMagu 2022

Netmarble Pro-Baseball 2022

RPG
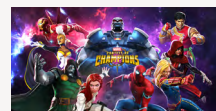
MARVEL Contest of Champions

Shop Titans
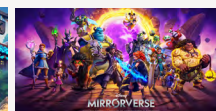
Disney Mirrorverse

Casual
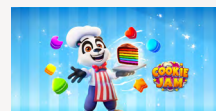
Cookie Jam
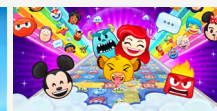
Disney Emoji Blitz
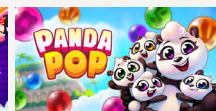
Panda Pop

Cash Frenzy
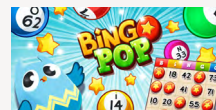
Bingo Pop

Jackpot World

Lotsa Slots

Jackpot Crush
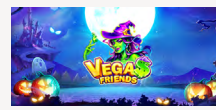
Vegas Friends

Harry Potter: Hogwarts Mystery

Breakdown of Domestic and Overseas Sales by Game in 2022

(Unit: KRW million)

Domestic 425,102
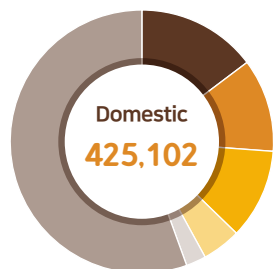
● Blade & Soul Revolution	62,563
● Lineage 2: Revolution	48,696
● Ni No Kuni: Cross Worlds	47,087
● Seven Knights 2	20,282
● The Seven Deadly Sins: Grand Cross	10,414
● Others	236,060

Overseas 2,248,306
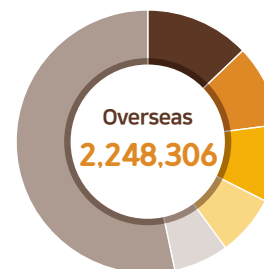
● MARVEL Contest of Champions	288,542
● Cash Frenzy	226,912
● Jackpot World	214,037
● The Seven Deadly Sins: Grand Cross	168,274
● Ni No Kuni: Cross Worlds	152,010
● Others	1,198,531

ESG Highlights

Netmarble aims to advance sustainability throughout the entire business operations, from game design which involves technology innovation to gameplay and our communities, as well as in our own business activities. In 2022, we engaged in a wide variety of activities to create sustainable value and progress together with our stakeholders.

ENTERTAIN TOGETHER
We pursue joy for all.

SUPPORT TOGETHER
We support harmonious development.

GROW TOGETHER
We build a culture for sustainable growth.

Institutionalized the working hour management system to create a family-friendly working environment

Deployed inappropriate language detection functionality enabled by AI deep learning technology to create a wholesome game culture

Established an outstanding talent pipeline by recruiting talent in technology, development, and AI positions

Nurtured talent in the gaming industry by supporting undergraduates with career development(Marble Challenger, Needs a Huge Buff!)

Ranked 1st in the game category in the Korea Digital Customer Satisfaction Survey for 6 consecutive years

Completed the Metaverse VFX research center

Created the Netmarble Character Park open to public

Business Operations

Technology Innovation

Gameplay

Supported startups through Industrial Complex Open Innovation

Reorganized the ESG Committee into a committee under the Board of Directors (Mar. 2023)

Operated the Game Culture Family Camp and the Game Overimmersion Healing Center to create and disseminate a sound game culture

Community

Joined the UNGC as the first Korean gaming company to do so to commit to human rights management

Launched the Partner Creator Program to establish a sustainable game ecosystem

Made the highest level of R&D investments in the gaming industry to secure AI, data and other emerging technologies

Operating 35 Play Centers nationwide

Set mid/long-term data privacy goals and upgraded our privacy management

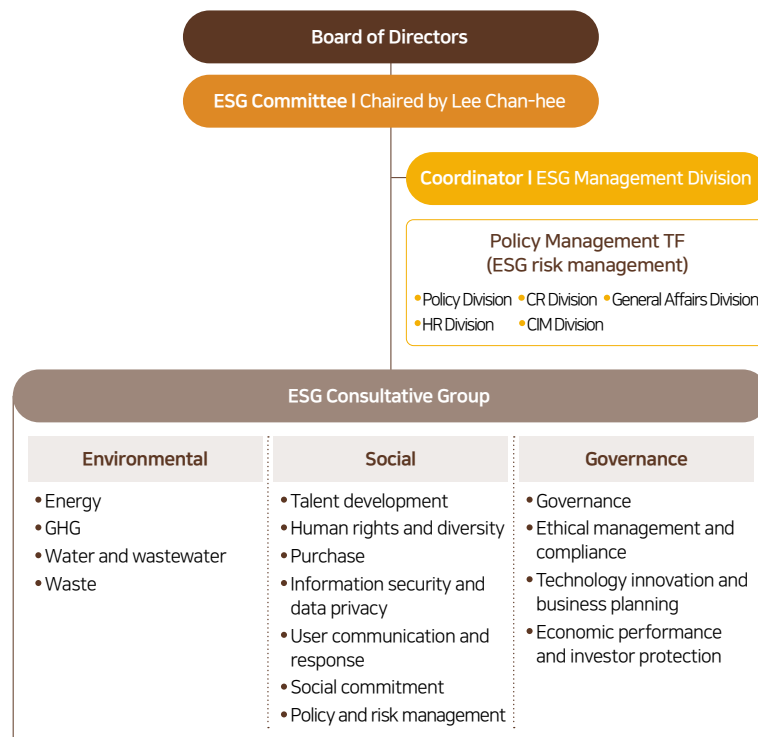# ESG STRATEGY

Seven Knights Revolution

ESG Governance

Netmarble operates systemic ESG(Environmental, Social, and Governance) governance, which consists of the ESG Committee under the Board of Directors, a dedicated ESG organization, and the ESG Consultative Group, to drive ESG management at all levels of the Company. The ESG Committee manages and oversees imminent non-financial risks and our strategic directions, and will continue to reinforce its control over ESG issues.

The ESG Management Division, as a dedicated ESG organization, identifies risk factors by monitoring internal and external ESG issues and develops risk management strategy. The Division also identifies strategic implementation tasks through discussions with relevant divisions under the ESG Consultative Group and supports their implementation. In addition, it issues ESG letters regularly for all employees, and publishes ESG reports each year to transparently disclose our achievements.

The ESG Consultative Group which consists of working-level organizations in each of the ESG areas is responsible for ESG implementation in our day-to-day operations. It selects tasks and key metrics in each area, including the environment and diversity, while engaging in activities to reach the set goals and monitoring the progress made.

The Policy Management Taskforce, composed of leaders in the areas of policy, public relations, HR, and other functions associated with non-financial risks, engages in regular discussions on our risk management status and potential risks, and reports non-financial risk agendas and issues to relevant committees and the Board of Directors when deemed necessary.

ESG Governance Structure

Board of Directors

ESG Committee I Chaired by Lee Chan-hee

Coordinator I ESG Management Division

Policy Management TF (ESG risk management)
- Policy Division
- CR Division
- General Affairs Division
- HR Division
- CIM Division

ESG Consultative Group

Environmental	Social	Governance
• Energy	• Talent development	• Governance
• GHG	• Human rights and diversity	• Ethical management and compliance
• Water and wastewater	• Purchase	• Technology innovation and business planning
• Waste	• Information security and data privacy	• Economic performance and investor protection
	• User communication and response	
	• Social commitment	
	• Policy and risk management	

ESG Committee
- Approve ESG management directions, strategies, and goals
- Deliberate on major ESG issues at Netmarble
- Manage and oversee key ESG risks concerning human rights, information security, etc.

ESG Management Division
- Support the operation of the ESG Committee
- Compile and share company-wide mid/long-term ESG plans and annual business plans
- Review ESG issues with relevant divisions and progress in strategic implementation
- Make ESG disclosures and support internal training

ESG Consultative Group
- Select tasks and key metrics in respective ESG areas
- Monitor the implementation and progress towards ESG goals
- Discuss issues including relevant risks and opportunities with the dedicatd ESG organization

ESG Committee

Netmarble's ESG Committee makes strategic decisions on our company-wide ESG implementation to drive our sustainable growth. The Committee operates regularly, at least on a quarterly basis, to keep current with pending ESG issues, and meets more frequently when key agenda items arise for preemptive risk management. In 2022, the Committee reviewed our ESG implementation plans, ESG improvement tasks, and key ESG issues at Netmarble, and reported ESG-related issues to our highest decision-making body, the Board of Directors.

In late March 2023, the ESG Committee was placed under the leadership of the Board of Directors to further reinforce its ESG management and oversight. The Committee Chair was appointed among non-executive directors, and non-executive directors formed the majority of the Committee to ensure its independence. Following its incorporation into the Board, the ESG Committee convened its first meeting on May 10, 2023 to discuss key ESG agenda items including the appointment of the Chair, the amendment of its operational regulations, the Company's business approach, and ESG issues that are material to Netmarble. Netmarble will advance ESG management in a more systemic and proactive manner through the operation of the ESG Committee under the Board of Directors.

ESG Committee Meetings Held in 2022

Date	Agenda	Category	Attendance
Mar. 2022	Report ESG operational plans for 2022	Reported	100%
Jun. 2022	Report the pool of ESG issue identified and selected for 2021-2022	Reported	100%
Aug. 2022	Report and amend ESG Committee's operational regulations	Approved	100%
Sep. 2022	Reinforce human rights management and work to join the UN Global Compact	Approved	100%
Dec. 2022	Identify ESG improvement tasks and discuss implementation approaches	Approved	100%

ESG Committee at a Glance

Category	Description		
Composition	Lee Chan-hee(Chair, non-executive director), Jeon Sung-ryul(non-executive director), Do Gi-uk(Co-CEO, executive director)		
Establishment	Established as an internal committee in December 2021	Reorganized as a committee under the Board of Directors in late March 2023	
Operation	Convene and hold meetings on a quarterly basis(also on an as-needed basis)		
Role	❶ Approve basic policies and strategies for ESG management	❷ Manage and review ESG operations	❸ Oversee significant risks associated with ESG
	• Set mid/long-term ESG management strategies and goals • Oversee ESG management performance and future implementation plans	• Review activities undertaken to increase social value • Review key issues to improve shareholder value • Review and approve the enactment/amendment of ESG-related regulations • Manage ESG-related operations and investments	• Manage and oversee key external non-financial issues • Review ESG assessment results from key organizations in Korea and overseas • Review responses to material ESG risks

ESG Committee meeting

ESG Management System

ESG Management Strategy

In line with our aspiration to become a 'Great Game Culture Company', Netmarble defined our ESG management strategy in reflection of our corporate vision to create sustainable value. We established the ESG Committee in 2021 to fully implement this strategy, and have been advancing the foundation for ESG management step-by-step by establishing our ESG implementation system in 2022 and incorporating the ESG Committee under the Board of Directors in March 2023.

Netmarble aims to collect requirements from wide-ranging stakeholders on an on-going basis and reflect them in our ESG strategies and tasks. Promoting transparent communication and advancing ESG management in the sincerest possible way, we will pursue sustainable growth.

ESG Management Principles

1. Faithfully fulfill our roles and responsibilities
2. Internalize ESG to advance ESG management with sincerity
3. Create sustainable value to disseminate positive impact
4. Transparently communicate with stakeholders to build trust
5. Build consensus and engage employees

MISSION	WE ENTERTAIN THE WORLD WITH FUN GAMES
ESG VISION	WE ENTERTAIN, SUPPORT, AND GROW TOGETHER

STRATEGIC DIRECTIONS

Shareholders & investors	Environment	Community	Customers (Users)	Employees
Establish responsible governance and a disclosure system	**Lead environmental management**	**Implement strategic social contribution projects**	**Bolster customer satisfaction and trust**	**Improve employee satisfaction**
• Establish responsible governance • Publish ESG reports on par with global standards	• Establish an environmental management system • Achieve environmental management system certification • Disclose environmental performance	• Facilitate social contribution in Netmarble's unique way • Align the social contribution project implementation system • Disclose social contribution performance	• Enhance information security • Use customer satisfaction data • Transparently communicate with customers	• Improve the transparency of grievance mechanisms • Advance human rights management • Strengthen communication
- Responsible consumption and production - Peace, justice and strong institutions	- Affordable and clean energy - Climate action	- Quality education - Decent work and economic growth	- Good health and well-being - Gender equality - Industry, innovation and infrastructure	- Good health and well-being - Quality education - Gender equality - Decent work and economic growth

ESG Management Enabler

ESG Committee | ESG Performance Management System | ESG Disclosure System Establishment | Stakeholder Engagement

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Entertain Together
Netmarble's pursuit of joy for all

We bring joy to users through high-quality game content and services.

Support Together
Netmarble's support for harmonious development

We commit to and support balanced development in harmony with society and the environment.

Grow Together
Netmarble's culture for sustainable growth

We establish a wholesome corporate culture and governance to grow sustainably.

Bolstering Our ESG Implementation

Elevating company-wide ESG execution and awareness

In February 2023, we hosted the 'Netmarble ESG Consultative Group Workshop' to gather together personnel from respective functions that comprise our ESG management system to share key pending ESG issues and discuss our mid/long-term implementation plans. Our CEO Kwon Young-sig, in his opening remarks, made it clear that we need to fully go over and meet internal/external requirements for the year 2023 and called for interest and commitment from across all divisions including the ESG Management Division. The workshop was joined by nearly 30 executives and working-level employees from respective divisions to exchange views on domestic and global ESG trends. Specifically, in-depth discussions were made on human rights, diversity, information security and other agendas that are considered critical in the gaming industry, along with efforts to explore ways to implement relevant top priority tasks.

We also issue our monthly ESG newsletter, 'Everybody's ESG' for all employees at Netmarble Company to encourage their interest and participation in ESG management. This newsletter communicates relevant news as well as basic knowledge on ESG. Its 'ESG Communication' section serves to answer questions raised in regards to ESG and recieve proposals to implement ESG inside and outside the Company to build our unique ESG culture that pursues mutual growth with employees.

ESG Consultative Group Workshop - CEO's remarks

Expanding public ESG communications

The mounting interest in ESG management at the national level, paired with the increasing user concerns over the implementation of environmental values and emerging diversity issues for game content, gave rise to growing needs for information on ESG management in the gaming industry on the part of stakeholders. In response, Netmarble is producing content titled 'Netmarble is ESGing' to engage in proactive public ESG communications. This series is made available in diverse formats, including card news, column, and video, across wide-ranging channels as Youtube and Facebook. In 2022, we delivered various content introducing the eco-conscious design and operation of G-Tower to publicize its eco-friendliness. This also served to communicate our ESG management activities undertaken on multiple fronts, including our social contribution programs implemented through the Netmarble Cultural Foundation, our Code of Conduct, and our information security risk management system, ensuring that the content is made highly accessible with a focus on real-life cases.

In line with our philosophy 'We communicate through whatever new media channels available just to reach one single user', we pursue active communication with our users through a wide range of new media channels. This holds true to ESG content, and we will continue to communicate effectively with stakeholders through our tailormade content strategy.

ESG Communication Progress

(Unit: Cases)

2022

11 · 4 · 3 · 2

Content uploads made in 2022

20 cases

Press releases and special articles published in 2022

2,737 cases[1]

● Column   ● Card news   ● Video   ● Other images

1) Including articles on the Netmarble Cultural Foundation

⭐ **The first gaming company in Korea to participate in the UNGC**

In December 2022, Netmarble decided to participate in the UN Global Compact(UNGC) as the first in the Korean gaming industry to do so to bolster our ESG management in accordance with global standards. This will serve as an opportunity for us to incorporate the 10 principles of the UNGC in the areas of human rights, labor, environment, and anti-corruption into our overall business operations, and to share our sustainability management achievements with various stakeholders. As human rights issues are gaining prominence across the global community, we will specifically focus on the human rights area in laying the overall groundwork to manage such issues on par with ESG leading companies and create a wholesome corporate culture in so doing. Participating in the initiative embodies our commitment to move towards a future of growth and co-existence, and Netmarble will internalize global ESG standards to faithfully perform our duties as a responsible company.

WE SUPPORT
UN GLOBAL COMPACT

Materiality Assessment

Netmarble conducts materiality assessments each year to select material issues that should be prioritized in our pursuit to become a sustainable company. We comprehensively analyzed our business operations for their impact on the environment and society from the sustainability perspective to create a pool of 28 key issues. We then prioritized these issues through impact assessment to eventually arrive at 5 material issues.

Materiality Assessment Process

STEP 1 Long-list material issues	STEP 2 Short-list material issues	STEP 3 Conduct impact assessment	STEP 4 Identify material issues	STEP 5 Review material issues

• Method: Data analysis(qualitative)
• List-up and group topics by global disclosure initiatives (ESRS, GRI, SASB, etc.) to create a pool of 28 issues
	• Method: Impact mapping(quantitative)
	• Calculate points for each topic through basic data analysis
	  - Analyze ESG rating and disclosure standards
	  - Benchmark industry peers
	  - Analyze internal agendas, CEO messages, and ESG Committee's agenda items
	  - Analyze media articles
	• Short-list issues based on top priority ones
		• Analyze each issue for their social/environmental impacts from the Company's activities and their results
		• Survey stakeholders including the ESG Consultative Group and external experts to conduct impact-based materiality assessment (Apr. 5-Apr. 7, 2023)
			• Select top five material issues based on impact assessment results
			
			Final material issues
			1 Talent acquisition and development
			2 Enhancing user satisfaction
			3 Information security and data privacy
			4 Technology innovation and R&D enhancement
			5 Contributing to communities
			6 Ethics and compliance
			7 Climate action and GHG emissions reduction
			8 Employee diversity and equal opportunity
			9 Employee health and safety management
			10 Energy efficiency improvement and management
				• Report materiality assessment results to the ESG Committee under the Board of Directors
				• Review the material issue selection methodology and results at the ESG Committee

Materiality Assessment Results

Ranking[1]	Material Issue		Significance of Impact			
			Environmental and Social Impact	Characteristics	Significance	UN SDGs
1 (▲2)	Social	Talent acquisition and development	Strengthen corporate competitiveness and improve the quality of content by recruiting top talent	positive·actual	●●●	4 QUALITY EDUCATION, 8 DECENT WORK AND ECONOMIC GROWTH
			Advance the gaming industry and create the value of social human capital through nurturing professionals	positive·actual	●●●	
2 (▼1)	Social	Enhancing user satisfaction	Better meet user needs and improve their satisfaction through wide-ranging activities at user touchpoints	positive·actual	●●	3 GOOD HEALTH AND WELL-BEING, 5 GENDER EQUALITY
			Result in the violation of users' rights and interests (risk to human rights, life, physical safety and/or property) and relevant legal risks	negative·potential	●●	
3 (▼1)	Social	Information security and data privacy	Provide a safe gaming environment for users	positive·actual	●●●	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
			Result in human rights violation and privacy breaches due to data leaks and other security incidents	negative·potential	●	
4 (▲6)	Governance	Technology innovation and R&D enhancement	Improve user satisfaction by applying new technology and ensuring great game quality	positive·potential	●	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
			Increase the intellectual capital of the domestic/global gaming industry	positive·actual	●●	
5 (▲8)	Social	Contributing to communities	Disseminate a wholesome game culture and help nurture talent in the gaming industry through game-related social contribution initiatives	positive·actual	●●	8 DECENT WORK AND ECONOMIC GROWTH
			Create social value across communities including the increased quality of life for vulnerable groups	positive·actual	●●	

1) Compared to the material issues in 2021

Management Approach

Category	Talent acquisition and development	Enhancing user satisfaction	Information security and data privacy	Technology innovation and R&D enhancement	Contributing to communities
Governance	• HR Support Officer: Set strategies and directions for acquiring and developing talent • HR Division: Engage in activities to recruit top talent outside the Company and to support employee growth	• Netmarble's service risk management organization: Engage in activities to ensure fair service delivery and minimize any violation of users' rights and interests	• CISO: Manage and oversee Netmarble's information security and data privacy operations • Information Security Council: Make decisions on information security with the CISO as the chair • Security Division(Security Strategy Team, Personal Information Protection Team): Operate the information security and data privacy systems and engage in risk mitigation activities	• Technology Strategy Officer: Discuss and propose Netmarble's desired directions for technology development • Technology Management Office, TPM Division: Manage and oversee issues concerning Netmarble's diverse projects and research tasks, engage in new technology research, and propose directions for technology development • The AI Center: Develop relevant technology as a dedicated AI research organization	• Netmarble Cultural Foundation Board: Hold regular meetings at least twice a year to review the Foundation's operations and decide on key issues • Netmarble Cultural Foundation: Set the course for social contribution activities and implement programs based on expertise and continuity, and reflect the needs of internal/external stakeholders including communities
Strategy and Policy	• Build a pipeline to attract top talent - Internship aligned with recruitment - Open recruitment for new hires - Succession plan for leader candidates • Operate capacity building programs by job position/category	• Establish our customer service policy - Aim to provide one-stop service - Manage persistent, unresolved inquiries - Manage repetitive inquiries - Follow up on customer satisfaction • Establish our user protection policy	• Establish a 3-step information security policy - Information security regulations: Outline overall goals and directions - Information security guidance: Set standards and principles to implement the information security policy - Procedure manuals: Specify concrete approaches to implementing the policy	• Develop AI, metaverse, and other new technology to improve the quality and engagement of game content • Introduce new technology and solutions to build a wholesome game culture	• Select focus areas in reflection of our corporate capabilities - Create a wholesome game culture - Nurture future game talent - Disseminate a culture of joyful sharing • Support communities in accordance with the clear implementation principles of continuity, sincerity, and transparency
Risk Management	• Conduct the annual Netmarble Culture Survey to identify and improve employees' grievances and factors undermining their performance engagement • Prevent employee turnover by improving employee satisfaction through better working conditions and greater benefits	• Establish a service risk management system - Classify approximately 10 types of internal/external service risk into 3 levels and manage them accordingly	• Conduct risk assessments on data breaches at least once a year • Identify and eliminate security vulnerabilities through security checks and penetration tests before and after launching • Review compliance with domestic/international regulations and the risk of data breaches through the service personal data impact assessment process	• Develop regular monitoring and infringement response procedures to protect intellectual property rights	• Operate regular Board meetings and the employee funds committee to improve transparency and ensure on-going monitoring • Increase impacts and prevent risks through professional verifications of the benefits produced by social contribution programs
Metrics	• Annual recruitment: 224 persons • Total employee training hours: 8,876 hours(10.6 hours/person)	• Customer satisfaction: 66.6 points(PC, out of 100 points), 3.5 points(mobile, out of 5 points) • VOC submitted to the customer center: 454,935 cases	• Security incident: 0 case • Personal data breaches: 0 case	• R&D investments[1]: KRW 858,085 million • R&D to sales ratio[1]: 32.1% • Cumulative patent registration[1]: 251cases	• Total beneficiaries of social contribution initiatives: 28,259 persons • Total social contribution expenditures: KRW 2,662 million
Page	56-61	21-30	34-38	31-33	50-54
GRI Index	401-1, 404	416	418	Non-GRI metrics	413

1) Netmarble Company(on a consolidated basis)

ENTERTAIN TOGETHER

Netmarble's pursuit of joy for all

MaguMagu 2023

Enhancing User Satisfaction

Percentage of VOCs addressed[1]

97.2 %

Coffee trucks for Fate/Grand Order

Expanding Interactive Communication with Users

Netmarble is tapping into the potential of new media platforms to bolster interactive communication with users, and provides content tailormade to respective platforms to effectively deliver news on Netmarble and our games.

Communication efforts for service improvement

We are expanding official live broadcasts for each of our games on Youtube to fully cater to users' game-related needs and inquiries.

Netmarble's Official Game Live Broadcasts in 2022

❶ Ni No Kuni: Cross Worlds	Ni No TV Show	❹ The King of Fighters All Star	KOF ALLSTAR Show
❷ The Seven Deadly Sins: Grand Cross	Official Broadcast	❺ Seven Knights 2	Seven Knights 2 night
❸ Lineage 2: Revolution	SSULUTION		Seven Knights 2 Developer Live

Collecting feedback in advance in launching 'Seven Knights Revolution'

We collected feedback from users before launching 'Seven Knights Revolution' to incorporate such opinions into the game planning phase. Questions were received from users on the preparation of this new game and its post-launch operations, and our executive producer directly answered them through the special broadcast titled 'Seven Knights 2 Communication'. This served to share with users our characters to be unveiled, our key update plans, and the behind-the-scenes stories from the development process to proactively cater to the heightened interest and curiosity of domestic users, and the feedback collected as such will be integrated in our services.

Improving the operation of 'Fate/Grand Order'

For 'Fate/Grand Order', we have been keeping in touch with our users to faithfully follow up on the discussions made with the users in 2021. For instance, we held 5 official live broadcasts in 2022, and continuously collected user feedback and reflected them into game service improvements through the monthly 'Operator's note' on our official community since 2021. Furthermore, three performance videos of 'FGO THE STAGE' that were only available in Japan were disclosed with translated subtitles to meet user needs while expanding the translation workforce and improving the internal translation review process to elevate the quality of service. In response, our users arranged 2 coffee trucks and independently hosted the '1st Grand Order Carnival' to send their encouraging messages, and Netmarble reciprocated by releasing our 'thank you' video for users through new media channels.

1) Based on cases addressed excluding ones for which additional answers were provided

Expanding global communications

Communicating with global users through online platforms

Netmarble remains closely connected to global users through various social media networks. Our TikTok account was especially effective in that we simultaneously distributed our content in English and Korean and raised the proportion of global content to 80% and higher, which resulted in over 90% of our followers being located in key global game markets. In 2022, we made nearly 203 content uploads with over 21.92 million views, and are communicating with global millennials and Gen Zs speaking 75 languages across 150 countries.

We are operating our official community on Discord, a platform well-known among global users, and are also running our country-specific Twitter accounts to engage in real-time communication with users in their local language. Our official community boards set up for each game also enable us to address major issues and provide assistance to individual users.

Attending G-STAR 2022 for on/offline communication

Netmarble attended G-STAR 2022 which was resumed in three years and proactively reached out to users both online and offline. The Netmarble pavilion was established encompassing 100 booths, 160 demo tables, and an open stage, and online live broadcasts were aired through diverse channels for four days, along with the real-time uploads of on-the-scene photos on social network channels. Our live broadcasts reached 56,000 peak concurrent viewers and 1.16 million total viewers, and we circulated nearly 150 content items(as of the end of 2022) through more than 10 Netmarble new media channels, continuing with particularly proactive online communications among active G-STAR participants. Our strategy to deliver 'fun-to-watch' content through 'Netmarble Online G-STAR' to equally serve virtual users with enjoyable content. We will continue to attend G-STAR to get closer to users and introduce our games in diverse ways and bring joy in the process.

Operating a variety of communication channels

Channel Netmarble 🔗

'Channel Netmarble' is our own brand media, and we renewed its website in 2021 in celebration of its 4th anniversary to serve diverse content in English-speaking countries as well as in Korea. Leveraging Netmarble's popular games - 'Ni No Kuni: Cross Worlds', 'Seven Knights 2', 'A3: Still Alive', and 'The Seven Deadly Sins: Grand Cross', Channel Netmarble produces behind-the-scenes stories for game show programs, game information guides, and branded webtoons that are hugely popular among users.

Also, a new category was created on Channel Netmarble to continuously upload postings and card news to help users better understand Netmarble's new business and ESG activities.
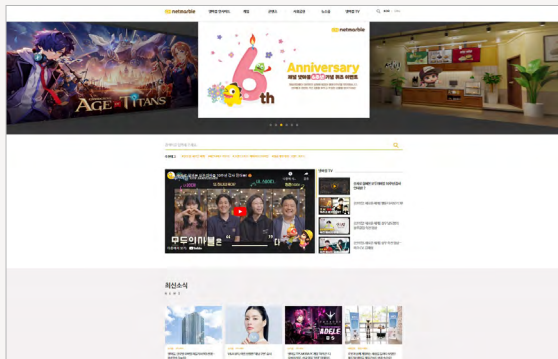
Channel Netmarble

Facebook 🔗

Netmarble uses Facebook as our leading social network channel and ranks first in the domestic gaming industry with over 2.66 million followers. Our Facebook page is constantly updated with major game news, casual content to interact with users, card news introducing our ESG activities, and video content. Facebook serves as our content hub through the mirroring of content already available on other Netmarble platforms to serve as a single point of access for our diverse content. We also operate an English version of our Facebook page for global users.

Netmarble's Content Series on Facebook

Netmarble is ESGing	Introduce our ESG activities in easily accessible card news format for users
Casual content	Produce enriched content that is fun and resonates with users through the use of our own character IP 'KUYA'
Collaboration with webtoonists	Regularly publish the 'Scholar's Game Tasting' series in collaboration with webtoonists
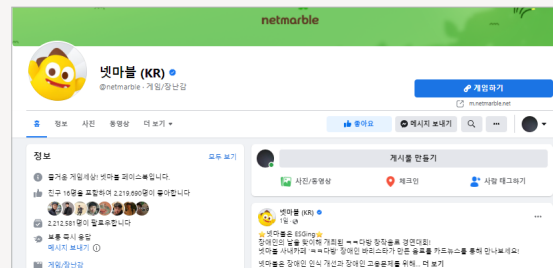
Netmarble's Facebook page

Youtube 🔗

'Netmarble TV' serves as the official Youtube channel of the Netmarble brand, and uploads official videos, marketing videos, and internally produced original content. Animations, web entertainment shows, talk shows, game reviews, and many other original content are produced in collaboration with high-profile influencers to deliver joyful experience to viewers. JJALTOON X Netmarble Collabo Animation – "The Great Gaming Company" which captures the daily routines of Netmarble as a gaming company drew much attention among users and was ranked in the list of trending videos.

In 2022, we initiated the 'Needs a Huge Buff!' series as a mentoring program for talented individuals seeking to land a job in the gaming industry. We also launched the 'Netmarble Partner Creator' program to support Youtube creators with their creative activities. Our game Youtube channels for 'The Seven Deadly Sins: Grand Cross', 'Marvel Future Revolution', and 'Ni No Kuni: Cross Worlds', etc. are up and running, and we continue with communication with users through official live broadcasting. As of the end of 2022, Netmarble was awarded 6 Silver buttons and 1 Gold button.
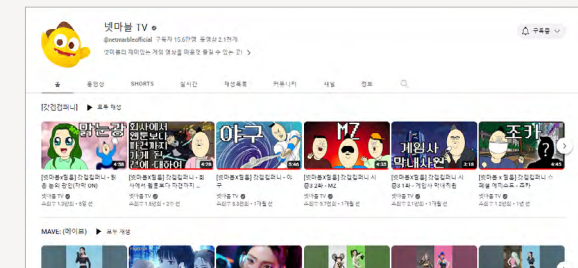
Youtube(Netmarble TV)

Naver Blog

We keep our blog updated with wide-ranging content, including game strategies and reviews for game users, since 2013. As of the end of 2022, our blog reached 27.76 million visits and was honored with the Best Blog Award in the game category at the Social i-AWARDS 2022. Our Naver blog is operated in conjunction with Marble Challenger, a group of undergraduate supporters for Netmarble, to serve as a venue for these young students wishing to develop their career in the gaming industry to gain real-world career experiences and produce game promotional content.
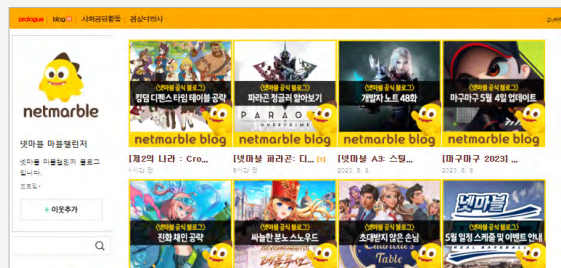
Naver blog

Instagram

Opened back in 2015, our Instagram channel provides casual content that shows Netmarble's corporate life and content that relates to game users to stay connected to them. This essentially serves to deliver engaging content that resonates with users who are fond of Netmarble games, and we reached nearly 20,000 followers as of the end of 2022.
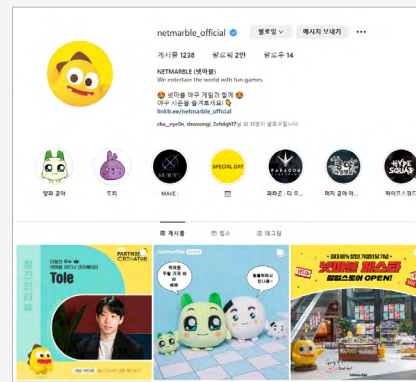
Instagram

TikTok

We opened our TikTok channel in 2021. On this rapidly-growing platform, we achieved 520,000 followers as of 2022. This allows us to reach out to young generations including teenagers and those in their 20's with trendy, short-form content.
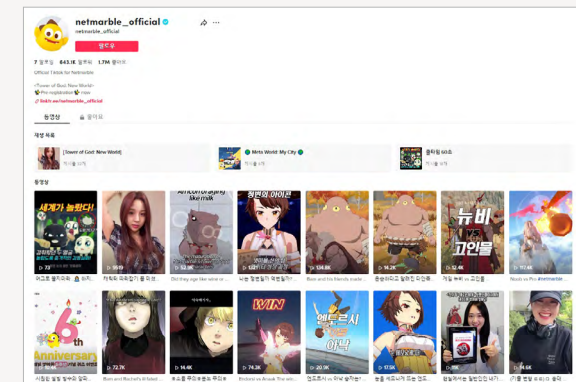
TikTok

New media awards

Netmarble was honored at a host of new media awards in recognition of our efforts to communicate with users. It is notable that we won the Korea Social Media Grand Prize and the Korea Digital Content Grand Prize at the 15th Korea Communication Awards for two consecutive years. The Korea Internet Communication Association, the host organization, cited excellent information disclosures and content appropriateness as well as ease in understanding ESG activities for its decision to choose 'Netmarble is ESGing' as the best content.

Award	Description	Host
15th Korea Communication Awards	Korea Social Media Grand Prize, Korea Digital Content Grand Prize	Korea Internet Communication Association
Social i-Awards 2022	Grand Prize in the game industry sector across the four Facebook, TikTok, Instagram, and Blog categories	Korea internet Professionals Association
11th Korea Digital Customer Satisfaction Survey	Ranked 1st in the game category(6 consecutive years), Excellent SNS company in the Facebook category	Korea Marketing Association
8th SNS of the Year Awards 2022	Grand Prize in the Facebook Company of the Year category	Korea Social Content Promotion Association

Improving Our Customer Service Capabilities

Netmarble is implementing our customer service policy by taking into account customer needs and external trends from multiple perspectives. In particular, we proactively respond to social issues involving banned words and loot boxes to deliver satisfactory services to all our customers. Going forward, Netmarble will heed the voice of various customers to establish reasonable customer service policies and improve customer satisfaction.

Customer Service Policy

Provide one-stop services from receiving to resolving inquiries	We aim to provide one-stop services to save customer's time from receiving and resolving their inquiries and minimize additional unnecessary inconvenience.
Manage persistent unresolved inquiries	We serve our customers to address their inconveniences as quickly as possible. For issues that are not readily addressable, we keep them regularly updated on the progress made through our community and other communication channels.
Classify repetitive inquiries and manage them on a cumulative basis to identify necessary improvements	We classify regularly-submitted inquiries to establish a process that ensures consistency in the customer services we provide. In so doing, we not only shorten the time taken for resolving issues but also deliver greater customer satisfaction.
Apply the follow-up process for customer satisfaction	We think from the viewpoint of customers rather than the Company and identify necessary improvements to create an environment that delivers customer satisfaction.

Customer service principles

Netmarble's customer service organization takes its responsibility seriously as the face of the Company and serves all our customers with utmost sincerity. We strive to create the best possible solutions from the viewpoint of customers.

You are in a position to represent the company!	Provide best services for all customers!	Strive towards a win-win situation for both the company and customers!

Ensuring the expertise of counselors to improve our customer service capabilities

Netmarble assists counselors in communicating from the perspective of customers and strengthening their service capabilities. For newly-recruited counselors, we give them an assignment to play games and reach the set level to better understand the games that they will handle, and assign counselors by game to improve the expertise and quality of counseling service. Our counselor training curriculum is also constantly updated to help counselors keep current with the the evolving game trends.

Type of counseling	Provide counseling for all types of inquiries, including the use of in-game content and other game-related issues including probability, items, and goods

Netmarble provides all game operation personnel with training on work ethic and launches campaigns on ethics compliance to alert them to the importance of ethics. To ensure we provide reliable and fair services in line with our Code of Conduct, we conduct training on customer data privacy, the exercise of one's authorities for intended purposes only, accuracy in handling customer inquiries, and transparency in asset management among others.

Work ethic training	Provided in December 2022, 100% completed
Ethical compliance campaign	Launched 3 times in 2022, and once in 2023(as of the first half of 2023)

Our Activities at Customer Touchpoints

Diversifying customer counseling channels

To ensure systemic customer service, our customer center operations are divided into PC games and mobile games by type of games. The PC game customer center addresses PC game inquires on payments, security, counseling, and Child Love(selective game shutdown) while the mobile game customer center provides assistance for each mobile game and receives one-on-one inquiries to help resolve a range of issues. As the lifting of COVID-19 quarantine rules in 2022 resulted in increases in the number of users who wish to visit our customer center for counseling, we relocated our offline customer center to make it more accessible for users and provide a more pleasant counseling environment.
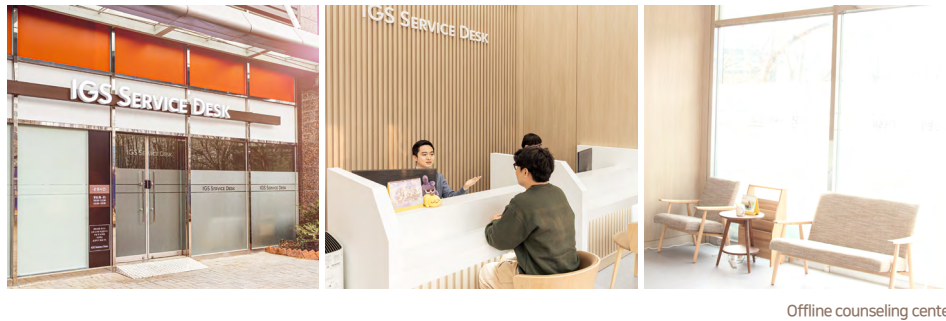
Offline counseling center
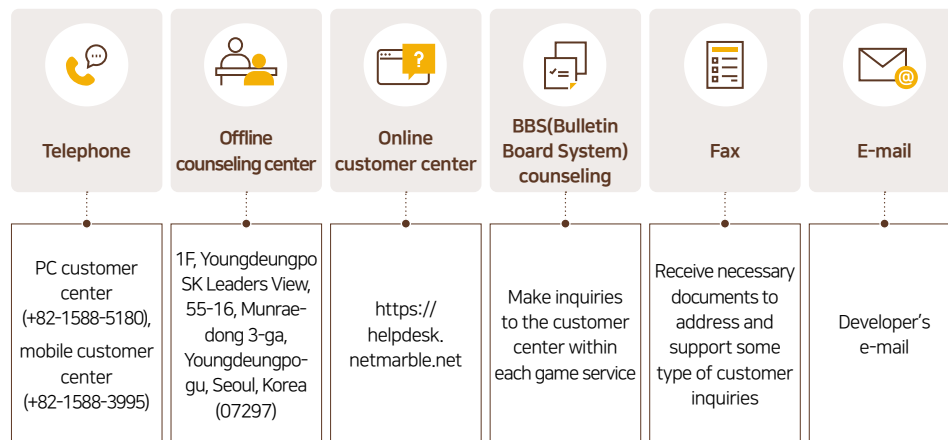
VOC management and handling process

We promptly address the complaints and suggestions raised through wide-ranging channels, including customer centers, game communities, customer inquiry channels, external sites, and applications while conducting customer satisfaction surveys to collect and manage customer feedback.

Operating the VOC management system

Netmarble introduced the VOC management system to strengthen our VOC monitoring. We monitor VOC 24/7/365, and classify them into the 3 types of failures, inconveniences, and suggestions and address them accordingly. Specifically, any failure is communicated to the responsible division within 4 minutes when detected, and appropriate action is taken for any report of user damage in line with the dual review process implemented by working-level divisions and the dedicated division for issue management. In fact, the number of institutional complaints submitted through dispute mediation organizations has been on the decline for 4 consecutive years, from 333 cases in 2018 to 40 cases in 2022.

Netmarble analyze the user needs and opinions identified through VOC management to support uninterrupted gaming experience for users. The collected VOCs inform our efforts to improve inconvenient functionalities, bugs, and balance sues within our games, and we integrate the varying voices of users in our service improvements to build even closer solidarity with users as partners in our long-term growth journey.

Customer Inquiry Channels

| Telephone	Offline counseling center	Online customer center	BBS(Bulletin Board System) counseling	Fax	E-mail
PC customer center (+82-1588-5180), mobile customer center (+82-1588-3995)	1F, Youngdeungpo SK Leaders View, 55-16, Munrae-dong 3-ga, Youngdeungpo-gu, Seoul, Korea (07297)	https:// helpdesk. netmarble.net	Make inquiries to the customer center within each game service	Receive necessary documents to address and support some type of customer inquiries	Developer's e-mail

Customer Satisfaction Survey Results   (Unit: Points)

PC(out of 100 points)

2020	62.2
2021	61.3
2022	66.6

Mobile(out of 5 points)

2020	3.4
2021	3.2
2022	3.5
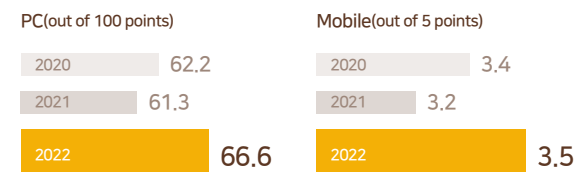
VOC Submitted to and Addressed at Customer Centers

VOCs submitted

2020	769,859
2021	653,251
2022	454,935

VOCs addressed[1]   (Unit: Cases)

2020	803,047
2021	683,421
2022	477,994
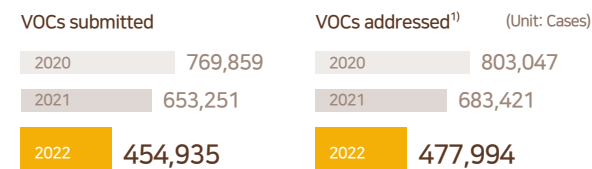
Share of VOCs by type   (Unit: %)

Type	Percentage
Suggestion	7
Payment	2
Account	18
Bug·failure	26
Recovery	38
Report	9

1) The number of cases addressed is greater than the number of cases submitted as additional answers were provided

VOC Monitoring Process

VOC Monitoring Channel

| 1:1 in-game counseling | Phone counseling | Offline counseling |
| Official community | Customer center on the website | App market |

▼

Issue Detection(365 days/24 hours)

Register on the VOC management system

▼

Process Implementation by Type of VOC

Failure occurrence	Complaints about inconvenience	Suggestions
Communicate within 4 minutes after detection	Investigate the issue	Share VOC through regular meetings and propose possible improvements
⬇	⬇	⬇
Take action	Review solutions and risks	Plan services to meet user needs
	⬇	
	Take action and resolve concerns	

▼

Follow-up Management

| Develop plans to prevent reoccurrences | Bolster internal training | Ensure history management |

Service risk management

Creating a service risk management organization

Netmarble created a service risk management organization to engage in a broad array of activities to protect the rights and interests of users and minimize any inconvenience they may face. We categorize service risks into 'game service risks' and 'operational service risks', and operate corresponding risk management systems by type of risk.

Game service risks refers to potential violations of our users' rights and interests in our game services, concerning access issues, payment issues, game balancing, and probability. We classify these risks into 10 different types and develop appropriate solutions by taking into account regulatory/policy compliance, liability of the Company, and user damages. We also preemptively review and respond to issues that may develop into potential risks or spread externally.

To fundamentally prevent operational service risks, we establish action guidelines for all game operators to follow and provide operators with on/offline work ethic training as well as regular campaigns 4 times per year. We also manage system(game operation to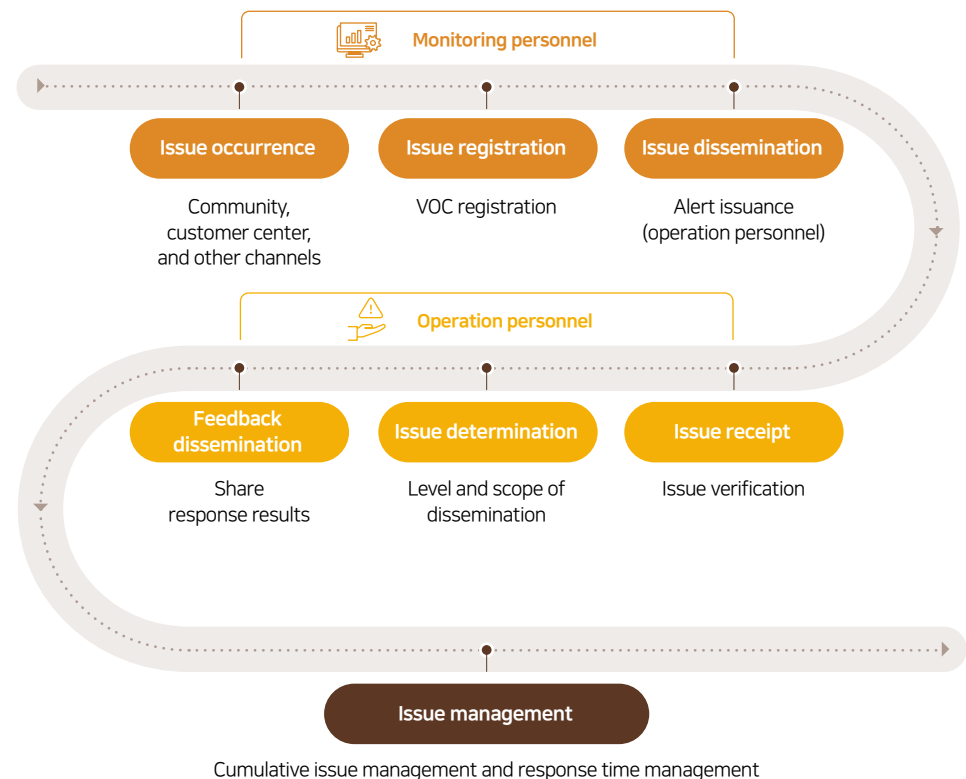ols) authorities and monitor their execution to fundamentally eliminate any corruptive practices on the part of game masters.

The Service Alert System that we developed in 2022 serves as an issue dissemination system to immediately communicate the key issues detected through monitoring to the responsible operator to swiftly respond to such issues. We keep an eye on user trends through the diverse service operation metrics that are managed for each game as well as pre-set keywords, and the information gathered as such is quickly delivered to respective project managers. This ensures that we identify root causes behind an issue, develop countermeasures, and swiftly take action to provide users with a pleasant game environment.

Issue Dissemination and Management Process

Monitoring personnel

Issue occurrence	Issue registration	Issue dissemination
Community, customer center, and other channels	VOC registration	Alert issuance (operation personnel)

Operation personnel

Feedback dissemination	Issue determination	Issue receipt
Share response results	Level and scope of dissemination	Issue verification

Issue management

Cumulative issue management and response time management

Service risk management system

Netmarble categorize service risks into 3 levels to ensure their systemic management. We also established a service management process to track, improve, and supplement key risks that keep occurring. To prevent similar issues from occurring and ensure uniform quality, we analyze service risks for their root causes and seek improvement and supplementation.

Service Management Process

	Game Service Risk	Operational Service Risk
Issue Detection	• Detect issues that need to be shared, including game issues, access issues, and complaints	• Detect issues through the monitoring of system use data
Dissemination and Action	• Verify issues, impact, action, and response approaches, and report accordingly • Collaborate among relevant divisions and take action	• Investigate the causes of incidents and their size of damage • Collaborate with relevant divisions and take action
Risk Management	• Receive service risks	• Rate risks and develop measures to prevent reoccurrences
Follow-up Management	• Share across the board to prevent similar issues from occurring	• Manage the implementation of measures to prevent reoccurrences

Creating a Fun and Wholesome Game Culture

The game ecosystem operates through the lively and complex interactions among stakeholders from the development of games to their operation and growth. Accordingly, Netmarble pursues collaborative development with the players in the game ecosystem based on active communication and support. We will commit to leveraging our content as an opportunity to connect diverse perspectives and promote healthy growth for all.

Operating Partner Creators to build a sustainable game ecosystem

The emergence of user-engaging content platforms such as Youtube has given rise to the formation of a content creator ecosystem, and creators' growth is driving the evolution of the gaming industry. Netmarble firmly believes that our relationship with creators should move beyond mere collaboration for the purpose of marketing towards the pursuit of mutual growth as key stakeholders, and is operating the 'Partner Creator' program to this end.

Starting with 'Ni No Kuni Partner Creators' in 2021, we officially launched the 'Netmarble Partner Creator Program' in 2022 to support the development of the content creator ecosystem. In 2022, a total of 22 creators joined this program to produce a total of 1,063 Netmarble-related content items through wide-ranging on/offline activities made possible with proactive support and collaboration.

Key Activities of Partner Creators in 2022

- Hosted the Netmarble Partner Creator launching ceremony

- Hosted 'HypeSquad VIP TEST for CREATOR'

- Hosted "YouTube Creator Town: 2022 YouTube Creator Town Gaming Tournament'
  : Online grand festival for creators joined by nearly 100 creators in Korea, including Netmarble's partner creators, in partnership with Youtube by unveiling HypeSquad
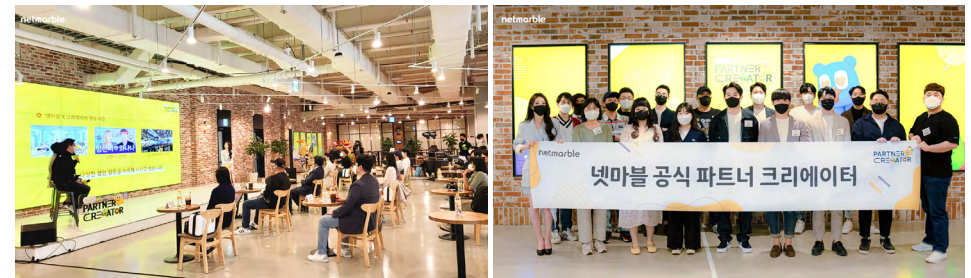
Netmarble Partner Creator launching ceremony

⭐ HypeSquad: Inviting creators to conduct tests

In May 2022, we hosted 'HypeSquad VIP TEST for CREATOR' as the first influencer test performed on HypeSquad at G-Tower. We invited nearly 30 creators to choose a final winner, and integrated the feedback collected from creators in this process into our game improvements.

While this event took the Focus Group Test(FGT) form, it was distinguished for the fact that the test targeted game content creators rather than general users. As the visual qualities of a game become increasingly important today, this served as a win-win opportunity. Netmarble was able to conduct intensive tests with the help of game content creators while creators were given the chance ahead of others to test a new game and gain inspirations for their content.

HypeSquad test with creators

User protection policy

Netmarble implements a range of policies established to protect the rights and interests of users. When withdrawal or refund requests are made for paid items, we ensure immediate refunds on unused subscriptions within seven days pursuant to applicable regulations to protect user rights including the right to withdrawal.

To protect underage users, we abide by laws and regulations governing contracts entered into with minors, and manage postings that could be harmful and outside the boundary of social norms. We keep an eye on any potentially harmful content 365 days a year and any postings that violate our posting management policy are immediately deleted upon their detection.
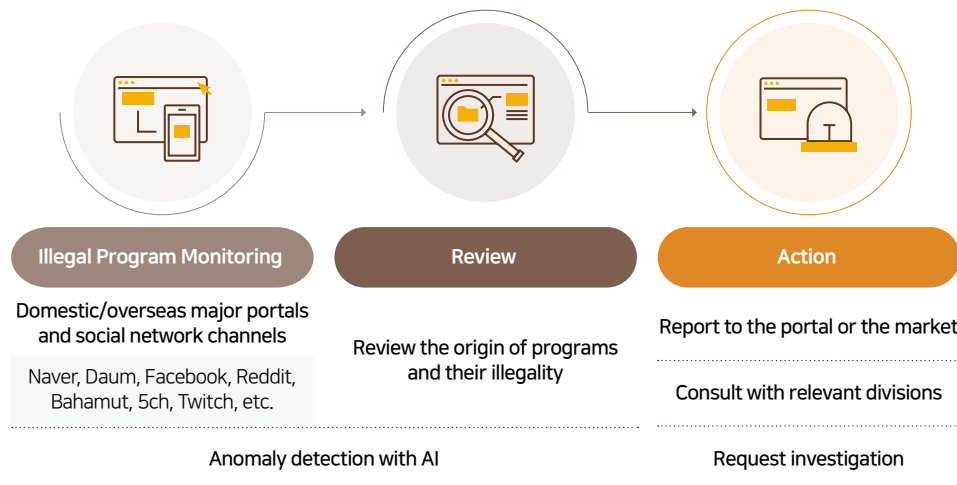
To safeguard authorized game users and provide reliable game services, we keep close tabs on illegal programs[1], illegal websites[2], and look-alike apps[3]. Specifically, we introduced an AI-enabled anomaly detection system to identify abnormal gameplay and advertising fraud to promote the reliability of our service operations. This new technology improved our detection rate by over 10 times compared to its predecessors. When identifying an act of disrupting the game environment and/or causing harm to users, we place restrictions such as blocking game access, and communicate such incidents through our official community and other channels.

1) Programs that undermine the technical protection measures of our games or alter data to allow for abnormal gameplay (data manipulation, cracked versions, macros, etc.)
2) Websites that have a similar name to our games or communities, could be mistaken for our official website, or distribute pirated programs
3) Apps that have a similar name to our games, or could be mistaken for our official program

Illegal Program Monitoring Process

Illegal Program Monitoring	Review	Action
Domestic/overseas major portals and social network channels	**Review the origin of programs and their illegality**	**Report to the portal or the market**
Naver, Daum, Facebook, Reddit, Bahamut, 5ch, Twitch, etc.		Consult with relevant divisions
Anomaly detection with AI		Request investigation

Children and teenager protection

Gameplay time arrangement service for teenagers(selective shutdown)

Netmarble is committed to protecting children and teenagers and supporting their proper gameplay. Pursuant to Article 12-3(Preventive Measures on Excessive Immersion in and Addiction to Games) of Korea's Game Industry Promotion Act, we provide a system for teenagers or their legal guardians to arrange their gameplay time so that teenaged users can play games for the set duration only. Such services include alerts to prevent teenagers from excessive immersion, time limit notifications, and monthly gametime data to help teenagers self-control their own gameplay time while assisting their parents in properly arranging gametime for their children through our 'parents-only counseling channel'. As another way to safeguard teenagers, payments and/or game-related events are preceded by notification on withdrawal options and the need for consent from legal guardians, and a process is in place to prevent unauthorized payments from being made without consent from legal guardians.

Providing appropriate game content based on user ages and ensuring data privacy

To provide age-appropriate content and safeguard the personal data of children and teenagers, we require that teen users verify their identity and gain consent from their legal guardian when using our services for the first time. We also make some of our game services inaccessible based on the age of users.

Complying with self-regulations for loot boxes

Netmarble faithfully complies with the self-regulations for loot boxes set by the Korea Association of Game Industry to help create a wholesome game culture, and have our services certified to the loot box self-regulation compliance program of the Game Self-governance Organization of Korea.

We disclose content probability information on item reinforcement and synthesis as well as the likelihood of acquiring in-game loot boxes, and make such disclosures beyond self-regulation standards. Internal reviews are made before launching services to go over probability disclosures, and independent technical measures were introduced to prevent any errors in probability disclosures. This process also applies in introducing new loot boxes during service operation to improve users' data accessibility and establishing a wholesome game culture.

GSOK 자율규제인증
확률형아이템

GSOK's self-regulation certification mark

Diversity & Inclusion in Our Games

Netmarble takes diversity & inclusion seriously in our efforts to deliver joyful experience to all our users. We aim to plan our content based on our understanding on different cultures and to build mutual trust into our community. We will remain committed to pursue greater diversity so that we provide the users of Netmarble games with enjoyable and fulfilling experience.

Process for managing diversity & inclusion in games

We established country-specific content guides to embrace greater cultural diversity and inclusion within our games from the global perspective. Such guides were designed to help our employees better understand the cultural backgrounds that are appropriate to game genres and characteristics and to prevent issues that undermine diversity. These guides base our efforts to take a diversity-by-design approach to content planning by taking into account stereotypes, discrimination, cultural appropriation, and symbolism in respective service regions.

Preventing inappropriate, hateful language within our content

Netmarble ensures that our games are free from any inappropriate and/or hateful language that may cause discomfort to users to create a thriving community where diversity is respected.

Our games go through the internal review process prior to their release, and are also subject to the rating process implemented by the Game Rating and Administration Committee and the Game Content Rating Board as well as platform operators to manage our content for any inclusion of inappropriate expressions.

Furthermore, we set criteria for universally banned words that apply to all our games, and regularly update our list of banned words. These words include insults, sexually insulting language, expressions that convey racial discrimination, and any such words that undermine individual dignity or run counter to applicable laws and regulations. Our in-game monitoring and reporting functionality allows us to take action against inappropriate language in real-time. 'PARAGON: The Overprime' launched in 2022 was fitted with deep learning technology to detect and sanction insults and other inappropriate language for nearly 150 languages.

Our terms of use and operational policies also specify restrictions that could be imposed on chats and postings, and we take necessary action against violations to protect our users.

Banned Words Management Process

Review the need for new banned words	Regularly consult on and coordinate criteria for banned words

Develop and update the standard list of banned words

Game integration	QA

Verify results
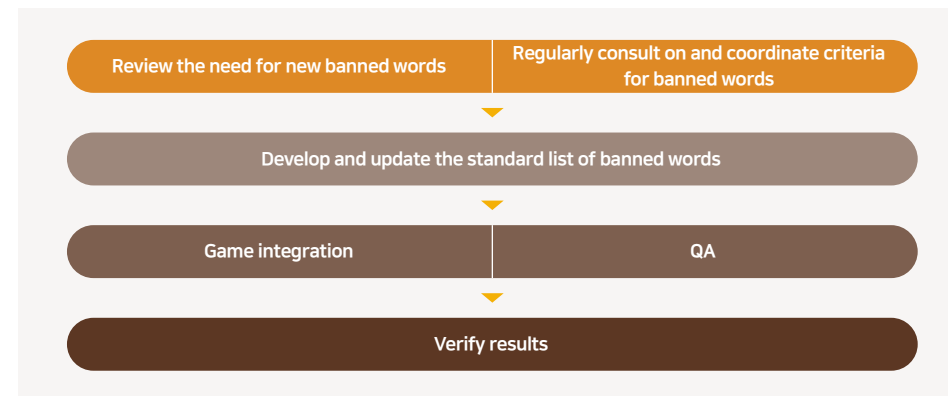
Technology Innovation and Business Expansion

R&D to sales ratio

32.1 %

Netmarble is fully committed to entertain people all over the world with fun games, setting the trends for the global game culture. To ensure users from different countries, languages, and cultural backgrounds are all given access to enjoyable and reliable game services, Netmarble spares no efforts in investing in and exploring game technologies.

Product and Service Innovation

Netmarble's investment in future technology and innovation

Netmarble is taking the lead in the industry for future technology as well as game technology. We established our dedicated R&D organization back in 2014 with the goal of developing 'intelligent games that play with people' and initiated our full-fledge efforts to develop AI technology. We remain focused on speech, natural language processing, reinforcement learning, vision, and graphics among others, and have successfully developed our in-game balancing system, anomaly detection system, and user recommendation system.

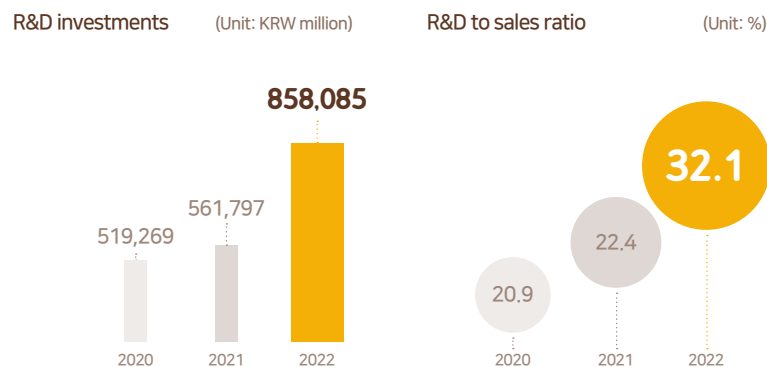Netmarble is expanding the R&D investments year after year. In 2022, our R&D investments surged by 52.7% in 2022 from the previous year to reach 32.1% in R&D to sales ratio.

R&D Expenditures[1]

R&D investments (Unit: KRW million)

2020	2021	2022
519,269	561,797	858,085

R&D to sales ratio (Unit: %)

2020	2021	2022
20.9	22.4	32.1

1) On a consolidated basis

Netmarble envisions a future of games as one led by intelligent games enabled by advanced AI technology. This goes beyond users reacting to games towards games adapting to users to provide further upgraded services. It is this vision that drives our tireless R&D commitment to progress towards future technology beyond game technology.

Technology that Netmarble envisions

> From AI to V-ARTIST(virtual artist), Netmarble relentlessly explores and applies technology that creates the most entertaining games yet.

AI reinforcement learning to create high-quality, engaging games

Netmarble harnesses AI reinforcement learning to provide users with even more entertaining experiences. We verify diverse characters made available for users for their performance and strategic fun factors, and help users match each character with the right combination of skills depending on their characteristics.

'MaguMagu' is our baseball-themed sports game and users may choose Challenge Mode from multiple game modes which was made possible with AI technology by analyzing the behavioral patterns of top-ranking users. This arranges a game environment where users virtually compete against high-ranking users who are typically difficult to encounter, taking the maturity and entertaining qualities of this game to a new height.
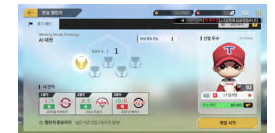
MaguMagu's Challenge Mode

AI speech technology for unique gaming experiences through a speech interface

Netmarble's 'A3: Still Alive' game is the first mobile game to provide the 'MONICA' speech recognition assistant service powered by AI speech technology. Users may initiate voice commands by saying 'MONICA' which recognizes top-priority keywords and command keywords to help them access a wide range of content.

Netmarble presented MONICA keywords and game command recognition technology at the INTERSPEECH and the IEEE ICASSP(2020), the world's top two academic conferences in the field of speech recognition. Our paper received perfect scores from all examiners at the NeurIPS, the world's most prestigious AI conference, in 2020 to demonstrate the technological prowess of MONICA. Currently, we are working on speech synthesis technology covering foreign language dubbing and virtual voice generation in addition to speech recognition.

DensePose and facial animation for maximum-possible game immersion

Netmarble is enhancing its animation technology to bring a sense of real-world presence to the game environment. DensePose uses deep learning technology to sense humans in two-dimensional images. and then map the skeletal structure of the human body to create various poses. We presented our technology to create a dense stack of upsampling layers in low resolution to achieve higher-resolution images at DensePose challenge competitions, and this technology won second place at the COCO 2018 DensePose Challenge hosted by the ECCV(European Conference on Computer Vision), one of the world's top three computer vision conferences, to showcase our exceptional technology. Presently, work is underway to utilize this technology to automatically extract the motions of K-pop dancers and famous sports athletes from videos to animation format.

Furthermore, we are exploring AI-enabled, automatic facial animation generation technology to create true-to-life facial motions. Applying this technology to games automates the precise matching between a character's facial expressions and lip movements and its voice dialogue to allow for even more natural character manifestation. This technology was presented and drew attention at the the ACM SIGGRAPH 2019, the world's top academic conference in the field of computer graphics, and is being applied to create truly immersive game experience through consistent technology upgrades.

As such, Netmarble's animation generation technology brings vitality to the characters and reinforces immersive gaming experience to make gameplay even more captivating.

Metaverse V-ARTIST in the game world

MAVE: is the virtual K-pop girl group made possible with Netmarble's motion capture, real-time 3D rendering technology, and AI speech technology. This four-member girl group – SIU, ZENA, TYRA, and MARTY – is much loved and is as active as their real-world counterparts. Specifically, ZENA was featured as a new heroine at 'PARAGON: The Overprime' to bring an added uniqueness to the game. In June 2022, Netmarble completed our metaverse VFX research center armed with the nation's largest single motion capture equipment, and we will further advance our metaverse technology on the strength of our cutting-edge R&D infrastructure.

MAVE:

Netmarble's pursuit of good technology

> Netmarble explores the value of wholesome games created collaboratively by technology and people.

A wholesome game culture that enables users worldwide to play safely and conveniently

Netmarble's 'Ni No Kuni: Cross Worlds' is the adaptation of the 'Ni No Kuni' IP, a game series created jointly by the Japanese animation studio Ghibli and Level-5, to a mobile RPG game, which is hugely popular among users. Meanwhile, large-scale bots[1] operating in the game caused competition between general users and these bots over server connections, which resulted in extended server access queues and increased complaints among general users. In response, we deployed a bot account detection model to limit the server connections from bot accounts, which dramatically brought down the number of bot-related user complaints. Going forward, Netmarble will remain committed to ensuring reliable game services for all users.

User Complaints Raised in Relation to Bots[2][3]   (Unit: Cases)

Discord
2,024
89.2% reduction
218
6/17   6/25

Reddit
76
97.4% reduction
2
6/19   6/25
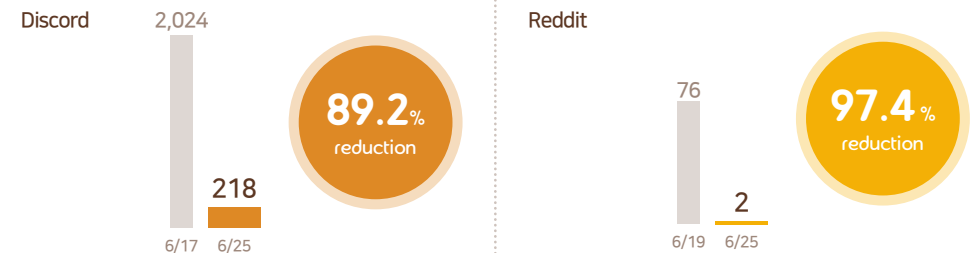
1) A software program operating on the internet to perform repetitive tasks
2) Bot account detection model(server connection restriction) activation: June 21, 2022(twice)
3) Discord and Reddit are all global communities and also serve as the global official community channels for 'Ni No Kuni: Cross Worlds'.

A wholesome game culture to detect and block abusive language

Netmarble's 'PARAGON: The Overprime' released in December 2022 deployed deep learning technology to fine-tune its functionality to detect inappropriate language within chats. This deep learning model was trained on nearly 20,000 datasets of chat texts and submitted reports to detect abusive language even from non-ordinary sentences or words in almost 150 different languages in addition to Korean and English. Eliminating such factors that may give rise to discomfort during gameplay, we help users confidently and delightfully immerse themselves into our games and create a wholesome game culture on the basis of mutual respect. Netmarble will deploy new technology in our games to deliver wholesome games and improve user satisfaction.

Improving our IP competitive edge

In line with our goal of nurturing global franchise intellectual properties(IPs), we are diversifying content by reinforcing our own IPs, discovering new IPs, and building a partnership framework for IP content production, and we are constantly engaged in IP development business.

Netmarble's flagship IP 'KUYA' has served diverse genres starting from 'KUYA Catchmind(2002)' to 'Merge Fantasy Island(2022)'. 'KUYA Restaurantz', a spin-off brand of KUYA, was created through the reinterpretation of KUYA's worldview, and is massively popular among millennials and Gen Z, reaching over 130,000 followers since its Instagram opening in 2022 and ranking 1st in emoticon sales of KakaoTalk messenger. 'Modoo Marble' was first launched in its mobile format in 2013 and has positioned itself as our global IP, gaining huge popularity in Korea, Thailand, and Indonesia. It was recreated on the metaverse platform with 'Meta World: My City(2023)' to add to its unique entertaining experience. 'Seven Knights', since its debut in 2014, has been a remarkable success across Korea, Japan, and Thailand and established its profile as a global IP symbolic of collectible RPGs, along with adaptations into animation and webtoon formats. This was followed by 'Seven Knights 2(2020)' and 'Seven Knights Revolution(2022)', and work is underway to launch new offerings including 'Seven Knights Idle Adventure' and 'The Seven Knights'. Furthermore, Netmarble is working on a range of game sequels originating from our own IPs, including 'StoneAge', 'Raven', 'Taming the Monster', and 'RF Project'. As to RF Project, efforts are also being made to adapt this game into a webtoon and a webnovel.

Furthermore, Netmarble initiated our partnership with Studio Dragon in producing 'Arthnal Chronicles Season 2' and developed our game 'Arthdal Chronicles' which shares the worldview with the drama, laying the basis for strategic partnerships. We also participate and invest in animation production committees to secure promising new IPs as part of our far-reaching efforts to nurture global franchise IPs.

KUYA Restaurantz pop-up store

IPR Management

Overview of Netmarble's IPR

Netmarble proactively safeguards and manages our extensive portfolio of intellectual property rights(IPR) including trademarks, patent rights, design rights, and copyrights. As we target the global market in our business operations, we work on multiple fronts to make IPR registrations and manage them accordingly both in Korea and overseas. Generally, the copyrights of individual games are owned by our subsidiaries who develop such games, and Netmarble publishes these games under the licensing agreement signed with the subsidiaries.

Patent Registration (Unit: Cases)

	2020	2021	2022
Cumulative	195	232	251
New	52	55	18
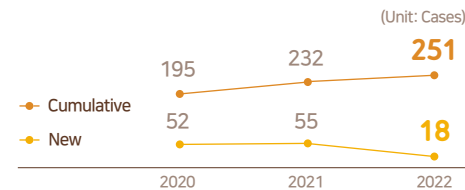
Other IPR(Trademarks, Design, Copyrights) (Unit: Cases)

	2020	2021	2022
Cumulative	920	974	1,019
New	12	19	23
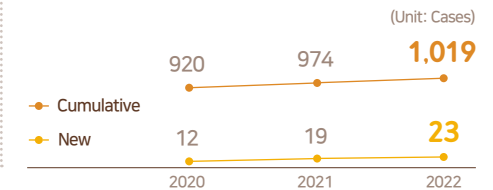
Responding to IPR infringement

Data analysis and illegality review

We engage in regular monitoring to protect our IPR, and if concerns are raised over potential infringement in relation to similar apps and others, we request our Legal Affairs Division to conduct legal reviews regarding their risk and illegality. Such requests are made and the results are communicated systematically through our legal management system.

Sharing results and taking additional action

In the event of IPR infringement, the relevant division takes action first by reporting the infringement to the competent portal, and goes on to take secondary action to request investigation when the issue remains unhandled or occurs multiple times. If the issue is not resolved at this point, consultations are made with the Legal Affairs Division and other relevant divisions to review additional action and its direction, and action is taken when deemed necessary to proactively respond to IPR infringement.

Response Process to IPR Infringement

Monitoring	Data analysis, illegality review	1st action Report	Sharing of handling outcomes	2nd action Investigation	Sharing of results, additional action
Share monitoring results with relevant divisions(weekly)	Share them concurrently with relevant divisions to determine risk/illegality	Report to portals and markets	Take secondary action if the issue is left unhandled or persistent(share results weekly)	Shut down illegal websites, request investigation, etc.	Review final action when it is impossible to handle the issue (consult with relevant divisions)

Information Security and Data Privacy

Security and data breaches

Zero

Information Security

As a global publishing company operating games in over 150 countries, Netmarble fully commits to the secure delivery of global game services and to the protection of user privacy. We thoroughly abide by domestic and international laws and regulations governing information security and data privacy, and are developing our policy in accordance with domestic and overseas information security standards. We also operate preventive activities and post-incident responses to address cyber hacking and other types of attacks, and perform internal and external audits at least once a year to assess the proper implementation of our information security management process.

Mid/long-term information security goals

Netmarble's security organization defined its vision of 'creating a secure game environment that users can confidently enjoy free from any worries over their personal data and in-game assets', and is progressing towards the following goals.

Protect user data — Comply with the Personal Information Protection Act, the GDPR(General Data Protection Regulation), the CCPA(California Consumer Privacy Act) and other data privacy-related regulations and keep user data safe under any circumstances

Maintain reliable game infrastructure — Conduct regular vulnerability assessments throughout the entire process of game development, distribution, and operation, and resolve identified vulnerabilities to build secure infrastructure

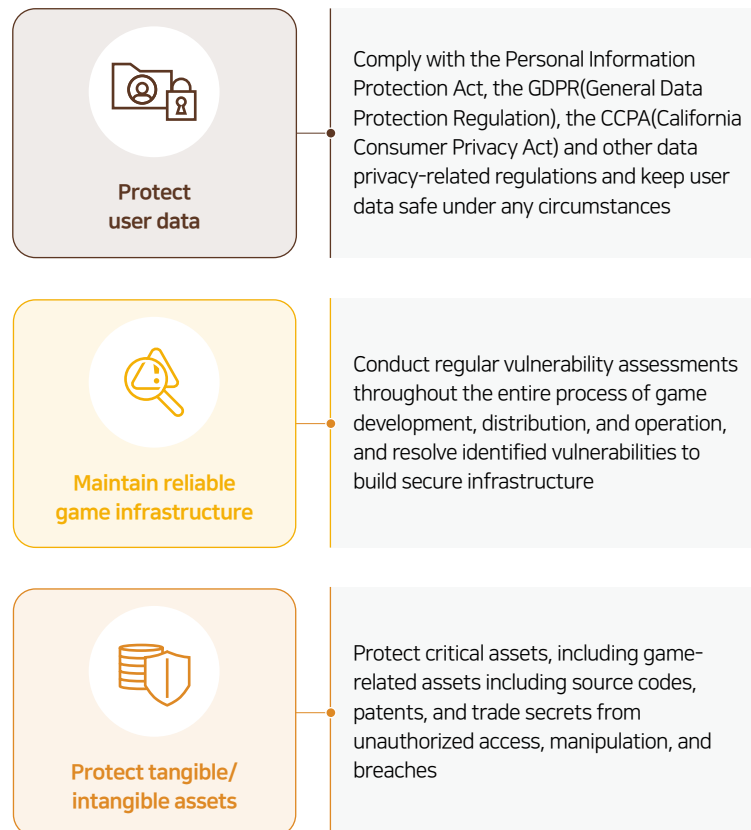**Protect tangible/ intangible assets** — Protect critical assets, including game-related assets including source codes, patents, and trade secrets from unauthorized access, manipulation, and breaches

Information security governance

Netmarble's Chief Information Security Officer(CISO) is appointed among executives (top management) from our dedicated information security organization. Our current CISO earned the PhD in information security with over 20 years of relevant experience. Our CISO's expertise and contribution in the field of information security was widely recognized as the CISO was honored with the Minister of Science and ICT Award at the '1st CISO Awards' hosted by the Korea Council of Chief Information Security Officers and the Security Awards Korea Committee in November 2022.

We operate the Information Security Committee chaired by the CISO to make decisions on our information security operations, and collect varying feedback from relevant divisions and build consensus to this end. The Information Security Council meets at least once a year to address such agendas as feedback on the enactment/revision of our information security policy, company-wide efforts to respond to breaches, and information asset risk assessment process results. For the purpose of bolstering our information security governance at the Netmarble Company level, the Company CISO Council convenes bimonthly.

Information Security Governance

- CEO
  - Information Security Committee/ Personal Information Protection Commission
  - Company CISO Council
  - Security Division(CISO/CPO)
    - Personal information protection
    - Security strategy
    - Response to security incidents
    - Security technology
    - Security development
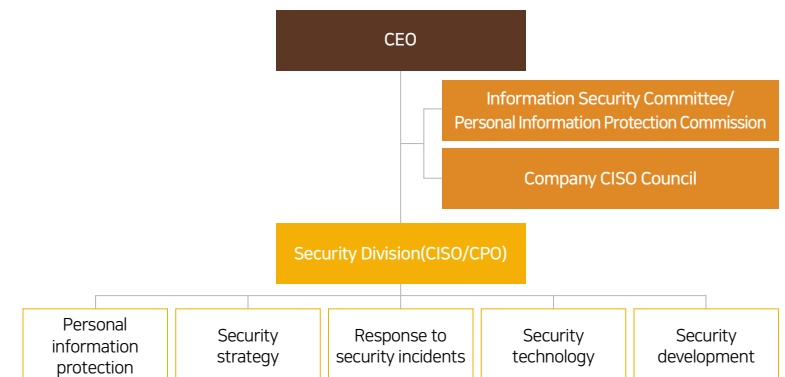
Information security policy

Netmarble implements our information security policy at 3 different levels for internal information security operations. Our Information Security Regulations serve as the highest-level policy to set overall information security goals and directions. At the middle level are 4 sets of guidance – General Security Work Guidance, Privacy Guidance, Information System Security Guidance, and Location Information Security Guidance – to set standards and principles to implement our information security policy. At the bottom level are 3 types of manuals that specify detailed approaches to implementing the policy. Our information security policy applies to all our employees and all outsourcing companies and individuals who perform work under the contract they enter into with Netmarble. This policy is regularly updated each year to keep current with the shifting internal/external conditions and regulatory landscape, and any such amendments made to the Information Security Regulations should be approved by the CEO. Our information security policy is made available on our internal system for all our employees to refer to at any given time, and a process is operated to allow employees to make inquiries and reviews on an on-going basis.

Information Security Policy: Structure and Definitions

Information Security Regulations			
General Security Work Guidance	Privacy Guidance	Information System Security Guidance	Location Information Security Guidance
Explain procedures regarding security for personnel, third-parties, confidential information, office equipment, security audits, and security inspections	Explain detailed matters to be observed in collecting, using, and managing the personal data of users and employees	Explain technical protection measures of the information security management system, including PC/server/network/security system management, information communication security incidents, and information system continuity management	Explain detailed matters to be observed in collecting, using, and managing the location information of users

(Personal Data) Information Asset Risk Management Procedure Manual	Application Program Security Procedure Manual	Emergency Situation Response Procedure Manual
A manual to explain the categories of information assets of the Company and criteria in assessing their importance and risks	A manual to specify security requirements in developing project-type systems and games	A manual to respond to internal security incidents and serious disruptions to critical information assets

Other information security guides

Information security management system

Netmarble's information security and data privacy systems have been certified by competent organizations in Korea and abroad, and are subject to continuous audits and improvements.

We achieved ISMS(Information Security Management System) and PIMS(Personal Information Management System) certifications in 2015 and have been certified under the ISMS-P(Personal Information & Information Security Management System) program since 2020. In accordance with the ISMS-P, Netmarble verifies the appropriateness of our overall security operations to establish, manage, and operate the information security management system to keep our critical information assets from a range of security threats.

We also achieved the ISO/IEC 27001 international information security system certification which governs the structure and operation of the information security management system, and receive certification audits each year on our risk management, security policy, access control, and response to security incidents to assess our information security management system and make necessary improvements. We plan to receive audits in compliance with ISO/IEC 27001 for data privacy and ISO/IEC 27017 & ISO/IEC 27018 for cloud service data privacy and personal data privacy from 2023 onwards. To ensure systemic security risk management, the Information Security Committee engages in in-depth discussions on potential risks that may occur in the future as well as identified risks, and explores common responses from respective functions on multiple fronts.

As part of our information security management system, we regularly implement risk management activities. For systemic risk management, the (Personal Data) Information Asset Risk Management Procedure Manual under our information security policy stipulates overall risk management procedures(classification of information assets, prioritization, risk assessment, and taking action), and improvement plans are developed for identified risks to address their root causes to eliminate and mitigate risks.

Personal Information & Information Security Management System(ISMS-P)

Scope: Domestic game services under operation

Validity Period: Dec. 16, 2020-Dec. 15, 2023

International information security certification (ISO/IEC 27001)

Scope: Information Security Management System in relation to service & internal operation for online game publishing. This is in accordance with the Statement of Applicability version 2.0.

Validity Period: Jul. 30, 2021-Jul.29, 2024

Assessing the Effectiveness of Major Risk Mitigation Measures   (As of May 2023)

Improvements made to software whose product services were terminated	Reductions in remote access to ·downloading of work documents	Improvements made following security inspections made on outsourcing companies
71.4%	92.8%	85.7%

Response to information security breaches

Netmarble has established a systemic information security incident response system which consists of proactive and reactive measures. To prevent data breaches, we engage in periodic risk assessments, pre-launching game security inspections, post-launching regular penetration tests, and malicious program detection. We also established a 24/365 security control system and an incident response process to ensure prompt recovery in the event of information security incidents.

Proactive measures

In January 2023, we created the Security Incident Response Team to ensure speedy and effective response to cyber attacks and bolster our expertise. The existing Security Technology Team is responsible for designing, deploying, and operating security systems and solutions, and the newly-created Security Incident Response Team detects and blocks security attacks in real time through a range of security systems including intrusion detection systems and web firewalls. Netmarble conducts risk assessments at least once a year(twice in 2022) to collect information on the latest security incidents and vulnerabilities to identify potential security threats and implement improvement plans for identified security risks, with an aim to elevate our information security performance. This demonstrates that we are improving our organizational expertise and accountability while coping with cyber threats through close cooperation. In so doing, we ensure that our service environment is kept secure devoid of any breaches that would compromise any of our critical data or assets.

To make our services secure, we proactively respond to the vulnerabilities identified in our game content and critical assets. Security inspections are conducted in the pre-launching phase, and penetration tests are performed regularly during the game service operation phase to identify and eliminate security vulnerabilities.

We also focus on detecting and blocking malicious programs, such as app forgery or tampering and hack-tools, by applying our independently-developed security modules to prevent game abuse while developing responses by promptly collecting and analyzing external threats. Furthermore, we perform periodic vulnerability inspections on crucial assets to reinforce security for assets that play an essential role in our business operations.

Reactive measures

Our 24/365 security control operations help us set the conditions to respond to security breaches on an on-going basis. We pursue prompt recovery in the event of information breaches to minimize their impact on all our games that we service, and our information security manager immediately reports on and responds to incidents that have significant impact according to the set breach response manual.

Our efforts for information security and data privacy risk management allowed us to record zero security incidents in 2022.

Breach Incident Response Process

Key Proactive Measures

Category		Proactive Measure Taken
Infrastructure security	Penetration threats detected/addressed	162,031 cases
	Operation tool/web vulnerabilities assessed	532 cases
Game security	Game app vulnerabilities assessed	37 cases
	Hack-tools detected and addressed	(AOS) 19,898,639 cases (iOS) 2,527,588 cases
Data privacy	Data privacy vulnerabilities assessed	53 cases

Efforts to create an information security culture

Raising security awareness among employees

To ensure minor negligence on the part of our employees does not escalate into large-scale security incidents, we undertake security awareness-building activities for employees. Each year, we provide new hires with information security training and statutory security training, and our internal data security training and data privacy training are attended by 100% of our employees.

Netmarble provides specialized information security training by job position and occupational groups. In 2022, we conducted a total of 109 hours of training to 109 employees in privacy-related roles, and 122 hours of personal data pseudonymization training to 61 employees. The information security training, provided to new hires each month in 2022 and included direct lectures by our CISO, was attended by all our new recruits including full-time and contract employees.

Furthermore, we launch monthly information security campaigns to set cultural settings in which our employees perform their work securely while fully complying with information security regulations to make doubly sure the valuable personal data of our users is safeguarded.


Netmarble's Information security campaign

Data privacy training for children and teenagers

To support data privacy training for children and teenagers, Netmarble joined the launching ceremony held in July 2022 for the 'Teen Data Privacy Leader Program' hosted by the Personal Information Protection Commission as part of the plan to protect the data privacy of children and teenagers. We invited teen data privacy leaders selected for this program to G-Tower to help them indirectly experience the work performed to protect data privacy along with our Chief Privacy Officer(CPO) and working-level staffs from the Personal Information Protection Team.

We also joined the '2022 My Data Guardian Campaign' supervised by the Personal Information Protection Commission as a special supporter to communicate to children and teenagers the data privacy rules they should be aware of during gameplay(no sharing or selling of account information, no exposure of personal data when chatting) through short-form content and promotional materials featuring 'keke', Netmarble's representative character.
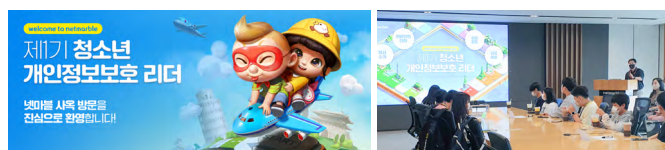
Practice program for teen data privacy leaders

Data Privacy

Mid/long-term data provacy goals

Netmarble's security organization defined our detailed roadmap for data privacy and is progressing towards the set mid/long-term goals.

-Q3 2023	-Q4 2023	-2024	-2026
Reinforce information security certification	Strengthen the rights of the data subject in Korea and abroad	Reinforce data privacy for children and teenagers	Tighten our global policy
Extend the scope of information security and data privacy certifications from domestic to global services (ISO 27001/ 27701/27017/ 27018)	Create a dedicated web page for all global users to access, modify, and delete their personal data and allow users to accept/refuse cookies	Gain consent from children and teenagers in Korea and abroad on the collection of their personal data and create separate guidelines for processing their personal data, extend the scope of protection (14 years old → under 18)	Expand our data privacy policy currently implemented mainly in key countries (North America, EU, and Japan) to cover state laws in North America and East Asia, etc. and segment its implementation

Data privacy governance

Netmarble appointed the head of the Security Division in an executive position as the Chief Privacy Officer(CPO) and the Data Protection Officer(DPO) and delegates the authorities and responsibilities for data privacy operations. Our CPO has over 10 years of experience in the field of data privacy, and is noted for his expertise as a member of the CPO Council under the Korea Information and Communication Technology Industry Association. The CPO attends weekly management meetings to report key agenda items on data privacy and receive feedback.

Under the CPO is the Personal Information Protection Team as a dedicated data privacy organization. The Team develops our internal policies through the analysis of domestic and international data privacy regulations while identifying and managing data privacy risks. The Team also engages in data privacy impact assessments, personal data outsourcing company management, and security reviews to prevent relevant risks from occurring. At Netmarble, the CPO and the Personal Information Protection Team play a pivotal role in heading the operations of the (Personal) Information Security Committee and the data privacy management system in line with the set annual security activity plan.

Personal data processing guidelines

As a global service provider, Netmarble makes our personal data processing guidelines available in multiple languages. It is notable that we introduced the 'Personal Data Labeling' to promote users' understanding in the latter half of 2022. The labels were created with diverse symbols to provide users with an intuitive, clear, and easy-to-understand view of our personal data processing practices.

Collection of personal data

- **Collection items:** Name, cell phone number, e-mail address, etc.

Purpose of processing personal data

- **Purpose:** Authentication, event participation, user counseling, service information, etc.

Outsourcing of personal data processing

- **Outsourcing vendors:** IGS Co., Ltd., MNB Co., Ltd., etc.

Retention of personal data

- **Retention period:** Store for up to 30 days prior to destruction for game/membership cancelation
- Store some personal data pursuant to applicable laws and regulations

Provision of personal data

- **Provided to:** Mobile phone, ARS payment settlement center, etc.

Grievance handling division

- **Responsible division:** Personal Information Protection Team
- privacy-help@netmarble.com

Data privacy management system

Netmarble strives to identify and abide by the data privacy regulations of key countries where we operate. These key service countries were identified based on the number of users and other factors, and their policies were analyzed and reflected into our services. We also team up with local legal experts to keep abreast with the latest country-specific regulatory trends to tailormade our data privacy management system to respective countries. In addition, we selected wide-ranging administrative, technical, and physical protection measures through checklists and performed internal reviews to identify and improve vulnerabilities.
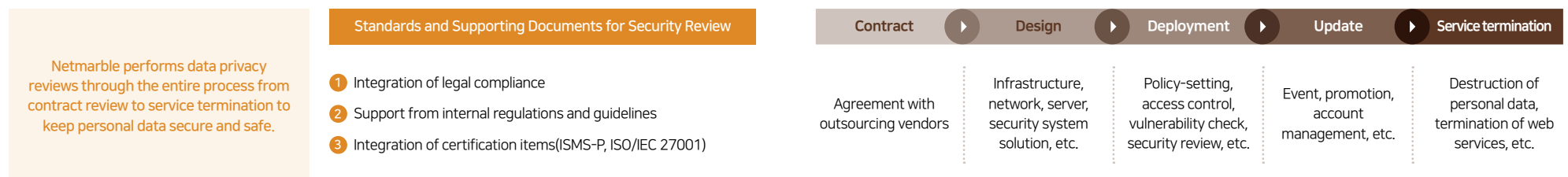
In collecting and handling personal data, we make it a rule to gain consent by reflecting the laws of key countries. All personal data is securely stored, is transmitted in its encrypted state, and is destroyed when users withdraw their consent or services are terminated. Our users may exercise their right to access, rectify, and delete their personal data via a variety of channels, including Netmarble customer centers, in-app functionality, and representatives(EU), and our Personal Information Protection Team and customer centers prioritize ensuring the rights of users as quickly as possible.

To respond to personal data breaches, we store logging data, take action to prevent any forgery or tampering, and install and manage physical security devices to keep personal data secure.

Operating the process to assess services for data privacy impact

Netmarble applies the PbD(Privacy by Design) principle to every game launched, with personnel from the Personal Information Protection Team directly auditing the integration of this principle in our policies. We implement the personal data impact assessment process when developing new personal data processing systems that require the handling of personal data(collection/use, provision, linkage of personal data) or modifying the existing personal data processing system. The personal data impact assessment process aims to improve the security performance of our personal data processing system by preemptively verifying its compliance with domestic/international laws and regulations and its risk for data leaks/exposures.

Phase-in Security Review Process

Netmarble performs data privacy reviews through the entire process from contract review to service termination to keep personal data secure and safe.

Standards and Supporting Documents for Security Review

1. Integration of legal compliance
2. Support from internal regulations and guidelines
3. Integration of certification items(ISMS-P, ISO/IEC 27001)

Contract	Design	Deployment	Update	Service termination
Agreement with outsourcing vendors	Infrastructure, network, server, security system solution, etc.	Policy-setting, access control, vulnerability check, security review, etc.	Event, promotion, account management, etc.	Destruction of personal data, termination of web services, etc.

SUPPORT TOGETHER

Netmarble's support for harmonious development

KUYA

Environmental Management System

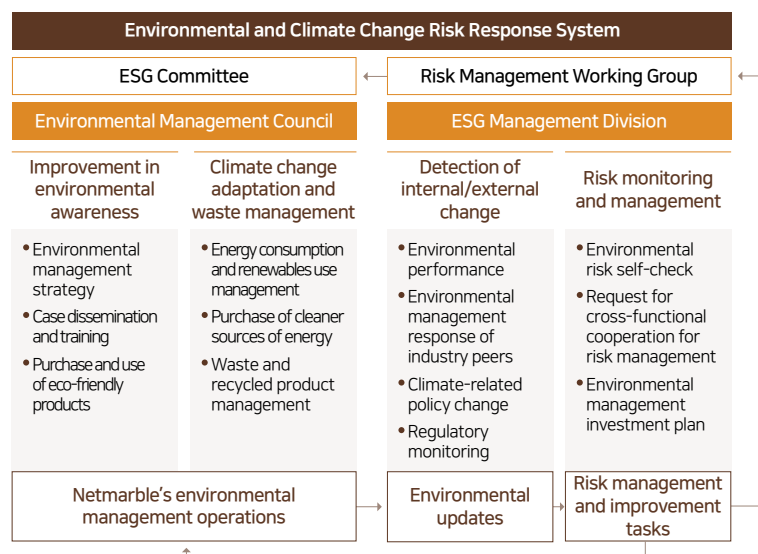**Scope of environmental data management**

Added 7 subsidiaries

Environmental Management Governance

At Netmarble, the ESG Committee under the Board of Directors plays a central role in responding to environmental issues that may arise in overall business operations. The Committee closely reviews climate-related legislative trends and identifies environmental impacts on our business model from multiple angles in line with domestic and international environmental initiatives and through internal/external assessments to manage our environmental management strategy and performance. The Committee operated at full scale in 2022, and this enabled us to perform comparative analyses on Netmarble's current status and the requirements of the TCFD(Task Force on Climate-related Financial Disclosures) and other global initiatives. We will discuss our response to analysis results and this will inform the efforts of the Board of Directors to implement our long-term tasks including our environmental management strategy and phased-in participation in environmental initiatives.

Operational System of Environmental Management

Environmental and Climate Change Risk Response System

ESG Committee	Risk Management Working Group
Environmental Management Council	ESG Management Division

Improvement in environmental awareness	Climate change adaptation and waste management	Detection of internal/external change	Risk monitoring and management
• Environmental management strategy • Case dissemination and training • Purchase and use of eco-friendly products	• Energy consumption and renewables use management • Purchase of cleaner sources of energy • Waste and recycled product management	• Environmental performance • Environmental management response of industry peers • Climate-related policy change • Regulatory monitoring	• Environmental risk self-check • Request for cross-functional cooperation for risk management • Environmental management investment plan
Netmarble's environmental management operations		Environmental updates	Risk management and improvement tasks

Environmental Management Strategy

Netmarble established our environmental management policy and guidelines to minimize environmental impact from our business operations, and strives to keep current with the rapidly-shifting business landscape and meet the varying requirements of internal/external stakeholders for environmental management.

Netmarble focuses on three strategic tasks in advancing environmentally-friendly management. We improve energy efficiency and shift to cleaner sources of energy to strengthen our preparedness against climate change, increase recycling in the workplace, and reach closer to stakeholders to expand the impact of our environmental values. Netmarble vows to comply with our environmental management guidelines to fulfill our corporate social responsibility and pursue sustainable environmental and social value.

Netmarble's Environmental Management Strategy

Qualitative Goal

Minimize environmental impact for future generations

Strategic Task

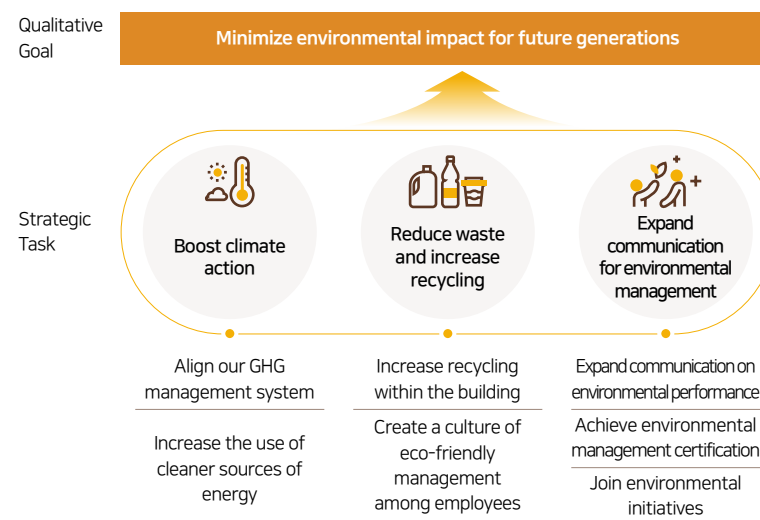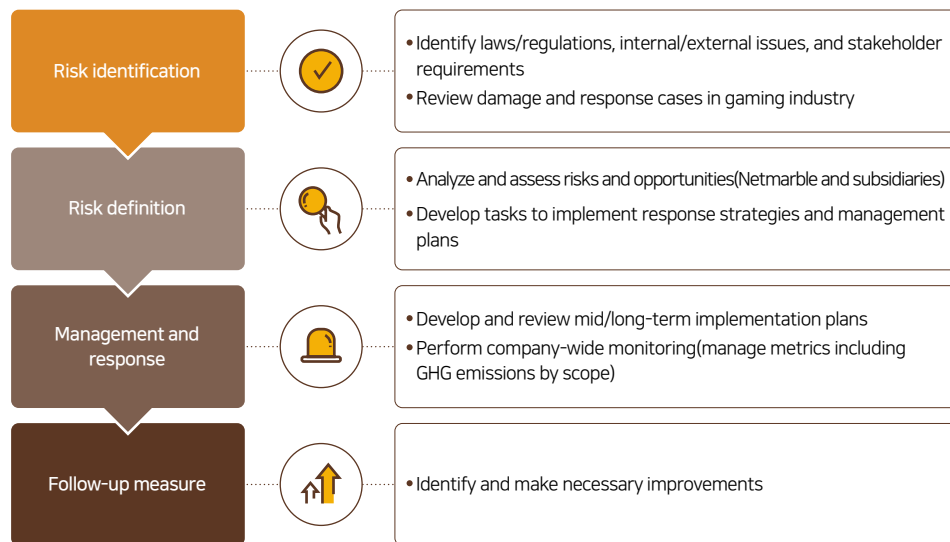| Boost climate action	Reduce waste and increase recycling	Expand communication for environmental management
Align our GHG management system	Increase recycling within the building	Expand communication on environmental performance
Increase the use of cleaner sources of energy	Create a culture of eco-friendly management among employees	Achieve environmental management certification
		Join environmental initiatives

Environmental Management Guidelines

① We recognize the environment as a driving factor for our corporate development, and advance eco-friendly management to create corporate value.

② We respect the intrinsic value of individuals, and fulfill our corporate social responsibility to create a sustainable society in harmony with the environment.

③ We fully commit to promoting the sustainable use of resources and reducing pollutants throughout the entire process of product development and sales.

④ We abide by domestic/international environmental regulations and conventions, strive to advance and improve environmental management, and disclose our achievements internally and externally.

Environmental Risk Management

Climate risk identification and management process

At Netmarble, the ESG Management Division and the Environmental Management Council play a pivotal role in identifying climate-related risks and opportunities, which are then reported to the ESG Committee for review depending on their likelihood(short and mid/long-term) and risk impact(urgency, relevance to management).

We identify the impact of climate change risks on game business to preemptively manage direct and potential risks. Given that a large portion of our sales occur in overseas markets, we keep close tabs on global environmental regulations and initiatives and on risks and opportunities associated with environmental issues that emerge across the IT and gaming industry, including the power consumption of data centers. In line with the shift from remote work initiated amid COVID-19 to on-site work since June 2022, we will further our efforts to reduce energy and resource consumption and waste discharge. To this end, the ESG Committee was placed under the direct leadership of the Board of Directors in 2023, and the Board, as the highest decision-making body, will take the lead in our efforts to strengthen response to climate change.

Risk identification
- Identify laws/regulations, internal/external issues, and stakeholder requirements
- Review damage and response cases in gaming industry

Risk definition
- Analyze and assess risks and opportunities(Netmarble and subsidiaries)
- Develop tasks to implement response strategies and management plans

Management and response
- Develop and review mid/long-term implementation plans
- Perform company-wide monitoring(manage metrics including GHG emissions by scope)

Follow-up measure
- Identify and make necessary improvements

# Environmental Management Activities and Achievements

GHG management

In 2022, the amount of GHG emissions from the Netmarble headquarters was 4,136 tCO$_2$eq, and emissions from electricity consumption comprise the majority of these emissions. Netmarble established a management system to reduce our GHG emissions by introducing high-efficiency, eco-friendly equipment, and we are committed to increasing renewable energy output to lower our carbon footprint.
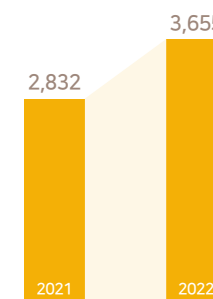
GHG Emissions   (Unit: tCO$_2$eq)

Scope 1[1]

	2021	2022
	550	481

Scope 2[2]

	2021	2022
	2,832	3,655
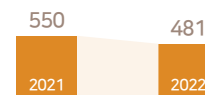
1) Direct emissions(Scope 1): GHG emissions from internal energy combustion and processes(diesel, gas, gasoline, etc.)
2) Indirect emissions(Scope 2): GHG emissions from indirect external sources including the purchase of electricity and steam

Key Metrics of Environmental Management

GHG

GHG emissions
(Scope 1&2)   **4,136**   tCO$_2$eq

Energy management

Energy saving efforts

Since power consumption represents the largest proportion of our energy consumption, we are establishing a zone-controlled heating/cooling and lighting system. To prevent the impact of outdoor air on indoor temperatures(cold draft), we installed cooling/heating equipment near the window to minimize heat losses from outside air. The air conditioning system running on Electric Heat Pumps(EHP) and geothermal power was deployed in consideration of spatial characteristics to reduce overloads during peak demand periods, and louvers were installed along the building façade to block 186.04kWh/m^2 of solar radiation. In addition, high-efficiency 100% LED lights were installed, timers were set to turn off the lights twice a day after working hours(at 20:00 and 24:00), and nighttime security patrols are conducted to reduce unnecessary use of electricity.
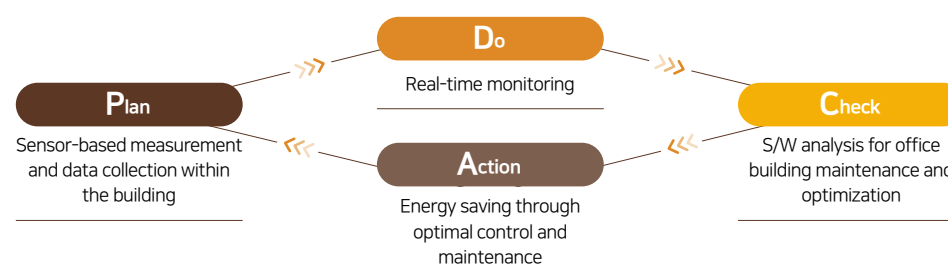
Establishing an energy management system

We introduced the Grade 1 BEMS(Building Energy Management System) and installed sensors on key equipment to systematically manage energy efficiency throughout the building. We analyze data collected from equipment and deploy the optimal operating system to effectively control building energy efficiency.

Building Energy Management System

Data collection and display
Energy consumption, etc.

Information surveillance
Monitor power, gas, CO_2 concentrations, inverter operation, and set temperature ranges

Data check
Perform correlation analyses on data including energy consumption against outdoor temperatures, and operating time against COP

Energy consumption analysis
Analyze energy consumption per unit area and cooling/heating energy consumption and efficiency

Equipment performance and efficiency analysis
Analyze performance and efficiency through EHP·GHP, and fuel cell measurements

Energy consumption forecast
Compare actual energy consumption through setting/managing energy consumption goals and regression analysis

Control system alignment
Control equipment aligned with the integrated SI system (boiler, geothermal, EHP·GHP, fuel cell, air conditioning, etc.)

Provision and use of indoor/outdoor environmental data
Control heating/cooling through differences in indoor/outdoor temperature and humidity levels, control indoor air quality through CO sensors, and measure PM leveles for performance/efficiency analysis

Energy cost check and analysis
Check and analyze energy costs through measurements made on energy courses(power, gas) and equipment (EHP·GHP, boilers, etc.)

BEMS-assisted Automatic Control System Management Process(PDCA)

Plan
Sensor-based measurement and data collection within the building

Do
Real-time monitoring

Action
Energy saving through optimal control and maintenance

Check
S/W analysis for office building maintenance and optimization

Renewable energy use

Our office building G-Tower is equipped with 681 photovoltaic power panels, 30 fuel cell units, and 15 geothermal devices that are under constant monitoring and operational management. These PV panels produce 18,436kWh of power on average per month and are operated regularly for the duration of sunlight, and the power produced is internally consumed through the inverters installed on each floor. Fuel cells are operated eight hours per day to produce 721kWh of power on average per month, and the hot water produced from power generation is circulated to maximize energy efficiency. Regarding the geothermal power, we use temperature differences in groundwater and convert heat exchange energy to cool outdoor fans in summer and to provide heating in winter. In so doing, we produce and use an average of 81,000kWh of heat energy per month, and will further reduce our energy consumption by adjusting indoor temperature levels which currently range between 23-24℃.

In 2022, Netmarble met 2,378GJ of our building energy consumption needs with renewable energy, which is translated into 43tCO_2eq in reduced GHG emissions.

Key Metrics of Environmental Management

Energy

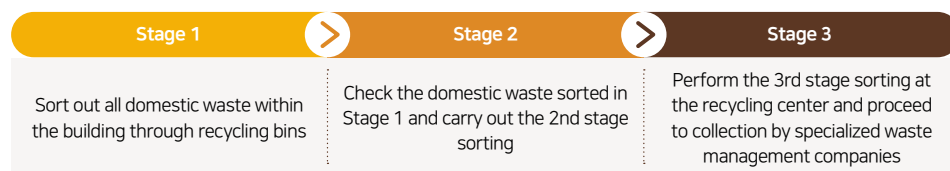Increases in renewable energy consumption

29 %

Waste management

Netmarble works in various ways to minimize waste generation while increasing recycling at G-Tower. We operate 6 types of recycling bins to improve the efficiency of waste sorting for resource recycling while making sure the recyclable waste that we discharge is fully recycled through recycling companies.

To reduce the waste generated from our office use, we are going paperless for our office operations at G-Tower and encourage double-sided printing when necessary. We have launched the environmental protection campaign at our in-house cafeteria since its opening in February 2021 to give discounts when employees bring their personal mug to help raise their awareness on waste reduction, which helped us avoid the use of single-use items on over 600 occasions on average per month.

As such, Netmarble aims to bolster our waste management capabilities to upgrade our resource circularity goals and achieve resource circulation certification, fully advancing environmentally-friendly management along the way.

Waste Discharge Process

Stage 1	Stage 2	Stage 3
Sort out all domestic waste within the building through recycling bins	Check the domestic waste sorted in Stage 1 and carry out the 2nd stage sorting	Perform the 3rd stage sorting at the recycling center and proceed to collection by specialized waste management companies

Waste Discharge Management

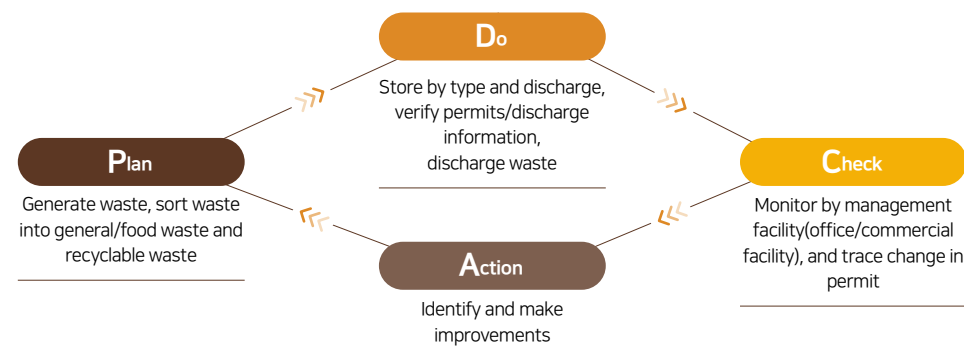| Category		Status	Note
General waste	Office facility	Discharge based on weight(kg) excluding recyclable waste	-
	Commercial facility	Discharge in bags excluding recyclable waste	
Recyclable waste		Recyclable: Paper, iron scraps, glass bottles, PET water bottles(free-of-charge) Non-recyclable: Laminated paper, food containers, plastics(discharged in the same manner as general waste)	-
Food waste	Office facility	Pay charges(collection companies/tenants)	Cost paid by the discharger
	Commercial facility	Bulk: Pay charges(collection companies/tenants) Small quantity: Operate RFID-assisted collection devices within the refrigerated warehouse to identify tenants and then measure waste amounts for discharge	

Key Metrics of Environmental Management

Waste

Waste recycling   **100** %

Waste Management Process(PDCA)

Plan
Generate waste, sort waste into general/food waste and recyclable waste

Do
Store by type and discharge, verify permits/discharge information, discharge waste

Check
Monitor by management facility(office/commercial facility), and trace change in permit

Action
Identify and make improvements

Water resources management

We installed and operate graywater and rainwater treatment facilities to reduce our water consumption and sewage generation. To increase the use of rainwater, we installed a 489 ton-capacity rainwater storage tank which exceeds the minimum statutory capacity of 410.44 tons, and such efforts allowed us to receive perfect scores in the 'water circulation management – water resources conservation – rainwater use' category of the G-SEED green building certification system. Graywater and treated rainwater are used at G-Tower for consumption at office facilities and sales facilities, restrooms, and parking lots and for landscaping. In 2022, the use of graywater allowed us to save nearly 719m^3 in water consumption.

In addition to water recycling, we also work to cut down on our overall water consumption. We installed water-saving faucets, shower heads, toilets, and electronic induction urinals to reduce domestic water consumption, and launched water conservation campaigns for employees to "turn the water on softly at the sink" and "use a cup when brushing teeth". The sum of such efforts enabled us to achieve a 2.5% year-on-year reduction in water consumption while returning to on-site work in line with the lifting of COVID-19 quarantine rules in 2022, testifying to our commitment to efficient water resources management.

Key Metrics of Environmental Management

Water resources

Reduction in water consumption   **2.5** %

Operating an eco-friendly building

Netmarble worked on multiple fronts to integrate eco-friendly considerations into our office building. We installed low-emissivity(low-E) insulated glass which reduces the inflow and outflow of heat and minimizes condensation, and created additional green spaces on the walls(93m²→123m²), and in the rooftop garden(2,208m²→2,578m²) to improve insulation performance and increase the proportion of ecological areas(35.46%→35.61%). In selecting materials, we installed high-efficiency equipment with reduced environmental loads, KS-certified materials, and eco-friendly equipment bearing eco labels that regulate hazardous chemicals content with an aim to maximize the carbon mitigation performance of our office building.

Operation of Eco-friendly Equipment

Category		Status
Insulation		• Installation: Wall greening(123m²), rooftop garden(2,578m²), low-E insulated glass • Operational status: Achieve insulation through wall greening and rooftop gardening, include insulation films within low-E insulated glass, install roll blinds and louvers
Air conditioning	GHP (gas heater pump)	• Installation: 1,260 units • Operational status: Set indoor temperatures at 23-25℃ • Change the set temperature range and operational hours at the request of respective companies **Additional saving plan** • Change the set temperature range and adjust operational hours • Preset the temperature at 25℃ (individual adjustments available at the request of tenant companies)
	Air conditioner	• Installation: 7 units • Operational status: Set indoor temperatures at 23-25℃ **Additional saving plan** • Preset the temperature at 25℃ (individual adjustments available at the request of tenant companies)
Lighting		• Set the lights-out schedule(general lights-out at 20:00 and 24:00) • Underground parking lot: Install dimmable high-efficiency LED lights **Additional saving plan** • Will expand the lights-out schedule (general lights-out at 20:00, 22:00, 24:00, and 02:00) • Reduce brightness to save energy consumption

Category		Status
Total heat exchanger		• Operate only at the request of individual companies
Lift		• Ensure the 24/7 operation of elevators • Adjust the daily operating hours of escalators
Water temperature control		• Supply hot water: 45℃ in winter, 40℃ in summer
Water circulation	Rainwater storage tank installation	• Use for restrooms and landscaping
	Graywater use	• Use for restrooms and cleaning
	Domestic water conservation	• Install water-saving faucets/shower heads/toilets and electronic induction urinals **Additional saving plan** • Install additional water-saving devices at the sink on each floor (30-40% reduction in water consumption expected)
Other operational improvement		• Turn the light off in the hallways and halls, closely monitor the opening and closing of blinds, entrance doors, and stairwell doors, launch campaigns for tenant companies **Additional saving plan** • PC-Off, minimum standby power, lights-off during lunch and in empty spaces

Infrastructure support for eco-friendly commutes

Netmarble's G-Tower introduced shuttle buses to avoid carbon emissions that would be otherwise generated through individual car commutes. Shuttling back and forth between the Guro Digital Complex Station & the Gasan Digital Complex Station and G-Tower, these shuttle buses have been made available for employees of Netmarble Company for three hours a day from am 07:30 since July 2022. As of the end of 2022, they reached 100,000 total cumulative rides with nearly 682 in average daily passenger count, contributing to minimizing individual car commutes for many of our employees and mitigating carbon emissions as a result.

We also bring added convenience for employees by improving our eco-friendly commuting infrastructure. G-Tower is equipped with 56 EV chargers and 260 bike racks, and within the bike depository installed on the 2nd floor is a shower room to make it easier for commuting employees to opt in zero-carbon mobility.

Shuttle bus

Creating an eco-friendly ecological park

We created the G-Tower Central Park as an eco-friendly biotope ecological park that serves as a habitat for a variety of fauna and flora. The park connects a terrestrial biotope which consists of piles of trees and stones and birdhouses to function as a habitat and a shelter for various living creatures with an aquatic biotope to provide animals and visitors with a resting place.

In 2022, we expanded its green spaces and introduced a multi-layered planting pattern to secure living spaces for animals and plants and promote biodiversity. Specifically, green spaces were added on the walls($93m^2 \rightarrow 123m^2$) and to the rooftop garden($2,208m^2 \rightarrow 2,578m^2$) to raise the proportion of ecological areas to 35.61%.[1]

In addition, trees were inspected every week for their growth status to remove dead leaves and weeds, prune branches, secure tree trunks, and manage wildflowers. In 2022, 60 dead trees were replaced for 9 species, including Western Red Cedar.

Terrestrial biotope
Designed as a small yet fully functional biotope in sync with the surrounding green landscaped areas, partially expanded in line with changes in planting locations

Size: $187.00m^2 \rightarrow 189.22m^2$

Aquatic biotope
Function as a habitat for aquatic animals and plants through waterfront landscaping along the destroyed green areas

Size: $91.50m^2$

1) Weight-adjusted number: walls(0.3), rooftop(0.6)

Awards

Netmarble was awarded with numerous green building certificates and awards in recognition of our efforts to construct and operate eco-friendly buildings. G-Tower was certified as the highest level of green building(green 1) under the G-SEED program for creating ecological spaces and using KS-certified materials, as well as the Grade 1+ in Building Energy Efficiency Rating for achieving high energy efficiency. Furthermore, the excellence of G-Tower which pursued eco-friendly architecture all the way from the design to the construction phases was widely recognized at the 'Korea Environmental Awards 2022' as it was awarded in the climate change adaptation/eco-friendly building category.

G-SEED certificate
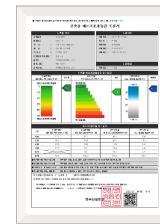
Energy efficiency rating certificate

Korea Environmental Awards

Campaigns to reduce environmental footprint

Netmarble launches the "CUT! CUT! Campaign" to encourage employees to take self-initiated, daily action to protect the environment.

This campaign was designed to raise employees' awareness on environmental protection to conserve resources and make it a daily routine to reduce unnecessary power consumption. To facilitate this campaign, we e-mail all our employees to publicize the campaign and display posters along high-traffic passages to promote energy conservation. An event is also held to exhibit photos of employees taking energy-saving actions to encourage participation.

Environmental protection campaign poster

⭐ Joining the Earth Hour Event

On the Earth Day in 2023, Netmarble joined the nationwide switch-off event hosted by the Ministry of Environment to help conserve energy. On April 22 of each year, Earth Day is celebrated globally to raise awareness on the severity of climate change and communicate the importance of a low-carbon lifestyle as a way to reduce GHG emissions. Netmarble held the 'Earth Hour Event with Netmarble G-Tower' in commemoration of 53rd Earth Day.

For 10 minutes from pm 08:00 on April 22, all lights at the main building and exteriors of G-Tower were turned off to conserve power and join in the global effort for environmental protection. Going forward, Netmarble will expand renewable energy while reducing energy consumption to proactively respond to climate change.

Eco-friendly Game Culture

Introduced

power saving game mode

Netmarble strives to disseminate an eco-conscious game culture among users throughout the gameplay phase. We aim to mitigate the environmental impact of gameplay and urge our users to take an interest in the environment by using games as the medium to achieve this goal.

Introducing an Eco-conscious Worldview in Our Games

We integrate environmentally-friendly considerations into our game content to widely communicate the importance of environmental protection. In 2022, we launched our new game 'Merge Fantasy Island' that is founded on an eco-conscious worldview. Users experience the disaster of an entire island covered with litter and are given a quest to clean up the polluted island. They set off the 'essence of healing' to gradually purify the island to make more of its land usable, which is then converted into homes for KUYA. As they clean up the polluted land in the virtual environment, users are given an opportunity to deeply relate to the importance of environmental protection.

This eco-conscious game was appreciated at numerous awards: Merge Fantasy Island was honored with the Excellence Award at the 'Korea Game Awards 2022', and was awarded in the general game(frontier) category of the Game of the Month in the Latter Half of 2022 Awards hosted by the Korea Creative Content Agency and the Excellence Award at 'Google Play's Best of Awards 2022'. Looking ahead, Netmarble will proactively pursue eco-friendliness in our games to build a broader consensus on the importance of environmental conservation.

Improving Energy Efficiency During Gameplay

Netmarble introduced power saving mode in our games to reduce environmental impact generated in the gameplay phase. In power saving mode, the game plays automatically without the user's intervention to cut down on power consumption while improving energy efficiency. This power saving mode is made available for 10 games that we service currently, including 'Blade & Soul Revolution' and 'Lineage 2: Revolution' as well as 'Seven Knights Revolution' launched in 2022.

It is notable that 'Ni No Kuni: Cross Worlds' comes with a new 'AI mode'. This pairs AI functionality with power saving mode to enable a server logic to control character AI and to operate it within the server. Even when users are not playing the game, their character interacts with other users to continue with the game. Both power saving mode and AI mode help conserve energy during gameplay and mitigate carbon emissions in the process.

Merge Fantasy Island

Power saving mode for Seven Knights Revolution

AI mode for Ni No Kuni: Cross Worlds
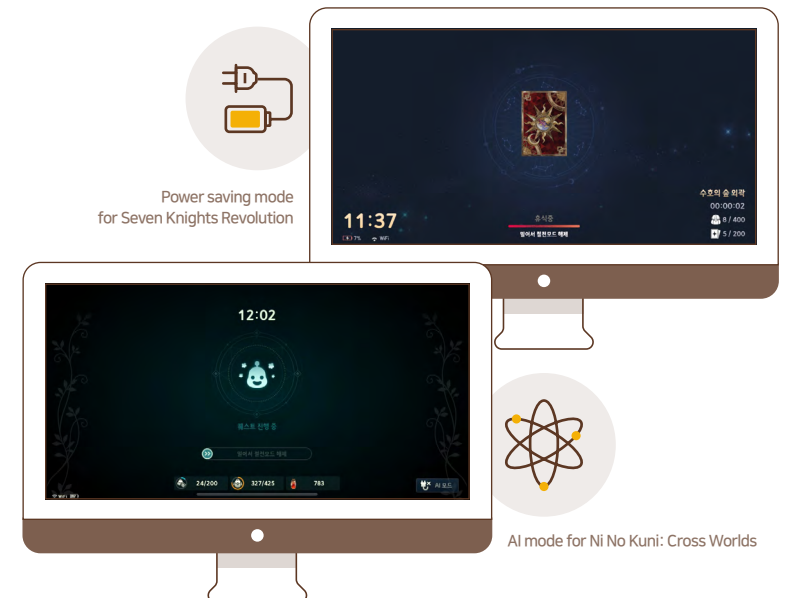
Sustainable Partners

Grievances filed by partners

Zero

Partner Management

Overview of partner management

As of the end of 2022, Netmarble did business with 221 partners engaging in game character image/merchandise production, game marketing, the provision of IT infrastructure supplies and products, and service outsourcing. To ensure transparency and fairness in the partner selection process, we conduct self-reviews on our supply chain distribution structure, and build on this to make direct transactions with partners who supply their technology to build trust-based relationships and make our services more reliable. This, in turn, helps establish sound transaction practices and streamline the distribution structure to eventually guarantee service continuity.
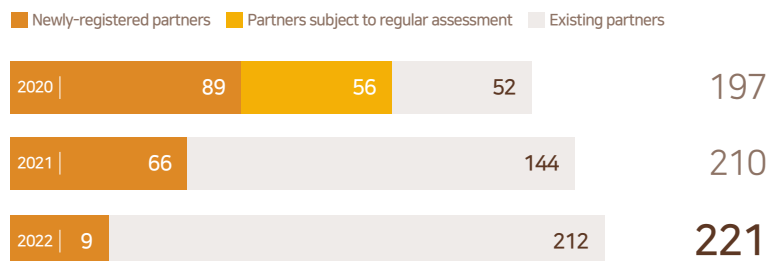
Netmarble's Partners[1]
(Unit: Companies)

■ Newly-registered partners   ■ Partners subject to regular assessment   ▢ Existing partners

Year	Newly-registered partners	Partners subject to regular assessment	Existing partners	Total
2020	89	56	52	197
2021	66		144	210
2022	9		212	221

1) Assessments were not conducted in 2021-2022 due to the supplementation of regular assessments
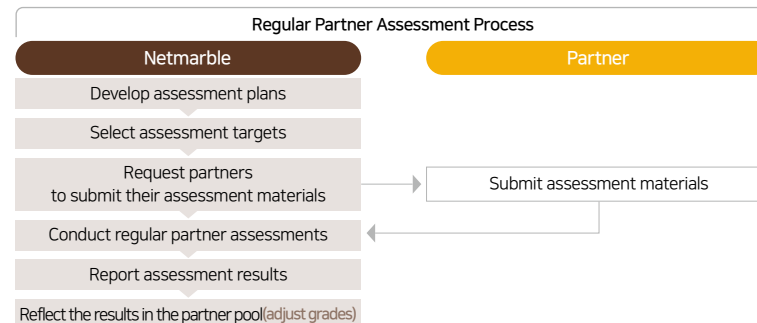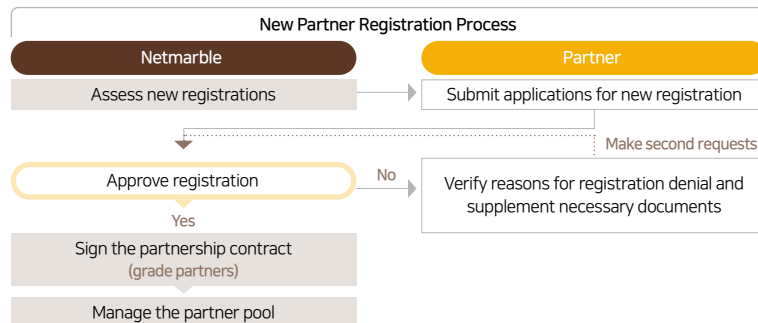
Partner registration and management process

Netmarble provides a range of systems for systemic partner management. Our purchase management regulations elaborate on the partner management guidelines to ensure the fair and reasonable process in assessing, registering, and managing partners. Partner candidates are assessed for their quality, technology, pricing, and management status among others and are eligible for registration when they score 70 points and above out of 100 points. Following consent from partners, we collect their credit rating data to prevent risks in relation to supply and service continuity.

For construction and service operations that require regulatory compliance and safety, we pay extraordinary attention to health and safety management, assessing partners' safe work plans in advance to ensure the work is performed exclusively by those partners who score 70 points and above. Safe work plans are structured in a way to comprehensively assess partners for their health and safety management system, execution level, operational management, and injury records to provide partners with a safe work environment.

With a goal of advancing reliable supply chain management, we are establishing an integrated partner operation system, which includes the regular management system that follows the cycle of 'registration assessment – performance assessment – regular assessment – year-round assessment'. Currently, performance assessments are made upon contract termination in relation to outsourcing service development and operation and the results are used as the criteria in determining contract renewal. We plan to gradually extend the scope of this system, and work is also underway to apply ESG assessment metrics to our supply chains to mitigate ESG risks along our supply chains and encourage partners to join in our ESG management journey.

New Partner Registration and Regular Assessment Process

New Partner Registration Process

Netmarble	Partner
Assess new registrations	→ Submit applications for new registration
↓	Make second requests ↑
Approve registration — No →	Verify reasons for registration denial and supplement necessary documents
Yes ↓	
Sign the partnership contract (grade partners)	
Manage the partner pool	

Regular Partner Assessment Process

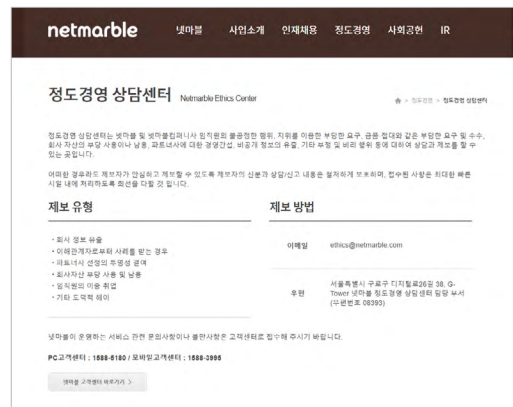| Netmarble	Partner
Develop assessment plans	
Select assessment targets	
Request partners to submit their assessment materials	→ Submit assessment materials
Conduct regular partner assessments	←
Report assessment results	
Reflect the results in the partner pool (adjust grades)	

Special Terms and Conditions for Partners to Practice Ethical Management

As any illegal and/or unethical practices of partners may bring risk to Netmarble, we make sure partners' ethical risks are properly managed. Our standard contract includes the 'Special Terms and Conditions for Partners to Practice Ethical Management' to demand that our partners observe reasonable and fair trade practices and establish ethical management as part of their corporate culture. In addition, provisions on labor, safety, the environment and other ESG considerations were added to the standard contract in February 2022. These Special Terms and Conditions specify responsibilities and obligations that both Netmarble and partners bear as contractual parties to manage non-financial risk, identify risk factors in the workplace, provide training, and make manuals available. In 2022, we conducted health and safety assessments in accordance with these special provisions to exclude partners who failed to meet the set score from contract signing.

In the entire Request For Proposal process, we inform that our partners prepare and submit their 'Pledge to Practice Ethical Management'. When any act which runs counter to this pledge is identified, we take appropriate action including refusal or termination of contracts as well as restriction of future transactions to make doubly sure we prevent any and all ethical risks.

Improving communication with partners

We inform our partners of the Netmarble Ethics Center to help report violations and grievances that arose while doing business with us. In 2022, zero grievances were filed by partners, and we will advance our purchasing system to proactively communicate with partners over the mid-to-long term so that the Center may serve as a window to collect varying feedback as well as partner grievances.

Whistleblowing page of Netmarble Ethics Center

Fair Trade with Partners

Purchase ethics policy

Charter of Purchase Ethics

Netmarble established and abides by the Charter of Purchase Ethics and its action principles as part of our purchasing regulations. We comply with laws and regulations and deliver the promises we make to advance 'win-win' purchasing practices along with partners.

Charter of Purchase Ethics	We are deeply aware of our role as a purchase expert contributing to Netmarble's profitability improvement, and practice the value of 'Win-Win' purchase with partners as our business companion based on honesty and trust. In addition, we pursue openness in our purchasing practices to abide by laws and keep our promises with impartiality and integrity.

Code of Conduct for Purchasing

1. We recognize that fair and transparent purchasing practices form the foundation of the Company's competitiveness, and as a proud member of Netmarble, we uphold the honor and dignity of the Company and ensure the Company's reputation is not tarnished.

2. We adhere to business ethics, act ethically, and do not engage in any form of unfair practices.

3. We do our utmost to establish sound corporate ethics and an organizational culture of integrity, and lead by example in eradicating corruptive practices.

4. We actively engage in purchasing activities to improve the Company's profitability.

5. We neither propose nor accept illicit deals or unfair practices in doing business with partners, and do not engage in any unfair transactions exploiting our dominant position under any circumstances.

Code of Conduct

To establish fair and transparent business relationships with partners, Netmarble specifies provisions on 'Practicing Fairness and Mutual Prosperity' within our Code of Conduct. Both Netmarble and partners abide by the Code of Conduct and generate performance on the basis of rigorous ethical management.

Code of Conduct	**Chapter 4. Practicing Fairness and Mutual Prosperity**
	- Selection of partners based on fair standards - Efforts for mutually prosperous transactions - Prohibition of provision and acceptance of illicit gains such as entertainment and gift - Transactions with law-abiding, ethical partners - Prohibition of unauthorized and compulsory acquisition of third party information assets

Fair trade compliance regulations

Netmarble establishes and implements policies in relation to fair trade practices. Our standard purchase ethics regulations prohibit the exploitation of one's dominant position to ask favors or make unjustified requests. We stipulate partner management guidelines pursuant to the 'Fair Transactions in Subcontracting Act', the 'Act on the Promotion of Mutually Beneficial Cooperation between Large Enterprises and Small and Medium Enterprises', and other applicable laws, and abide by the Charter of Purchase Ethics and its action principles as part of our purchasing process management regulations.

Code of Conduct on our official website 🔗

Purchasing process

Netmarble established purchasing process management regulations, and our purchasing operations comply with the six principles that include the principle of profit creation, the principle of fairness, and the principle of process compliance among others to specify the necessity for fair and reasonable transactions. We use our purchasing system in selecting vendors for individual contracts and issue and retain each contract in written form to ensure transparency throughout the transaction process.

Enforcement of fair pricing

We specify provisions on pricing and price adjustments in the Standard Product Supply Agreement to ensure fair pricing. Prices are determined reasonably in consideration of the quantities of products supplied and their specification and quality as well as market prices, and prices are set through consultations made between Netmarble and partners rather than through any unilateral decision. Furthermore, when price adjustments are required due to fluctuations in the price of goods supplied, such adjustments are made through consultation pursuant to the Fair Transactions section of the Subcontracting Act.

Improvement of payment conditions

We improve our payment conditions to help stabilize the operational stability of our partners. Since 2015, we increased the frequency of payments to twice a month and strictly abide by our payment criteria to make sure payments are made within 30 days on average. When partners request for early payment to ensure their financing liquidity, we make reviews and allow for such exceptions. In principle, all payments are made in cash and KRW 191,975,005,204 of cash payments were made in 2022.

Purchasing Principles

1 Principle of profit creation	2 Principle of purchasing at optimal prices, quality assurance, and guarantee of delivery due date	3 Principle of right time, right place, right product	4 Principle of fairness	5 Principle of improvement	6 Principle of process compliance
We ensure the purchasing of goods and services serves as an added source of profit generation through cost/ expense savings.	We purchase goods and services at the most cost-effective prices while ensuring their quality and on-time delivery.	We ensure the supply of the right product at the right time and in the right place in purchasing goods and services to reduce purchasing costs and inventory expenses.	We avoid biases and personal interests in performing purchasing work to gain trust internally and externally.	We continuously improve overall work with enterprising attitudes for increased operational efficiency and performance.	We follow the process defined in purchasing regulations and the Company's arbitrary decision regulations in the entire purchasing process.

Social Contribution

Total social contribution expenditures

KRW 2,662 million

netmarble cultural foundation

Netmarble Cultural Foundation's website

Netmarble Cultural Foundation

Stakeholders are increasingly interested in corporate social responsibility and sustainability, and businesses are expected more than ever to engage and contribute to the communities where they operate. As a company that has taken social contribution seriously since early days, Netmarble established the Netmarble Cultural Foundation in 2018 to deliver most lasting and impactful outcomes in undertaking our initiatives.
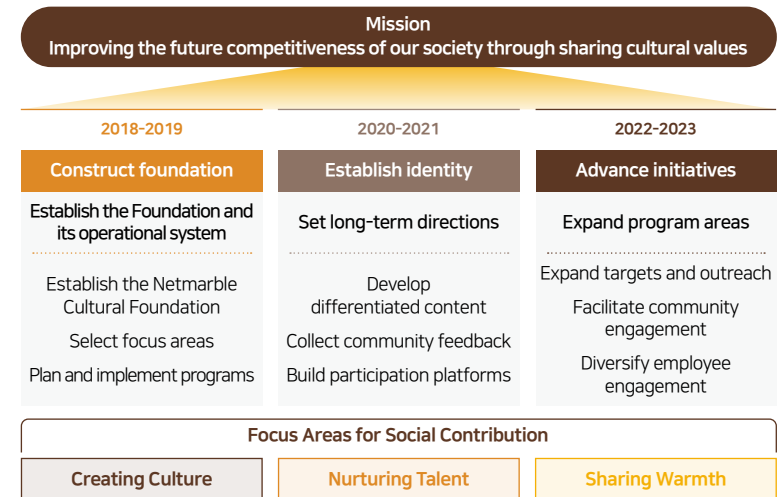
Netmarble remains focused on unlocking the potential of the resources and capabilities that we have to the fullest extent possible to create and disseminate cultural value across our society. We make the most use of the positive qualities that games have to offer to create a new culture, nurture talented individuals who will lead the future of the gaming industry, and build a culture of joyful sharing with communities and stakeholders.

Inspired by the openness of games that are readily accessible for anyone at any given location, we provide wide-ranging and specialized programs that are open to all generations from children and teenagers to youth and adults and even to people with disabilities. We also work to identify the social issues that arise in the communities where we operate and support programs designed to resolve such issues.

The Foundation Identity of the Netmarble Cultural Foundation symbolizes a star of hope made of love. This embodies our hope to open new possibilities towards a better tomorrow through the concerted efforts of Netmarble and our wide-ranging stakeholders.

Beneficiaries of social contribution
(Unit: Persons)

Year	Value
2020	24,668
2021	28,190
2022	28,259

Total social contribution expenditures
(Unit: KRW million)

Year	Value
2020	3,155
2021	2,222
2022	2,662

Total investment in social contribution[1]
(Unit: KRW million)

Year	Value
2020	3,041
2021	2,060
2022	2,492

1) Including COVID-19 and flood recovery funds for 2020

Our approach and roadmap for social contribution

Since its inception in 2018, the Netmarble Cultural Foundation has engaged in a wide spectrum of social contribution activities to disseminate cultural values as a way to enhance the competitiveness of our society over the long haul. The Foundation aims to bring positive and actual change to communities from the long-term, sustainable perspectives, and focuses on leveraging corporate capabilities and resources to the fullest extent possible in progressing the social contribution activities.

Mission
Improving the future competitiveness of our society through sharing cultural values

2018-2019	2020-2021	2022-2023
Construct foundation	**Establish identity**	**Advance initiatives**
Establish the Foundation and its operational system	Set long-term directions	Expand program areas
Establish the Netmarble Cultural Foundation	Develop differentiated content	Expand targets and outreach
Select focus areas	Collect community feedback	Facilitate community engagement
Plan and implement programs	Build participation platforms	Diversify employee engagement

Focus Areas for Social Contribution

| Creating Culture	Nurturing Talent	Sharing Warmth

Social contribution implementation principles

The Netmarble Cultural Foundation's social contribution programs are all anchored on the following 4 principles.

1. Continuity	2. Sincerity	3. Expertise	4. Transparency
We pursue lasting and consistent implementation, rather than one-off events, to bring out change over the long haul.	We focus on the pressing needs of communities to establish a support system that delivers real-life benefits.	We ensure responsible organizations have the relevant expertise and experience to increase the impact of our programs and manage risks.	We document the entire process of our programs and share the data with internal/external stakeholders to improve transparency.
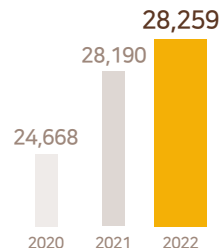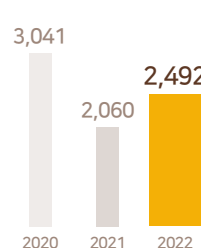
Creating Culture
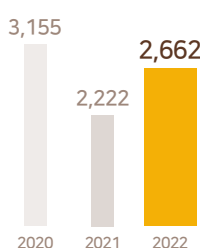

Play Center

Special game space where play meets education

To make games accessible for all irrespective physical or social constraints, we opened Play Centers at special education schools and relevant institutions nationwide. This program was initiated through public-private partnerships with the National Institute of Special Education in 2008, and a total of 35 such Centers opened as of December 2022. Equipped with PCs, mobile devices, VR equipment, and other cutting-edge devices, Play Centers distribute systemic user manuals that are easily applicable to shape a new culture of learning and leisure for students with disabilities. In 2023, we plan to distribute brochures and videos in celebration of their 15th anniversary, and extend their scope into wider communities on the strength of our capabilities accumulated over the years.

Family Game School

Communicating through games to bring families closer

To help establish a healthy gaming culture at home, the Netmarble Cultural Foundation launched the Family Game School program in 2016 for elementary schools and parents nationwide. Learning content is distributed for families to practice proper communication methods through the medium of games and build positive relationships, along with parent discussions, case studies, and research. Phased-in training courses are also provided for parents to look over their role and practice to properly assume their role to promote game-based healthy communication at home. Hybrid on/offline education is made available for even more families to access this education program.

Game Concert

Open forum for gaming industry and culture

Initiated in 2019, the Game Concert invites experts in the gaming industry to share a multi-faceted view on the gaming industry and a game culture and to present future visions. This helps elevate understanding on the industry and its culture, and interactive lectures provide an opportunity to engage in the spirited exchange of diverse views, receiving positive feedback from participants each time. The Game Concert addresses different topics each year. In 2022, a host of lectures were provided under the the topic 'Game &', and the 2023 Game Concert will be themed 'Game and Future'.

e-Festival for Students with Disabilities

Festival for everyone to unite through games

The Netmarble Cultural Foundation has held the e-Festival for Students with Disabilities since 2009. As Korea's only e-sports festival and the competition held for students with disabilities, the event is co-hosted by the Netmarble Cultural Foundation, the National Institute of Special Education, and the Korea Creative Content, and sponsored by the Ministry of Education and the Ministry of Culture, Sports and Tourism. It is joined by students with and without disabilities, teachers, and parents to help students with disabilities enhance their digital competencies and access a leisure culture that was not readily available before. In 2021 and 2022, the festival went online to support students with disabilities to enjoy the culture of e-sports, and it will resume in offline format in Gyeongju in 2023.

Nurturing Talent

Game Academy Dream of the future, put into games

The Game Academy has been up and running since 2016 to nurture talented young generations who will lead the nation's gaming industry. Teenagers are selected for their strong commitment to making their dreams come true and basic competency for game development, and are provided with intensive 8-month education. Not only do they learn game development knowledge and skills, but also they are assisted in developing ethics and a sense of responsibility required for game talent. The bootcamp program also provides high-quality education to future game developers. This short-term, intensive program offers education on app store registrations as well as game development skills.
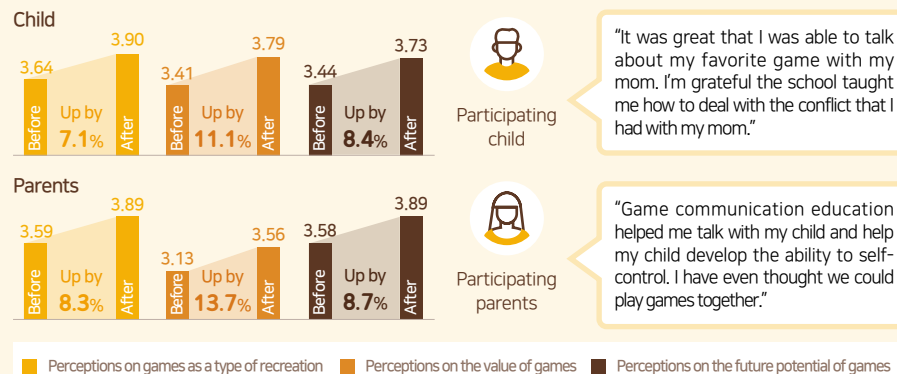

Game Academy reunion

⭐ Program social impact assessment

The Netmarble Cultural Foundation conducts annual effectiveness assessments on game-related social contribution programs to objectively measure the benefits delivered by such programs. The results are used to improve and supplement its programs to pursue systemic, phased-in improvements in game-themed social contribution initiatives.

For Family Game School, both quantitative research(self-survey questionnaire with scale) and qualitative research(keyword analysis and Focus Group interview(FGI)) was conducted together on 189 children and 191 parents who participated in the program to produce objective numerical data on its effectiveness and collect feedback from participants. It revealed that improvements were made in awareness on games among both participating children and parents, and a 13.7% increase was observed in parents' 'awareness in positive value of games'.

The Game Academy was verified for its contributions to talent capacity-building tailormade to the gaming industry. The verification was made on 70 participating students through experimental research based on the metrics standardized through scientific processes as well as keyword analysis and FGIs. It turned out that students improved by 44.8% and 28.1% in terms of game knowledge and understanding and career preparedness respectively when compared before and after their training.

Going forward, the Netmarble Cultural Foundation will continue with scientific verification of its programs to identify their effectiveness and to plan and implement social contribution programs that bring positive impact to society through games.

Comparative Research Outcomes for Family Game School[1]   (Unit: Points)

Child

	Before	After	Up by
	3.64	3.90	7.1%
	3.41	3.79	11.1%
	3.44	3.73	8.4%

Participating child

"It was great that I was able to talk about my favorite game with my mom. I'm grateful the school taught me how to deal with the conflict that I had with my mom."

Parents

	Before	After	Up by
	3.59	3.89	8.3%
	3.13	3.56	13.7%
	3.58	3.89	8.7%

Participating parents

"Game communication education helped me talk with my child and help my child develop the ability to self-control. I have even thought we could play games together."

■ Perceptions on games as a type of recreation   ■ Perceptions on the value of games   ■ Perceptions on the future potential of games

1), 2) Research commissioned to Seoul Women's University(5-point scale)

Comparative Research Outcomes for the Game Academy[2]   (Unit: Points)

	Before	After	Up by
	2.52	3.65	44.8%
	2.49	3.19	28.1%
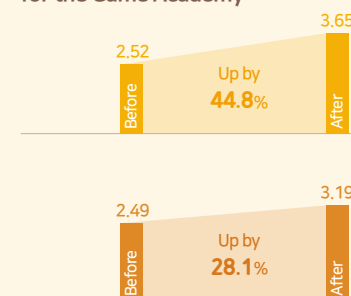
■ Knowledge and understanding on games
■ Career preparedness

Individual creations by team in 2022

20 games

Games launched on Play Store in 2022

10 games

Sharing Warmth

Netmarble Visit

My visit to the gaming industry

This program provides middle and high school students and undergraduates who are interested in the gaming industry and relevant career with special lectures hosted by our employees and a tour around our office building. They are given the opportunity to explore diverse career pathways through the independently developed content, engage in experience-based activities to understand the game development process, and attend lectures offered by working-level personnel to share their knowledge and experience on the gaming industry and the specific roles performed. From 2023 onwards, we will develop tailormade boardgames to make this program even more engaging for students.

Netmarble Para-Rowing Team

Overcoming prejudices and limitations

The Netmarble Cultural Foundation became the first in the gaming industry to start a sports team of athletes with disabilities, providing these individuals challenged even more than their able-bodied counterparts with stable employment and systemic training opportunities. Netmarble Para-Rowing Team has been producing excellent achievements at numerous domestic and global events, including Korea's National Para Games and international championships. We will continuously support these athletes with training facilities, supplies, and better training conditions to promote disability sports and ensure their self-reliance over the long haul.

Netmarble Sharing

A warmer world together

The Netmarble Cultural Foundation launches in-house sharing events that engage employees to promote the welfare of communities. This covers Netmarble Sharing Day and holiday season auctions as well as employee donations and volunteering to encourage employees to join social contribution activities while creating and establishing a culture of sharing across the board.

Netmarble Sharing Day evolved from the Netmarble Bazaar launched in 2016. Netmarble employees donated books, home appliances, albums, and other items, and some of these donations were auctioned off. All of the proceeds generated as such went to community welfare centers and childcare institutions, and the the Creative culture and arts education (Together Project) operated on the funds raised through sharing events helped provide wide-ranging IT-based education and exhibitions.

Netmarble Books

Fairy tale for everyone to understand differences

The Netmarble Cultural Foundation publishes 'Netmarble Books' as a picture book series that depicts a world where everyone exists in harmony, including those with disabilities and socially underprivileged individuals. Under this series, children's books have been released to convey the message of respecting diversity and becoming a responsible member of society. In 2023, a new book titled 'The truth is,' will be published to recount the joy of being old. Conferences and exhibitions are also held and human rights education is provided to explore ways forward to shape a society where diversity is appreciated.

The entire proceeds from selling the books go to publish the series and donate to educational and welfare institutions. To create a world where differences are understood and embraced, Netmarble Books will continue with its publication and arrange meaningful opportunities for sharing.

Contributing to Communities

Joining Industrial Complex Open Innovation

Netmarble participated in the open innovation program led by Korea Industrial Complex Corporation to support startups with innovative technology. We engaged in the 5-month acceleration of startups developing conversational AI platforms and game discovery platforms to select, validate, and commercialize technology development projects, recommended outstanding startups, and supported them as finalists for the Corporation's open innovation demo day. This program allowed us to explore our own technology innovation and expand our human network all while assisting startups in validating and commercializing their technology, generating meaningful win-win outcomes along the way. We will continue to collaborate within our local communities to pursue the value of shared growth on an ongoing basis.

Providing community amenities for vulnerable groups

To care for people with disabilities and vulnerable individuals, we install facilities that enable convenient yet shortest-distance movement while complying with applicable regulations to improve accessibility for all. For instance, G-Tower is fitted with pathways, safety handrails, and finishing materials that meet legal standards to provide wheelchair/assistive device users, seniors, children, and all other visitors with safe and convenient access to its facilities.

In 2022, we learned that the stairs and steep slopes between G-Tower and high-density housing areas to the west of G-Tower posed difficulties for seniors and wheelchair users. This prompted us to transplant some trees and grass to install wheelchair ramps and safety handrails. In so doing, we created pathways accessible for all, and we continue with our efforts to pursue improvements to make the entire community as well as G-Tower easily and safely accessible for all.

Open innovation launching ceremony

Open innovation demo day
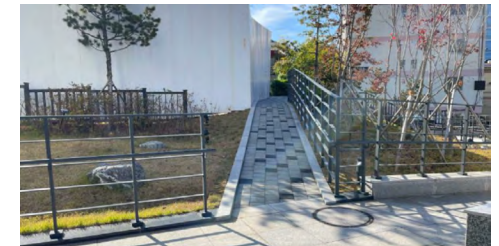
After improving the walkway outside G-Tower

⭐ Netmarble Character Park

Netmarble converted 70% of the G-Tower site into a park and made it publicly available to provide an eco-friendly shelter for community members. In 2022, we opened the Netmarble Character Park in G-Tower's public open space. This 5,884m²-sized character park serves as an urban rest area accommodating patios, rattan chairs, a ground fountain, and other wide-ranging places to relax, along with ecological ponds to bring comfort and healing to the busting urban center. The park also welcomes visitors with characters from Netmarble's leading IPs – 'Seven Knights', 'Modoo Marble', and 'MaguMagu' – as well as 37 character sculptures from eight of our games including 'Ni No Kuni: Cross Worlds', and 'The Seven Deadly Sins: Grand Cross'.

Talent Acquisition and Development **56**

Human Rights and Diversity **62**

Employee Welfare **68**   Sound Governance **78**

Risk Management **82**   Ethics and Compliance **85**

GROW TOGETHER
Netmarble's culture for sustainable growth

Ni No Kuni: Cross Worlds

Talent Acquisition and Development

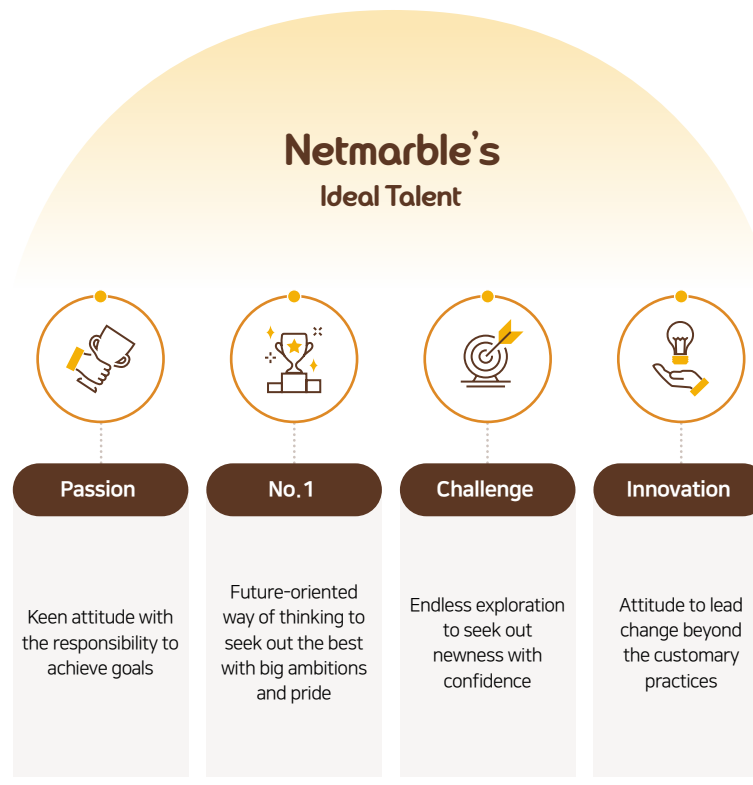**Average training hours per employee**

10.6 hours

Building a Talent Pipeline

At Netmarble, employees are the most important key driver behind our growth and future. To service games that bring joy to people worldwide, we strive to develop new pools of excellent talent in wide-ranging areas from business and technology to marketing and design.

We operate a dedicated recruiting team and perform phased screenings including interviews and personality tests to assess candidates' job competencies and fit with Netmarble's definition of an ideal talent. Netmarble will continue to do our utmost to recruit and nurture top talent for our corporate growth and the advancement of the gaming industry.

Ideal Talent at Netmarble

Netmarble's Ideal Talent

| **Passion**	**No.1**	**Challenge**	**Innovation**
Keen attitude with the responsibility to achieve goals	Future-oriented way of thinking to seek out the best with big ambitions and pride	Endless exploration to seek out newness with confidence	Attitude to lead change beyond the customary practices

Nurturing future talent

To attract junior talent who have an interest and competencies in the gaming industry, we operate 'open recruitment' and 'recruitment-linked internship' programs each year. 'Open recruitment' includes the Netmarble Test and coding tests as well as interviews to focus on real-world competencies required to perform one's job rather than mere qualifications. Our recruitment-linked internship program provides competent and talented graduates with firsthand career experience and top-performing interns with an opportunity to come onboard as full-time employees. In 2022, we significantly scaled up our recruitment-linked internship program from the previous year and recruited interns by job category – business PM, software development, AI research and others- to develop a broader and more diverse talent pipeline.

Allied Software Academy of Companies

Netmarble joined the 'Allied Software Academy of Companies(ASAC)' to provide young people with a software training opportunity along with the Korea Chamber of Commerce and Industry and 10 other companies. We assisted in planning and designing training courses that reflect the qualities and competencies required in the field, and our working-level experts on AI-based big data analytics offered special lectures to help young people wishing to become software developers to gain necessary expertise and technology.

In September 2022, we were granted the 'Youth Jump-up Membership Certificate' by the Ministry of Employment and Labor in recognition of our efforts to help young job seekers strengthen their competencies and provide them with greater employment opportunities. As a leader of the domestic gaming industry, Netmarble will remain committed to facilitating youth employment.

청년도약 멤버십 가입증서
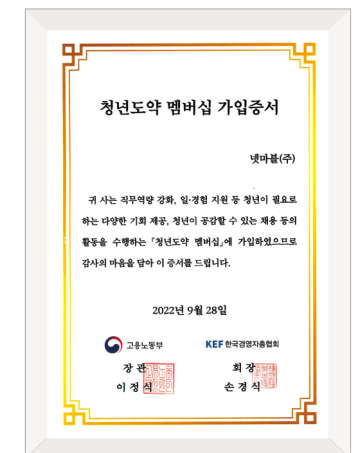
Youth Jump-up Project membership certificate

Marble Challenger

> "An event dungeon to gain experience points for undergraduates wishing to become 'hard-carry' players in the gaming industry"

'Marble Challenger', which targets undergraduate students wishing to build their career in the gaming industry, assists them in interacting with our working-level employees from diverse functions through posting on Netmarble's official blog, internal/external event participation, and mentoring. Varying opportunities are provided to indirectly experience the industry firsthand to improve their understanding and broaden their perspectives on the gaming industry. Job candidates who completed the Marble Challenger program are given precedence in the applicant screening process to closely align this program with our hiring. As of December 2022, over 50% of Marble Challenger graduates successfully landed a job in the gaming industry.

Career Support Provided through Marble Challenger

Job seekers who landed a job in the gaming industry
58%

Job seekers who joined Netmarble
16%

Marble Challenger activity

Needs a Huge Buff!

> "Mentoring provided by seniors who reached their maximum level to share their experience points with young employees who just started the quest of their life"

Netmarble designed the 'Needs a Huge Buff!' project for future game talent preparing to start their career in the gaming industry to improve their competency and provide more practical career information. This mentoring program matches undergraduates, interns, and young employees wishing to develop game-related career pathways with our professionals working in the areas they are interested in. This project has been undertaken in 5 rounds for jobs such as game character voiceover and game planning. While both mentors and mentees have been internally recruited to date, we will expand this program to accommodate external applicants.

'Needs a Huge Buff!' Youtube videos

Expanding recruitment

Netmarble is expanding recruitment each year to step up our efforts to bring in talented individuals. We ensure a fair and transparent hiring process for all applicants who are interested in and enthusiastic about games and Netmarble, without discrimination against gender, sexuality, religion, academic background, age, etc.

The digital transformation accelerated in the wake of COVID-19 and dramatically boosted the demand for programmers and engineers across different industries. Our demand for candidates with tech expertise also increased than before in line with the convergence of AI, big data, cloud, and other emerging technologies, naturally leading to more open positions in the relevant fields including programming, artificial intelligence, data science, etc. In 2022, these positions accounted for 45.1% of the total 224 new hires.

Annual New Hires

(Unit: Persons)

120 2020

217 2021

224 2022

Identifying and developing potential leaders

Our succession plan aims to establish and manage a pool of next-generation leaders for key positions at Netmarble in advance. The candidates for leaders are selected based on recommendations made by higher-level leaders at respective organizations and the personnel verifications performed on their potential as leaders. Selected candidates are assisted in a way to offset their weaknesses while maximizing their strengths so that they can successfully assume their leader role.

For positions that are difficult to fill internally, we develop our recruiting strategy to bring in qualified talent from outside the Company by comprehensively considering the size of the organization in need of staffing, the hiring needs, and the possibility of internally nurturing leader candidates. Netmarble aims to systematically cultivate and secure next-generation leaders to bolster organizational stability.

Supporting Employee Growth

Netmarble operates various capacity-building programs to support our employees in their self-directed growth journey. Our training courses are designed to meet the different conditions and needs of our employees including new hires(experienced hires, employees hired through open recruitment, and interns) and position holders(leaders, new leaders). Internal conferences and forums are held to provide learning opportunities to share each other's knowledge and experience.

New hire training & onboarding

Onboarding for new hires

Netmarble Company's orientation training(on/offline) supports new hires as they take their initial steps as a part of our organization. Such training is intended primarily to assist new recruits in internalizing Netmarble's value systems and developing basic qualities required to be a member of society. Since 2023, the 'Netmarble Game Contest(NGC)' was launched as a mini-game planning and development project to elevate new recruits' understanding of the gaming industry and their collaboration skills. This is followed by mentoring support to help new hires mingle with incumbent employees and quickly adapt to their new roles at Netmarble.

New Hire Onboarding Programs in 2022

| Pre-Boarding	Common Orientation Training	Common SQC Program	Post-assignment Activity
• Pre-networking on a metaverse platform • Build a sense of belonging and solidarity	• Improve understanding on Netmarble's history and value system, the gaming industry, and their job while developing basic qualities required for employees	• Propose diverse ideas from the user's perspective to provide more satisfying and engaging gaming experience • Explore and discuss the essence of games with the team	• Provide OJT training after assignment in consideration of the division's R&R and work process • Provide 1:1 mentoring to share experience and knowledge and support new hires' successful onboarding

SQC program

Netmarble provides the Service Quality Control(SQC) program for new hires working in business operations. This intends to identify and propose diverse ideas from the user's perspective to deliver more satisfying gaming experience. New hires working in business operations attend the SQC program one year upon their joining Netmarble to understand the essence of games and improve their user mindset to develop basic competencies to assume business PM roles. Furthermore, these new hires are given the opportunity to engage in business operations on their own initiative by identifying and making a range of improvement tasks for the game services published by Netmarble.

Onboarding for experienced hires

Our onboarding program assists experienced hires in quickly adapting to their new role at Netmarble. This helps assimilate them to 'Netmarble WAY', which is Netmarble's value philosophy, growth story, business overview, HR programs, and working methods, and also provides diverse programs including networking among new hires so that they better understand our organization and work methods and build consensus to align themselves towards our shared goal.

In 2022, we completely renewed the welcome kit provided to new hires to include items that fully manifest Netmarble's identity as well as the 'Day 1 Guide'. Our Buddy Program was also realigned to help new hires develop a better understanding of Netmarble while accomplishing the set missions along with experienced colleagues from their assigned division to tour around the office building and learn how to use internal systems.
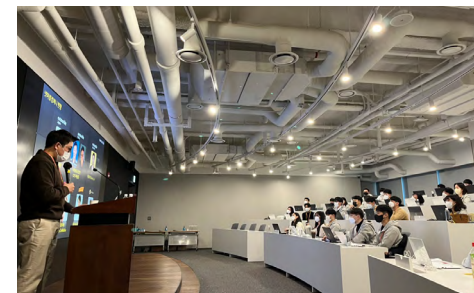
New hire orientation training　　　Welcome kit

Leadership training

Our leadership training programs assist leaders in bolstering their organizational management competency and driving performance generation. Each year, newly-appointed leaders attend the special lectures provided by top management on Netmarble's leadership philosophy to properly fulfill their role. We also make available 'Job Support Manual for Leaders' for those taking on new roles to help them understand our major internal systems and processes spanning HR, finance, and general affairs.

In 2022, we created an onboarding process for newly-appointed leaders to support them to successfully settle with their new role and lead their organization through 1:1 meetings with higher-level leaders and the head of the HR division as well as HR sessions.

We also invited external experts in sync with our performance management cycle to provide team leaders with capacity-building training on topics like organization/performance management and communication skills with team members. For those who completed such training, we produced and circulated lecture notes that summarize key takeaways and tips to transfer their training to their daily routines to bring about practical behavioral changes among these leaders. We also survey them on their training satisfaction and whether they implemented what they learned at work, in order to discover potential changes and incorporate them into future training sessions.

Sharing knowledge & expertise

Netmarble actively encourages our employees to attend domestic and global game and IT related conferences and external training for the purpose of capacity-building. We also operate programs to help share expert knowledge and project experiences among employees. These include the Game Trend Forum(GTF) that address domestic and overseas game trends and issues, the Netmarble Global Game Conference(NGGC) that facilitates the sharing of global game services and know-how, and the Game Developer Forum(GDF) for our in-house professionals to share their game development know-how. Anyone wishing to attend these events may participate to share their experience and knowledge while interacting with others.

2022 GDF dealt with broader topics including business and marketing operational know-how and domestic/international market trends as well as development cases to share each other's knowledge and experience and communicate with one another. All courses were provided offline amid the post-COVID-19 era to strengthen communication between lecturers and attendants, and the forum was recorded and made available to employees in order for them to obtain the relevant knowledge.

Leader training program
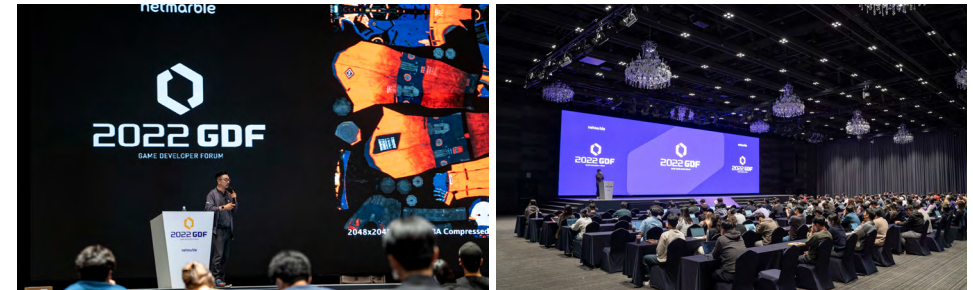
2022 GDF

⭐ Partnering with organizations for future tech leaders

We form partnerships with varying external organizations with an aim to produce intelligent games powered by advanced AI technology. Our partnership with Korea University's Department of Artificial Intelligence began in 2019 to support research on deep learning-based speech synthesis and allow our employees to access advanced technology and apply such technology to their work. This partnership enabled us to develop a Singing Voice Synthesis(SVS) model to achieve high-quality speech synthesis, and in 2023, we are conducting research on adjustable SVS models.

Performance-based Management

Netmarble distinguishes between performance and competency, and performance appraisals are carried out by comparing one's achievement against a predetermined goal, whereas individual employees are evaluated for their degree of competency. Both performance appraisals and competency assessments ultimately aim to support the growth of employees, and their results serve as basic data in determining compensation each year.

Performance appraisal

Netmarble advances fair performance appraisal based on systemic goal setting and regular peer feedback. Our performance management follows the year-round cycle which starts from setting goals at the beginning of the year and moves on to interim reviews in the first half and regular feedback to end with comprehensive assessments. Comprehensive assessment results are used for compensation and leader appointment, and are provided in in-depth feedback format through 1:1 meetings held with organizational heads to promote individual employees' growth.

The first step of 'goal setting' in the performance appraisal cycle prioritizes the alignment between organizational and individual goals. To this end, all employees participate in setting their organizational goals so that their divisonal goals are defined in alignment with the overall corporate strategy through mutual consultation. The organizational goals set as such lay the groundwork for individual employees to engage in consultations with their leader to set their individual goals in a way that contributes to attaining the organizational goals to align their growth with organizational growth.

The second step is 'interim review and feedback'. Following goal setting at the start of the year, reviews are made on the progress towards each goal of individual employees between June and July to support their goal achievement. This also serves to discuss with leaders any difficulties employees face in attaining their goals, which allows employees to take a second look at their goals and rethink their implementation strategy.

The third step is 'regular peer feedback'. Netmarble provides the regular feedback system to support effective goal management among employees as well as among leaders. Employees working at a given division have access to their detailed work goals and may give their feedback as they wish on noteworthy achievements and necessary improvements depending on the progress made towards these goals. The feedback provided by leaders and co-workers is accumulated for the duration of the assessment period to serve as the basis for fair performance appraisal.

The last step is 'final assessment and result feedback.'. Individual goal achievement is confirmed and their level of attainment determined based on the previous stages taken. Along with individual assessments, the performance of their organization is also assessed and the official feedback period is implemented so that the results are reviewed with higher-level organizational heads and are reflected in the following year's business plan.

Annual Performance Management Cycle

Goal setting
Set individual work goals and action plans through mutual consultation

Interim review and feedback
Review the progress made towards each goal and offer guidance for goal attainment

Regular peer feedback
Encourage each other through regular feedback and support career development

Final assessment and result feedback
Conduct comprehensive assessment on the work outcomes achieved and give feedback

Leadership and competency assessment

Netmarble supports the assessment of competencies required for individual positions and roles as well as relevant feedback to ensure our employees' self-directed competency development. We categorize our employees into leaders and members to perform competency assessments in consideration of their job position and role.
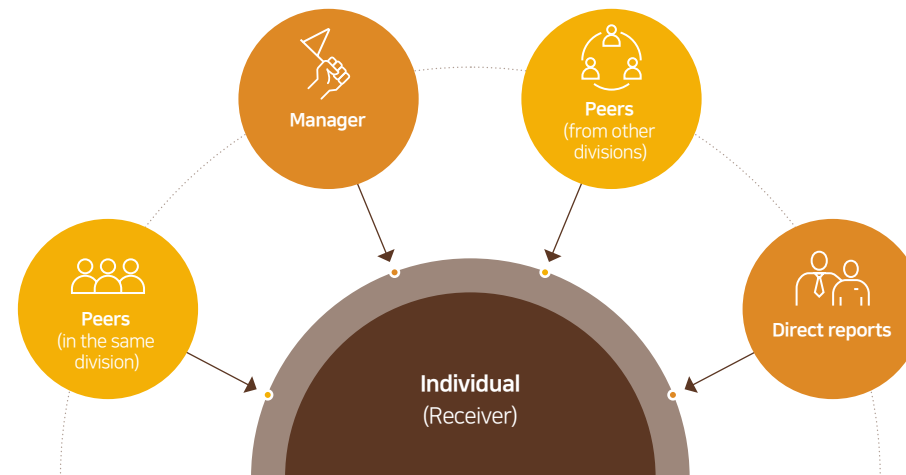
Leadership assessment is performed with the participation of the managers of the assessees, junior members(direct reports), and colleagues in the same position. This 360-degree assessment process consists of three components – 'core value & basic philosophy' which reflects Netmarble's vision and value, 'core competency(work, people, self-management)' required for leaders, and 'leadership derailers' which refer to behaviors and tendencies that get in the way of leaders' performing at their best, and serves to take stock of leaders' current level of leadership competency.

To ensure leaders who receive assessment objectively identify and improve their leadership skills, we provide them with result reports each year which contain various charts and metrics, including comparison between the overall average score and one's own score and between previous year's assessment score and this year's score. Netmarble uses leadership assessment results in making promotion decisions and identifying leaders who are proper fit for our organization.

Competency assessment for members is also a 360-degree assessment process joined by the leader of their division, colleagues, and members from other relevant divisions to offer multi-faceted assessment and feedback. Competency assessments are made on 'common competency' which reflects Netmarble's definition of an ideal employee and 'job competency' to measure expertise required to perform specific roles. As to job competency, we ensure measurements are made on the type of job expertise specifically required at the moment in reflection of the changing organizational and business landscape, and categorize competencies into 70 different roles to make assessments according to the characteristics of individual roles.

Following such assessments, feedback is provided on a range of metrics, including one's year-over-year growth and comparison between self-assessment and assessment made by others, so that members themselves review their own competencies from multiple angles in a comprehensive manner and improve on their weak competencies through job training.

Leadership and Competency Assessment Structure

Manager

Peers (from other divisions)

Peers (in the same division)

Direct reports

Individual (Receiver)

Human Rights and Diversity

Percentage of reports on human rights violation addressed

100 %

Protecting the Human Rights of Employees

As a global game culture company, Netmarble endorses the principles of banning forced labor, discrimination, and child labor as stipulated in the Fundamental Conventions of the International Labour Organization(ILO) and abides by applicable laws and regulations. We participated in the UN Global Compact(UNGC) as the first Korean gaming company to do so in December 2022 to fulfill our corporate social responsibility and commit to honoring its 10 principles in the areas of human rights, labor, environment, and anti-corruption. As Korea's leading global game culture company, Netmarble vows to respect the human rights of all our employees and uphold human rights in any way we can to eliminate human rights risks and embed human rights management into our business operations.

Human rights training

We provide regular human rights training each year to raise employees' awareness on human rights. This includes statutory training on the prevention of sexual harassment and the improvement of perceptions on disability, and we also make it mandatory for all our employees(including contract and dispatched workers) to attend ethical management training which addresses Netmarble's Code of Conduct, fair trade, and win-win partnerships and training on the culture of mutual respect designed to prevent workplace bullying. Such training forms part of the orientation training provided to new hires to elevate human rights awareness at all levels.

Training for New Hires and Newly-appointed Leaders

Category	Topic	Timeline
New hires (new/ experienced)	Statutory training[1] and ethical management training which includes the Code of Conduct, and training on the culture of mutual respect to prevent workplace bullying	Within 1 month after recruitment
Newly-appointed leaders	Netmarble's ethical management – its concept and practice values – that leaders need to know, and key requirements of the Code of Conduct including fair and mutually-beneficial trade	Within 1 month after promotion

1) Training on the prevention of sexual harassment, the improvement of perceptions on disability, and data privacy

Company-wide Training

Category	Topic	Cycle
Statutory training	Prevention of sexual harassment	Annual
	Improvement of perceptions on disability	
	Data privacy(categorized into common training and training for employees handling personal data)	
Internal training	Culture of mutual respect	
	Ethical management	

Human rights training material

Statutory Training and Internal Training in 2022

Total trainees **885** persons

24 persons — Executives

809 persons — Full-time employees

52 persons — Contract/dispatched workers

Netmarble Culture Survey

The Netmarble Culture Survey has been conducted since 2014 on all our employees each year to objectively assess our organizational culture from the viewpoint of employees.

The survey questionnaire consists of items designed to assess our core value, work methods, leadership, trust & communication, and engagement levels. These items are reorganized each year in alignment with employees' interests and industry/social issues to make our survey more relevant and embrace diverse perspectives.

In 2022, 651 employees participated in the Netmarble Culture Survey. It revealed that the score on the organizational communication metric increased from the previous year while our company-wide remote work policy remained effective until May 2022, which demonstrates further improvements in communication and collaboration which form the core our competitive edge. As we ended the prolonged remote work mode in June 2022 and switched to on-site work, we added survey items on employees' satisfaction with remote work and productivity to measure their awareness and the effectiveness of different work arrangements. It turned out that the majority of respondents chose 'reduced fatigue during commutes' as the reason for their positive perceptions on work-at-home, and this prompted our decision to introduce shuttle buses in July 2022 to operate between the the Guro Digital Complex Station & the Gasan Digital Complex Station and our office building. As such, the Netmarble Culture Index helps us objectively identify feedback from employees to create necessary systems, which in turn improves employees' satisfaction and work engagement to create a self-reinforcing cycle in the process.

Netmarble Culture Survey Questionnaire Composition

Category	Keywords
Performance engagement	Say, Stay, Pride, Strive
Embedding the Netmarble Spirit	Passion, Challenge, Innovation, No.1
Core values	Detail, Responsibility, Teamwork
Organizational communication	Respect for diversity, Information sharing
Top management	Strategy & Vision, Reliability
Organizational leaders	Strategic thinking, Strategic decision-making, Robust execution
Internalization of HR systems	Recruitment, Opportunity, Compensation, Performance appraisal

Grievance mechanisms and actions taken

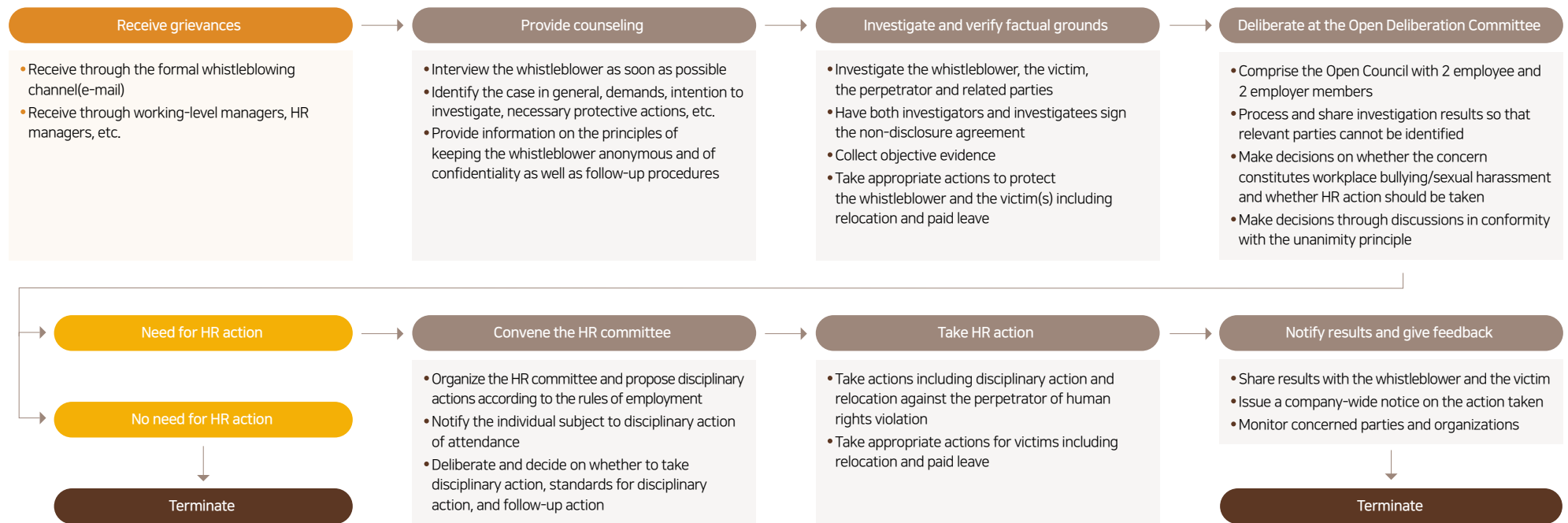**Grievance mechanisms and remedy procedures to address human rights violations**

Netmarble operates a range of grievance mechanisms to allow anyone to immediately seek counseling and report human rights abuses in the workplace, such as workplace bullying and sexual harassment. Reports are accepted by e-mail of Mutual Respect Organizational Culture on an ongoing basis, and reports filed to Netmarble Ethics Center and the Open Council, our labor-management consultative body are also swiftly transferred to relevant divisions to take action accordingly. These grievance mechanisms and their process are constantly communicated through our new hire orientation training, regular employee training, and our internal system. Netmarble Ethics Center is also made available on the Netmarble official website so that partners, customers, and other external stakeholders may request counseling and raise their concerns.

When grievances are filed, we have whistleblowers present their opinions and our personnel with relevant expertise investigate into their factual grounds according to our rules of employment, internal sexual harassment prevention and handling guidelines, and workplace bullying prevention and handling guidelines. Throughout the entire process from the receipt of grievances to their termination, we ensure the identity of whistleblowers and the details of their concerns remain strictly anonymous and confidential in accordance with applicable laws and regulations(Labor Standards Act, Equal Employment Opportunity Act, Public Interest Disclosure Act), internal regulations, and the non-disclosure agreement. Furthermore, we prioritize the views of whistleblowers and victims over all else and take protection measures, spanning paid leave, transfer to another position or location, psychological counseling, and support for medial expenses while ensuring they are not put at a disadvantage for the act of whistleblowing.

Specifically, workplace bullying and sexual harassment issues are brought to the Open Deliberation Committee composed of 2 employee and 2 employer members from the Open Council to embrace diverse perspectives and improve fairness and transparency so that they go through careful deliberations to substantiate the concerns raised and determine whether they should be referred to the HR committee. When deemed necessary, we seek expert opinions from independent third-party organizations or commission investigation to handle such issues.

When human rights violation is substantiated, the perpetrator is subject to stringent action in accordance with our zero-tolerance principle. The action taken is communicated at all levels of the Company through our internal bulletin board to convey our firm commitment to value the culture of mutual respect, and concerned parties and organizations are monitored on an on-going basis to prevent such incidents from ever occurring again. We ensure that work adjustments and trainings are implemented for reports of workplace bullying that were raised but not substantiated.

Grievance Procedure

Receive grievances

- Receive through the formal whistleblowing channel(e-mail)
- Receive through working-level managers, HR managers, etc.

Provide counseling

- Interview the whistleblower as soon as possible
- Identify the case in general, demands, intention to investigate, necessary protective actions, etc.
- Provide information on the principles of keeping the whistleblower anonymous and of confidentiality as well as follow-up procedures

Investigate and verify factual grounds

- Investigate the whistleblower, the victim, the perpetrator and related parties
- Have both investigators and investigatees sign the non-disclosure agreement
- Collect objective evidence
- Take appropriate actions to protect the whistleblower and the victim(s) including relocation and paid leave

Deliberate at the Open Deliberation Committee

- Comprise the Open Council with 2 employee and 2 employer members
- Process and share investigation results so that relevant parties cannot be identified
- Make decisions on whether the concern constitutes workplace bullying/sexual harassment and whether HR action should be taken
- Make decisions through discussions in conformity with the unanimity principle

Need for HR action

No need for HR action

Terminate

Convene the HR committee

- Organize the HR committee and propose disciplinary actions according to the rules of employment
- Notify the individual subject to disciplinary action of attendance
- Deliberate and decide on whether to take disciplinary action, standards for disciplinary action, and follow-up action

Take HR action

- Take actions including disciplinary action and relocation against the perpetrator of human rights violation
- Take appropriate actions for victims including relocation and paid leave

Notify results and give feedback

- Share results with the whistleblower and the victim
- Issue a company-wide notice on the action taken
- Monitor concerned parties and organizations
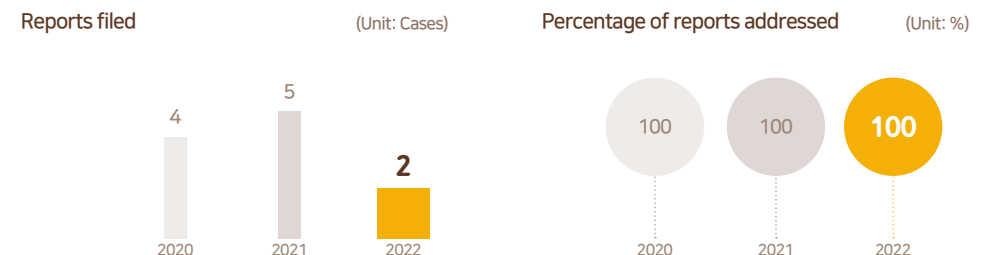
Terminate

Reports and actions on human rights violations

In 2022, 2 incidents of human rights violations were submitted through our grievance channels, and both were addressed. Our consistent efforts to build a corporate culture of mutual respect and advance human rights management resulted in a year-over-year decline in the number of concerns submitted for human rights violation in the workplace. Netmarble documents and retains all concerns submitted for human rights violation, including ones that were not substantiated and ones that were terminated by issuing warnings only.

Grievance Report Channel

Netmarble Ethics Center

Open Council

@ ethics@netmarble.com

Workplace Bullying and Sexual Harassment Report Channel

Hot Line
FAQ

@ respect@netmarble.com
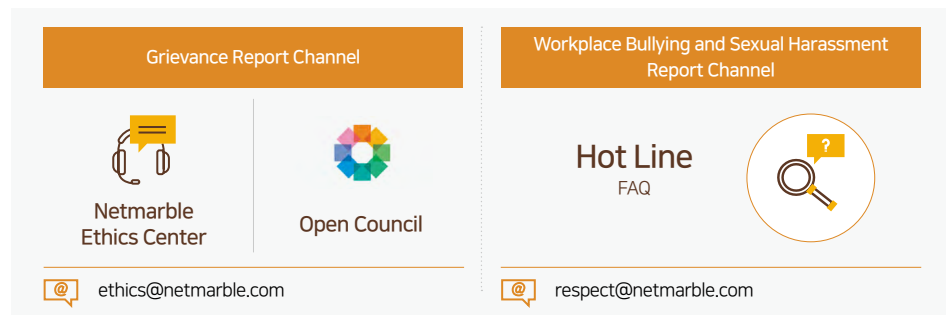
Reports on human rights violation filed and addressed[1]

Reports filed (Unit: Cases)

- 2020: 4
- 2021: 5
- 2022: 2

Percentage of reports addressed (Unit: %)

- 2020: 100
- 2021: 100
- 2022: 100

1) Workplace bullying, discriminatory treatment, and sexual harassment

Ensuring Diversity and Equal Opportunity

Netmarble's aspiration is to become a culture company that helps shape and disseminate a culture through games, and we firmly believe that an innovative and creative culture is made possible when employees with diverse backgrounds and values come together for harmonious co-existence. This is why we commit to providing equal opportunity and respecting diversity for everyone at Netmarble to unlock their full potential.

To this end, our rules of employment ban all forms of discrimination in recruitment and working conditions on the grounds of gender, age, religion, social status, place of origin, school, marriage, and pregnancy, and our Code of Conduct stipulates respect for diversity, non-discrimination, and privacy protection. We also provide amenities for socially underprivileged groups to make G-Tower equally accessible for all, doing our utmost to break down the barriers to mobility in the process.

Currently, Netmarble is working to develop a DEI(Diversity, Equity, and Inclusion) policy and establish its implementation governance. We will remain focused on promoting diversity and inclusion for our employees.

Providing fair and equal opportunities

Netmarble provides employees with equal opportunity to avoid any discrimination in determining employment, promotion, compensation, and training opportunity for reasons other than individual competency and performance. Our proportion of female employees is constantly on the rise, and in fact, individuals in their 20's were appointed in leader positions at Netmarble where the average age of employees is 34.8 years old. As such, anyone, as long as they are qualified, is given a chance to become leaders of their organization, and this competency-driven approach to offering equal opportunity is an underlying pillar of Netmarble's corporate culture. Looking ahead, Netmarble will continue to develop a corporate culture to uphold diversity free from discrimination.
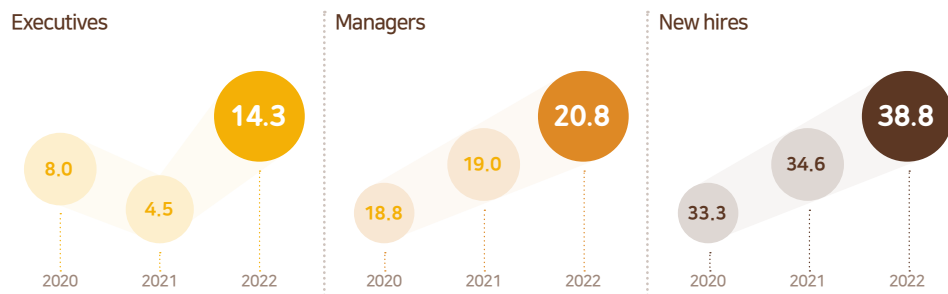
Creating a Healthy Corporate Culture

The Open Council

Netmarble operates the Open Council as a labor-management consultative body to promote the common interests of both labor and management. The Council consists of an equal number of 5 employee and employer representatives to facilitate communication between labor and management. Specifically, employee members were chosen from each election unit to reflect feedback from respective organizations and functions and promote employee democracy and representation.

The Open Council holds regular meetings every 3 months to engage in in-depth discussions on a host of issues to promote corporate growth, resolve employee grievances, and improve working conditions. The decisions made are transparently communicated to all employees through its own website. On the landing page of our internal work system is the banner to directly access the Open Council website to make it more convenient for employees to check the Council's activities and file their grievances. In the event that our HR system is modified in a way that affects employees, preliminary briefings are provided to the Council before making such modifications.

Out of all proposals made through the Open Council in 2022, we addressed 83% of them(10 out of 12 cases), and on-going communications resulted in the introduction of new benefit programs to offer birthday gifts, expand comprehensive check-ups, and increase our equity in the condominiums made available for employees.

The 3rd Open Council was launched in August 2022, and its employee members conducted an anonymous survey on all employees in December to collect their feedback on benefits, working conditions, and working methods. Since 2023, 'Foodie' events have been hosted under the supervision of the Council for top management and employees to communicate while dining together. Going forward, Netmarble will reach out to even more employees through the Open Council and build trust-based relationships.

Percentage of Female Employees   (Unit: %)

Executives

2020	2021	2022
8.0	4.5	14.3

Managers

2020	2021	2022
18.8	19.0	20.8

New hires

2020	2021	2022
33.3	34.6	38.8

Key Activities and Agendas of the Open Council in 2022

| Date	Activity	Description	Agenda
Feb. 24, 2022	Regular meeting	Q1 regular meeting	❶ Plan for the prevention of workplace harassment ❷ Matters on open recruitment ❸ Review of Council's 2021 activities and sharing of 2022 plans
May 27, 2022	Regular meeting	Q2 regular meeting	❶ Matters on annual leave ❷ Revision of Council's regulations ❸ Plan for the election of employee members for the 3rd Council ❹ Plan for the 2022 summer internship program
Aug. 4 – Aug. 5, 2022	Election		Election of the 3rd Open Council employee members Election of employee/employer members
Aug. 11, 2022	-		Termination of the 2nd Open Council tenure Official launching of the 3rd Open Council
Aug. 25, 2022	Regular meeting	Q3 regular meeting	❶ The 3rd Open Council election results, Q2 2022 management performance ❷ Plan for basic common training(statutory training) ❸ Progress on Netmarble's sports center(G-FIT) ❹ Progress on childcare facilities
Nov. 24, 2022	Regular meeting	Q4 regular meeting	❶ Matters on annual leave ❷ Appointment of members and directors for in-house labor welfare funds ❸ Challenge Awards, year-end gifts
Dec. 7 – Dec. 16, 2022	Survey		Employee survey

Challenge Awards

Netmarble's Challenge Awards was initiated in 2018 to identify and award employees who contributed to their organization by living by the Netmarble Spirit of rising to challenges and pursuing innovation for the year. Awards are given to the highest-level leaders of respective organization in December each year, and a total of 55 leaders were honored at the Challenge Awards 2022. This recognizes and rewards the achievements made to motivate all our employees and to share best practices to disseminate our organizational value.

2022 Challenge Awards

Employee recognition system

Our employee recognition system 'Thank you ㅋㅋ' helps our employees motivate each other and expand healthy communication. On the first day of every month, all our employees are given 10,000 recognition points and they may give the points to their colleagues along with messages of appreciation, which can be used at our in-house café and nearby restaurants. We disclosed the monthly and annual rankings of points to activate this system, and 6,882 recognition messages were exchanged on a cumulative basis in 2022, with 693 employees praising others at least once and 814 employees receiving recognition at least once. In the coming year, we will improve this system to make it more proactive and meaningful, and engage in campaigns and other diverse activities to disseminate a sound corporate culture that promote recognition, encouragement, support, and gratitude.
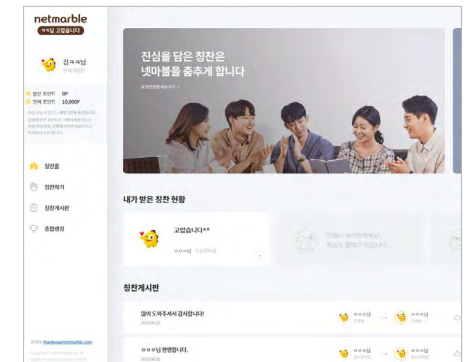
Employee recognition system(Thank you ㅋㅋ)

Disability-friendly workplace

In 2021, Netmarble established a subsidiary-type disability-friendly workplace, and began operating 'ㅋㅋ DABANG', our in-house cafe, as an inclusive workplace while employing people with disabilities for document courier service and meeting room management. In accordance with the purpose of the subsidiary-type disability-friendly workplace system, Netmarble fully commits to recruiting people with disabilities to create stable jobs for these challenged individuals who often find it difficult to participate in the competitive job market and to fulfilling our social responsibility while meeting our obligation for employing disabled people.

In 2022, we provided pre/post-employment training programs in partnership with the Korea Employment Agency for the Disabled and the Seoul Employment Center for the Disabled to help employees with disabilities learn essential job skills and adapt to their new role. We also provided employment support training to people with severe disabilities and career experience opportunities to students with disabilities. Specifically, we participate in the internship program for people with autism and other severe disabilities who face significant barriers in landing a job to fully support these individuals to become self-reliant.

As part of our sustained efforts to provide employees with disabilities with better working conditions, we more than tripled the number of disabled full-time employees from the end of 2021, and arranged separate rest areas made available before starting work, in taking a break, and at mealtimes. In May 2022, we made available products inspected for their component safety as well as their MSDS(Material Safety Data Sheet) in collaboration with the Safety and Health Team to raise safety awareness.

We plan to launch new beverages crafted with baristas with disabilities and use our internal programs including the employee recognition system to provide all our employees with an opportunity to mingle and interact together irrespective of disability. We will also identify new roles to provide diverse services and establish sustainable business models to further expand our employment of individuals with disabilities.

People with disabilities employed by our subsidiary-type disability-friendly workplace
2022 — **24 employees**

Proportion of full-time employees at our subsidiary-type disability-friendly workplace
2022 — **41.7 %**

Training Provided by Organization

Organization	Participating Program	Participant
Korea Employment Agency for the Disabled	Employment support for people with severe disabilities	12 persons
	Career experience program for students with disabilities	
	Internship for people with disabilities	
	On-the-job adaptation training	
Seoul Employment Center for the Disabled	Pre-employment on-the-job training	1 person

Improvement in Working Conditions for Employees with Disabilities

Item	Description
Equal benefits	Provide all employees with financial support for family events and holidays, health check-ups, separate rest areas, and snacks
Grievance mechanism	Provide regular counseling with the help of in-house vocational rehabilitation specialists
Diverse internal activities	Held the beverage creation contest joined by baristas with disabilities on Disability Day (Apr. 2023) and the in-house recognition sticker program(H1 2023)
Workplace safety	Ensure safety through rigorous MSDS management in the workplace and the provision of protective gear
Expansion of recruitment	Expand recruitment to help adjust workloads and reduce the burden on employees in taking annual leave due to vacancies

★ Drink contest on Korea's Day of People with Disabilities

Our subsidiary-type disability-friendly workplace hosted the drink contest joined by baristas with disabilities on the Day of People with Disabilities in 2023, and introduced the winning beverage of the contest as a new menu for ㅋㅋ DABANG. All employees at the workplace formed groups to develop new beverages of their own, and a tasting event was held for two days before and after the Day of People with Disabilities so that visitors and community members as well as Netmarble employees could try out new beverages and vote for their favorite one. The winner 'Red Bean Einspanner' will be made available at ㅋㅋ DABANG for one year. This drink contest held on the Day of People with Disabilities helped elevate awareness on diversity brought by employees with disabilities.

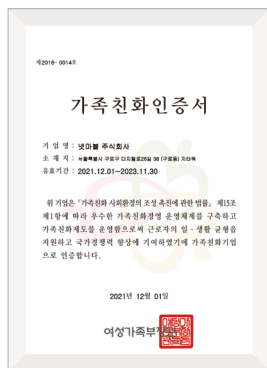Voting for the best beverage at the contest

Winning team 'Red Bean Jelly'

Employee Welfare

Investments in employee benefits

KRW 109.7 billion

Family Friendly Management Certification

Creating a Family–friendly Working Environment

Netmarble provides a range of family-friendly programs and flexible work hours to help employees strike the right balance between work and family as well as work and life. We place the convenience of our employees first in arranging work hours and spaces, and strive to provide an employee-friendly working environment.

Programs for maternity care

We operate a wide range of maternity protection programs to fully support our employees with pregnancy, childbirth, and childcare. Our employees, both men and women, are fully entitled to statutory programs, including support for prenatal check-ups, maternity leave and miscarriage/stillbirth leave, parental leave, paternal leave, and family care leave to meet childcare needs. Expecting mothers are eligible for reduced work schedule throughout their pregnancy without pay cuts, work-at-home, medical expense support for childbirth, and rest(nursing) areas accessible at any given time, which testifies to our commitment to ensuring maternity protection. When our female employees become pregnant, the leader of their division is also informed in detail of Netmarble's maternity protection programs so that these expectant mothers could receive sufficient protection and care.

In addition to our efforts to establish institutional settings, we also worked to ensure both men and women take parental leave as they wish: nearly 20% of the employees who took parental leave in 2022 were men, and all male employees who returned to work after parental leave in 2022 worked one year and longer.

In 2022, we significantly increased the monetary value of childbirth gifts by drawing on our in-house labor welfare funds, and upgraded these gifts by including trendy and practical childcare products. Employees who were given such gifts were highly satisfied as they were able to choose from baby formula makers, baby bottle sterilizers, and baby carriers worth nearly KRW 300,000.

Our sustained efforts for maternity protection were recognized as we were named the Best Family Friendly Management Company by the Ministry of Gender Equality and Family. We were first certified in 2018 and have continued to operate and expand our family-friendly programs to remain certified since we renewed the certification in 2021. Netmarble will lead the industry as an exemplary company creating a family-friendly corporate culture.

Maternity Care Programs

Before birth	After birth
1. Prenatal check-ups	1. Post-birth leave
2. Miscarriage/stillbirth leave	2. Paternal leave
3. Pre-birth leave	3. Guaranteed breastfeeding hours and locations
4. Limited overtime work	4. Parental leave
5. Reduced workhours during pregnancy	5. Reduced work hours during parenthood
6. Fertility treatment leave	
7. Work-at-home	

Timeline Check List

Confirm pregnancy, develop maternity protection plans
- Take leave in line with one's prenatal check-up schedule
- Reduce work hours during pregnancy
- Plan for pre/post-birth leave and parental leave

Apply for pre/post-birth leave (D-60)
- Set the date to take at least 45 days of post-birth leave(60 days for multiple births), gain electronic approval and apply for leave

Take pre-birth leave (Before D-44)

Due date (D-day)
- Spread the news and apply for congratulatory money and gifts
- Apply for medical expense reimbursement for medical exams and hospitalization (within 3 months)

Maternity leave (After D+45)
- Apply for post-birth benefits at the employment center in one's district after 60 days of maternity leave

Parental leave, reduced work hours during parenthood (After leave)
- Apply for leave of absence(or reduced work hours) in line with one's parental leave plan

Flexible working hours

To increase our employees' work engagement and support their work-life balance, we have provided flexible work arrangements early on since 2018. Our fully-optional working hour system without 'core time' gives full autonomy to employees in setting their work schedule, and our optional leave system allows employees to adjust their work dates within a predetermined range of monthly working hours to guarantee maximum autonomy in operating their own working hours.

While we shifted from remote work to on-site work to return to normalcy in 2022, our flexible work arrangements smoothed out this transition. Aside from a small number of employees including professional researchers, all our employees use flexible work arrangements to improve their work efficiency.

Furthermore, we prevent excessive work by institutionalizing our working hour management system: any holiday/nighttime work should be approved by one's leader in advance, daily work hours are logged, and alarms are issued for those whose working hours could potentially exceed the set monthly limit. The concerted efforts of all our employees resulted in a 12% decline in monthly average overtime work and holiday work in 2022 from 2021. We will continue to guarantee autonomy in individual employees' work arrangements and boost satisfaction with our work system so that they unlock their potential and perform at their best.

Interviews on Flexible Work Arrangements

"At my previous company, I was expected to come to office at the set time and I could not drop off my child at the daycare center. It's great that at Netmarble, I have the flexibility to decide when to start and finish work, which means I can accompany my child before going to work. When my child got sick suddenly, I could use my paid lave to take my child to the doctor before work."

Ms. Kim, who is a working mom

"I had so many things that I wanted to do and I could not enjoy all my hobbies during the weekends alone. Flexible work hours allow me to leave home early and exercise in the morning before going to work or leave work a bit earlier to take one-day classes. This has certainly increased my overall satisfaction with life and it has also made me more enthusiastic about my work."

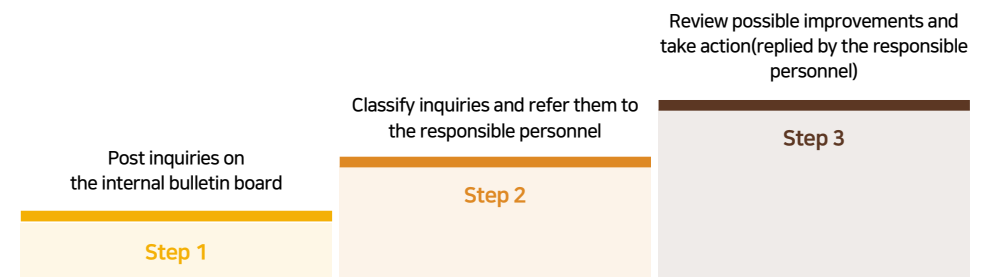**Mr. Park, who prioritizes self-development**

"At Netmarble, the hours worked are managed accurately, and it is institutionally guaranteed that if I work longer today, I can go home early the next day to flexibly manage my time. I feel satisfied with Netmarble's culture which enables me to work efficiently, taking into account both my own workloads, schedule and collaboration with other team members. As much as the Company trusts its employees and gives autonomy, this strengthens our sense of responsibility towards our work."

Ms. Choi, who pursues work efficiency

## Continuous efforts in improving working environment

Our "All About G-Tower Life" serves as an internal bulletin board to address any questions my employees may have about our office building, improve working conditions, and receive and address complaints. When an inquiry is made, we follow the streamlined process as below to swiftly address such inquiries, and proactively collect employee feedback to improve our working spaces on an on-going basis.

Inquiry Handling Process of All About G-Tower Life

Step 1
Post inquiries on the internal bulletin board

Step 2
Classify inquiries and refer them to the responsible personnel

Step 3
Review possible improvements and take action(replied by the responsible personnel)

This feedback collection process allowed us to provide support and take action on 52 inquiries n 2022: we applied elevator running open technology to improve our amenities and work environment for employees(nearly 1-hour efficiency gains in mobility), operated shower rooms for bike users, reduced PM levels by replacing central air conditioning filters, and arranged rest areas within the cafeteria on the 3rd floor. This eventually created a pleasant work environment that adds to the comfort and work engagement of our employees. In October, we also opened a sports center to accommodate between 1,500 and 2,000 Netmarble employees a month including contract workers. We pay a portion of the sports center fees for our employees to reduce the financial burden of employees.

In 2023, we will continue to identify the needs of our employees through wide-ranging channels and explore creative solutions to provide the optimal working environment and welfare facilities.
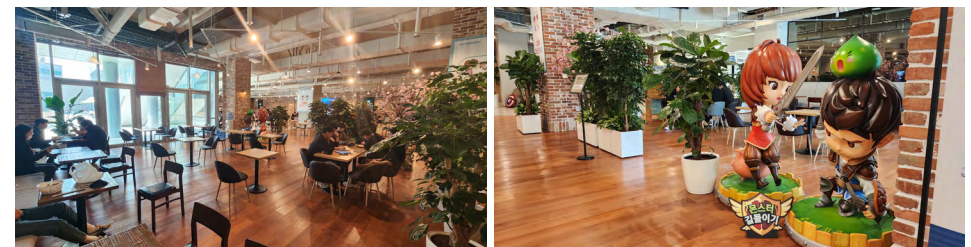
Rest area created for employees

Benefits

We operate a wide spectrum of benefit programs to help employees achieve their work & life balance and deliver greater satisfaction. All programs are equally provided to contract workers and other fixed-term workers. Our 'optional welfare system' was specifically designed with millennials and Gen Z in mind to meet their individual lifestyle needs by providing benefits on our welfare mall and welfare cards.

Netmarble's Benefit Programs and Infrastructure[1]

Category		Description	Note
Optional welfare system		Provide welfare points that employees can redeem as they wish to meet their diverse needs	
Meal expenses		Pay for lunch and dinner(when working after 20:00)	
Vacation	Refresh leave	Provide long-term employees with vacation and vacation money to refresh themselves before returning to work	
	In-house condominiums	Provide access to affiliated resort facilities and benefits on an on-going basis	Expanded support in 2022 (twice the existing benefits for condominium membership)
Healthcare	Medical expenses	Pay for actual medical/medication costs to help reduce the unexpected economic burden from the diseases and injuries affecting employees and their spouse	
	Health check-ups	Pay for health check-ups and provide paid leave on the day of check-ups to help with early disease treatment and prevention - Employees: Annual comprehensive and general check-ups - Spouse: Biennial comprehensive check-ups	Expanded support in 2022 (from biennial to annual)
	Group accident insurance	Subscribe to group accident insurance for unfortunate accidents and provide support	
	Healthcare (health center)	Operate health centers with in-house nurses and full-time psychological counselors - Scope: Musculoskeletal pain management, basic medications, mild disease management, emergency care, health management and therapeutic counseling, etc. - Available facilities: Health recovery room, healthcare room, rest area for expecting mothers(nursing room), psychological counseling room	
	G-FIT (sports center)	Operate an in-house fitness center for employees' physical training and health promotion - Available facilities: Aerobic exercise zone, weight exercise zone, PX zone, stretch zone, powder room, and shower zone	Created in 2022

Category		Description	Note
Family-friendly	Family events	Provide financial support, supplies, and vacation for weddings, births, 70th birthdays, and bereavement	
	Holiday gift money for parents	Provide top management's thank-you messages and cash to employees' parents on national holidays(New Year/Korean Thanksgiving) to express gratitude	
	Childcare support	Pay for daycare centers(children under 5)	
	Childbirth gifts	Provide childbirth gifts(choose one's desired gift)	Expanded support in 2022 (increased the monetary value of gifts)
	Birthday gifts	Give congratulatory messages on employees' birthday and gifticons (choose one's desired product)	Created in 2022
Commute	Shuttle buses	Operate shuttle buses in the morning from the Gasan Digital Complex Station and the Guro Digital Complex Station (am 08:00-10:30, 5 to 10 minutes intervals)	Created in 2022
	Taxi fare	Pay for taxi fares when working nighttime(leaving office after 23:00) irrespective of the distance traveled	
Other infrastructure	ㅋㅋ Bookstore	Operate ㅋㅋ Bookstore to support self-development and cultural activities(accept requests for desired books and make them available the next month)	
	In-house cafeteria	Operate ㅋㅋ DABANG on the 3rd floor of G-Tower - Make it available to the local community and provide employees with a 50% discount	

1) All benefit programs are equally provided to both full-time and part-time(contract) positions without any discrimination

Vacation support

Netmarble provides refresh vacation for long-term employees. We offer 5 to 20 days of paid leave and up to KRW 10 million of vacation subsidies for every 5, 10, 15, and 20 years of service. This aims to extend our gratitude for their long-term commitment and provide plentiful opportunities for recharging themselves, and our employees are greatly satisfied with this program.

In addition, we offer employees discounts in accessing affiliated condominiums and resort facilities nationwide on an on-going basis. In 2022, we doubled the coverage of affiliated resorts to provide even more employees with an opportunity to use such facilities.

Improvement in retirement pension plans

In 2022, we realigned our retirement pension plan to introduce the defined contribution(DC) plan and the hybrid-type(DB+DC) plan on top of the existing defined benefits(DB) plan, which enables our employees to operate their pension plan according to their individual purposes by taking into account their financial status and investment strategy.

The DC plan and the hybrid plan are drawing much attention from employees as they allow for early withdrawals and investment-focused product management to make pension funds more available. We also opened 'All About Pension Funds' as an in-house bulletin board to provide information on the pros and cons of each pension plan and address FAQs, accommodating any questions to improve employees' understanding on pension plans. As of the end of 2022, a total of 146 employees opted for either DC or hybrid plans to directly operate their own pension funds.

Creating a Healthy Workplace

Healthcare center

Netmarble Healthcare aims to provide a healthy workplace. Located on the 9th floor of G-Tower, Healthcare is staffed with full-time healthcare professionals to provide proper medications and nursing care, and is equipped with a cholesterol tester, an InBody meter, and a blood pressure measurement device among others. In 2023, we made available a regular health check system so that our employees can manage their diverse health data on the app.

We also provide a health recovery room for minor injury treatment and physical therapy, a lounge and a nursing room for employees who experienced pregnancy and childbirth, and a psychological counseling room to help manage job stress. Medications, nursing care, and counseling are available for partner employees as well as Netmarble employees to take care of all our stakeholders.

| Scope of Care	• Emergency care for COVID-19 • Intensive management of musculoskeletal pains and VDT • Provision of basic medications and over-the-counter medications • Basic healthcare and counseling on disease treatment	• Minor disease and wound care • Emergency response (emergency care and transfer) • Counseling on health check-up results • Job stress/psychological counseling management
Facilities	• Health recovery room: Treatment of mild injuries and support with physical therapy devices • Health management office: Health counseling by in-house nurses and personalized 1:1 programs	• Lounge for expecting mothers(nursing room): Private space for expectant mothers to take a break and breastfeed • Regular healthcare zone: Self-initiated health checks for blood pressure, stress, and BMI measurement • Psychological counseling room: 1:1 counseling with professional counselors and relevant tests

Employees Who Used Healthcare[1]
(Unit: Persons)

- 2020: 4,584
- 2021: 3,326
- 2022: 8,475
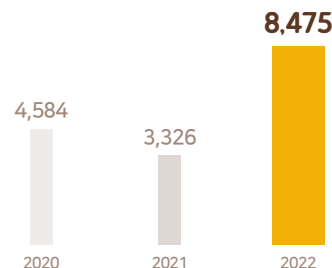
Medications Provided to Partners
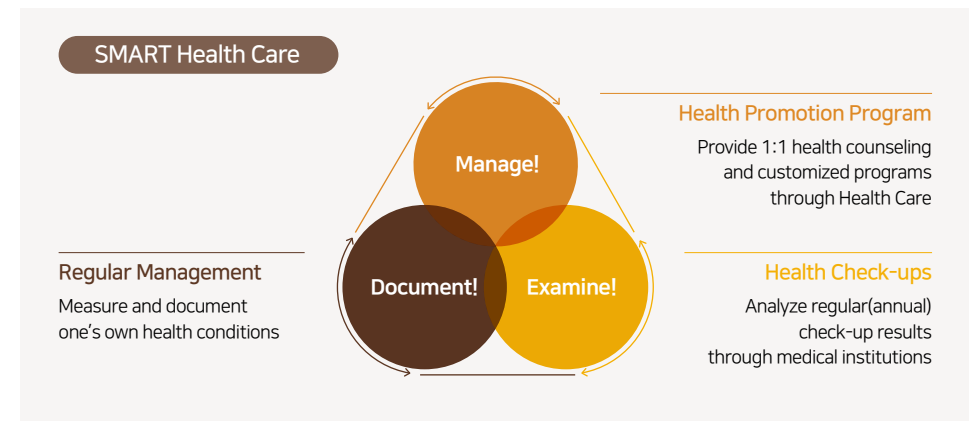(Unit: Persons)

- 2020: 141
- 2021: 107
- 2022: 202
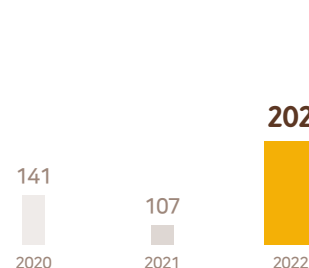
1) Based on Netmarble Company

SMART Health Care

Our SMART Health Care service was initiated in 2023 to support the healthy lifestyle of our employees through customized health promotion and preventative activities based on health data.

This service aims to provide data-based, integrated healthcare through the connections made among health promotion programs, health check-up data, and our regular health check system, and offers customized health promotion programs. The regular health check system allows our employees to regularly document their health data and verify improvements made for smart healthcare.

SMART Health Care

Manage!
Document!
Examine!

Regular Management
Measure and document one's own health conditions

Health Promotion Program
Provide 1:1 health counseling and customized programs through Health Care

Health Check-ups
Analyze regular(annual) check-up results through medical institutions

Implementing health promotion programs

Netmarble provides employees with annual health check-ups to help with the prevention, early detection, and treatment of diseases, and offers employees' spouse biennial health check-ups. Such check-ups enable us to identify employees at the increased risk for brain cardiovascular diseases that are highly likely to occur among people in the IT industry, and pair the data with our health promotion programs. In 2022, we provided personalized health counseling and management programs on a total of 62 occasions.

We help employees pay for their medical expenses for healthcare, and also pay for all treatment and medication expenses that incur for childbirth. In addition, we operate a 4-week healthcare program for employees who return to work after taking sick leave or leave of absence for health-related reasons, which helped 7 employees to safely return to work in 2022.

On—site fitness center

In October 2022, we opened G-FIT, a large-scale(1,500m^2) sports center at G-Tower. This welfare facility was designed to promote the health of our employees, and houses a host of equipment to accommodate all users, from the beginner level to the advanced professional level. The space is categorized into the aerobic exercise zone, the weight exercise zone, the free-weight zone, the GX zone, and the stretch zone, and its shower room is designed in a way that minimizes contacts among users to ensure privacy.

G-FIT garnered much attention from employees before its opening, and we performed a 2-week pre-opening test on 500 employees to secure safety and prevent congestion. This served to monitor the use pattern of employees in real time to calculate the appropriate capacity level of G-FIT, and collect feedback from employees through satisfaction surveys so that we could make necessary improvements prior to its official opening.

The appropriate capacity of G-FIT was determined at 1,400 persons through pre-rest results, and the facility officially opened on October 17, 2022. We keep analyzing employees' use pattern to ensure employees can conveniently utilize this facility.

Following its official opening, we continued to gather feedback from employees through on/offline channels, which allowed us to proactively improve on identified inconveniences by providing personal PT classes, installing additional equipment, and increasing personnel at the reception desk since March 2023 to improve employees' satisfaction on an on-going basis.

User Pattern Analysis

Peak to available capacity(150 persons) ratio   (Unit: %)

85

58

44

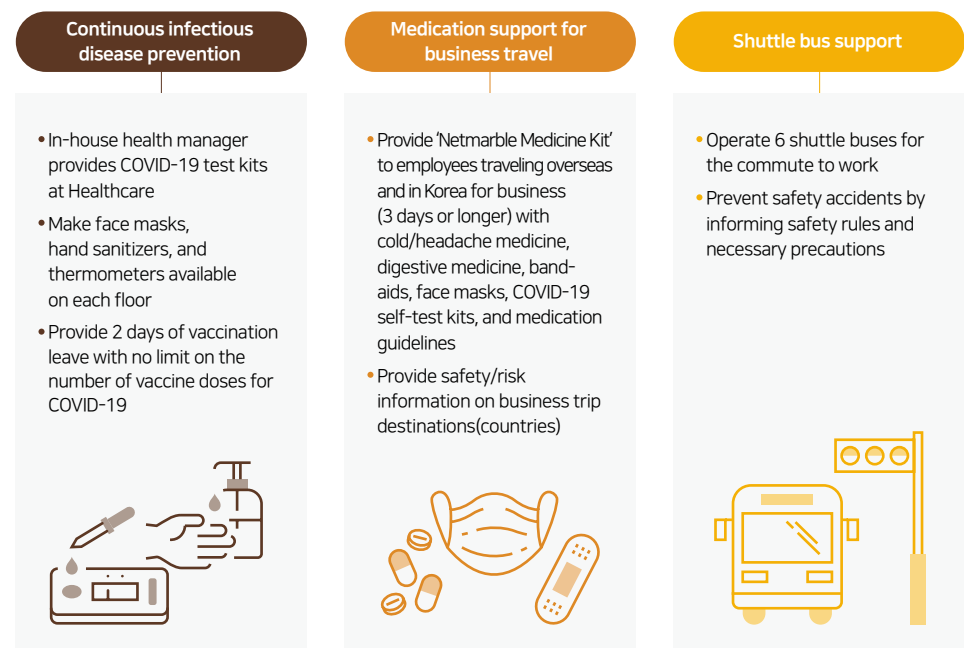| 500-person maximum capacity | 800-person maximum capacity | 1,400-person maximum capacity |
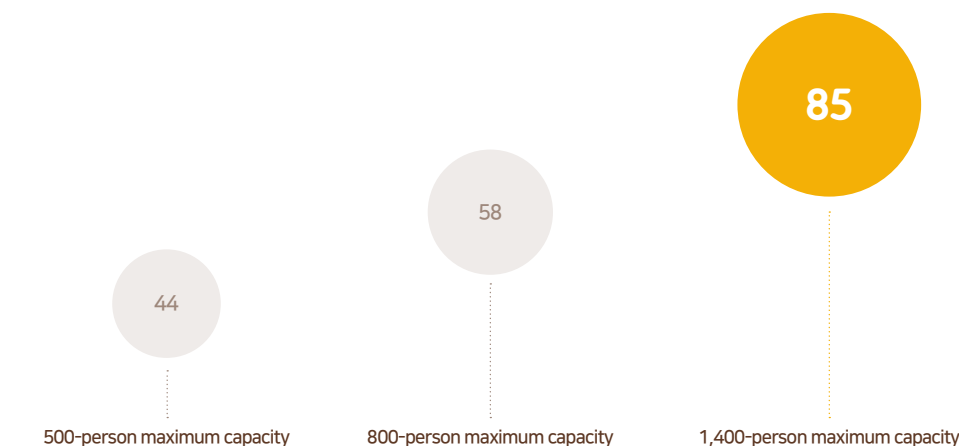
Supporting safe commute during COVID-19

Taking into account the government's quarantine policy and the prevalence of COVID-19 among our employees, we flexibly opted for full-time remote work and a 3-day workweek. Since June 2022, we have transitioned into on-site work to return to pre-pandemic work mode. High-risk groups, including expecting mothers and employees with specific medical conditions, work from their home, and we continue with infectious disease prevention activities to keep our employees commuting to work safe and healthy under any circumstances.

In 2022, domestic and international business trips resumed in line with the transition to on-site work and the easing of the government's quarantine rules. This prompted us to provide the 'medicine kit' to help alleviate the concerns of business travelers as well as safety and risk information on business trip destinations(countries) to keep them safe and healthy.

The Occupational Safety and Health Committee introduced shuttle buses for safe and convenient commuting since July 2022 based on the employee needs identified through the Netmarble Culture Survey 2022, and expanded the number of shuttle buses to currently operate 6 buses for the commute to work in line with positive responses from employees. We maintain cleanliness inside these buses to provide pleasant rides even in inclement weather, and inform safety rules and precautions to shuttle bus commuters to prevent accidents.

When the government escalated the national disaster alert level to 'serious' amid the heavy rain and typhoons affecting the Seoul metropolitan area in 2022, we implemented emergency remote work (August 9-10, September 5-6) for the safety of our employees while contacting our employees through the hotline to check for any damage and supporting them for their safe return during torrential downpours.

Continuous infectious disease prevention

- In-house health manager provides COVID-19 test kits at Healthcare
- Make face masks, hand sanitizers, and thermometers available on each floor
- Provide 2 days of vaccination leave with no limit on the number of vaccine doses for COVID-19

Medication support for business travel

- Provide 'Netmarble Medicine Kit' to employees traveling overseas and in Korea for business (3 days or longer) with cold/headache medicine, digestive medicine, band-aids, face masks, COVID-19 self-test kits, and medication guidelines
- Provide safety/risk information on business trip destinations(countries)

Shuttle bus support

- Operate 6 shuttle buses for the commute to work
- Prevent safety accidents by informing safety rules and necessary precautions

Making hygiene supplies available on each floor

Medicine kit for business travel

Shuttle Bus Safety Rules

1. Please wear your face mask all the time during boarding and while on board[1]
2. Do not use your smartphone when getting on and off the bus
3. Once seated, fasten your seatbelt, and do not move around the bus while it is in motion
4. In case of emergencies such as a fire, use the emergency hammer attached to the side to break the window and escape
5. Be cautious of vehicles(motorcycles or bikes) approaching from behind and obstacles when and/or after getting off

1) The mask mandate was lifted in 2023 in line with the easing of the government's COVID-19 quarantine rules.
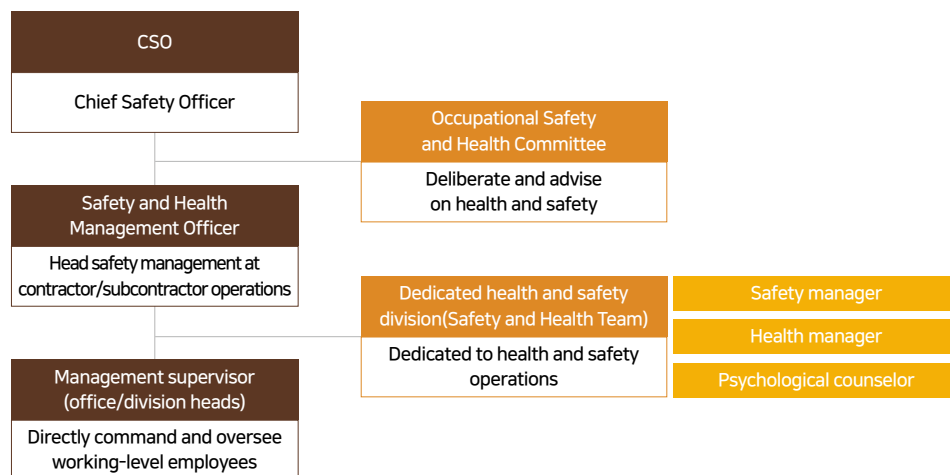
Health and Safety Management

Health and safety governance

To ensure safety and health at Netmarble, we are establishing health and safety governance which consists of the Occupational Safety and Health Committee, Subcontractor Safety and Health consultative group, management supervisors, and workers with the Chief Safety Officer(CSO) and the Safety and Health Team as a dedicated health and safety organization playing a pivotal role. To ensure the safety and health of employees from relevant organizations, we continue to engage in interactive communication, incident/accident prevention, and health promotion activities.

Health and Safety Management Organization Structure

CSO
Chief Safety Officer

Occupational Safety and Health Committee
Deliberate and advise on health and safety

Safety and Health Management Officer
Head safety management at contractor/subcontractor operations

Dedicated health and safety division(Safety and Health Team)
Dedicated to health and safety operations

Safety manager
Health manager
Psychological counselor

Management supervisor (office/division heads)
Directly command and oversee working-level employees

Mandate of the Health and Safety Management Organization

Category	Work Description
Chief Safety Officer	• Head the prevention of occupational injuries for employees • Make final decisions on the implementation of health and safety obligations
Safety and Health Management Officer	• Manage occupational injury prevention for contractor/subcontractor workers
Management supervisor (all office/division heads)	• Cooperate with safety/health managers for their guidance/advice • Participate in risk assessments and prevent hazards/risks
Safety manager	• Tasks deliberated/decided upon by the Occupational Safety and Health Committee • Tasks specified in health and safety management regulations and the rules of employment • Guidance and advice on other safety tasks
Health manager	• Tasks deliberated/decided upon by the Occupational Safety and Health Committee • Tasks specified in health and safety management regulations and the rules of employment • Guidance and advice on other health tasks

Occupational Safety and Health Committee

Netmarble's Occupational Safety and Health Committee operates regularly at least once a quarter to deliberate and decide on important health and safety issues in the workplace. In 2022, the Committee discussed and decided on 15 agenda items. This helps to share and discuss key health and safety issues and improve the environment for employees and stakeholders while preventing safety accidents. The activities of the Committee are made available for employees through the health and safety website of our internal portal.

Occupational Safety and Health Committee Operations in 2022

Meeting	Time	Agenda
Q1 2022	February	1 Change in membership of the Occupational Safety and Health Committee 2 G-Tower joint safety inspection results 3 Plan to create a Netmarble health and safety website 4 Establishment/amendment of health and safety regulations and terms of reference regulations
Q2 2022	May	1 Comprehensive health check-up results for 2021 and management plans 2 Work environment measurement results for H1 2022 3 Reporting of Q1 progress on joint safety inspections 4 Results on the establishment of a health and safety website
Q3 2022	August	1 Reporting of Q1 progress on joint safety inspections 2 Public-private joint fire drill results for H1 2022 3 Comprehensive health check-ups provided and plans to encourage participation in 2022
Q4 2022	November	1 Public-private joint fire drill results for H2 2022 and 2023 plans 2 Hospitals in partnership for influenza(flu) vaccination 3 Regular risk assessment(survey) plans for 2022 4 Plan to distribute infectious disease prevention kits to domestic/international business travelers

Health and safety management policy and goal

Netmarble keeps health and safety management as a top priority in business operations. We identified the key risks specific to the gaming industry and prioritized them to focus on the management of high-risk issues, and proactively respond to major social and legal issues involving the Serious Accidents Punishment Act and the Industrial Safety and Health Act. Furthermore, we fully abide by the following management policy to promote health and safety at Netmarble.

Health and Safety Management Policy

Netmarble declares health and safety management as our top priority in our entire business operations, and fully abides by the following principles to pursue 'Safe Netmarble, Healthy Netmarble'.

First, we consider health and safety as a key value of our business conduct, and top management sets an example to promote safety.

Second, we thoroughly abide by all health and safety laws and regulations, including the Industrial Safety and Health Act and the Serious Accidents Punishment Act, and ensure all operations comply with basic principles and guidelines for safety.

Third, we predict potential risks in advance and manage them within the acceptable boundary, and continuously work to prevent health & safety incidents and accidents.

Fourth, we share relevant information with all employees(including part-time workers and interns) and stakeholders(including subcontractors) and provide regular trainings and exercises to achieve our health and safety policy and goal.

Health and Safety Goals and Focus Areas

Achieve **ZERO** high-consequence occupational injuries

Achieve **ZERO** high-consequence civil disasters

Achieve **100%** of health and safety management plans

Bolster our health and safety management system

Continue with health and and safety prevention activities

Raise employees' health and safety awareness
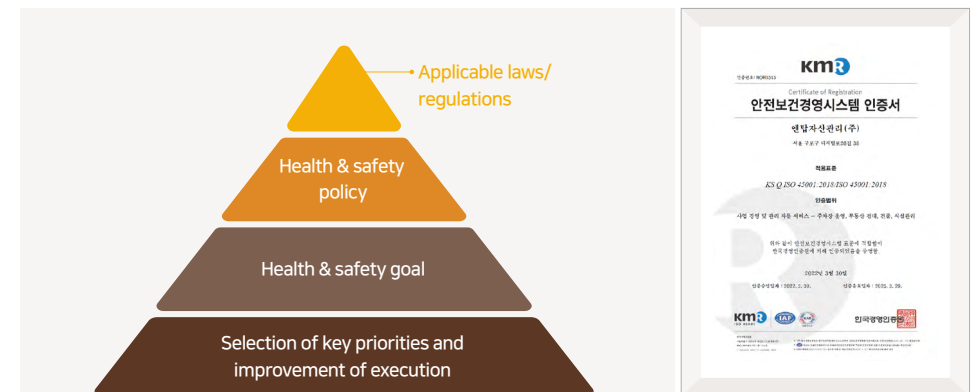
Health and safety regulations

To protect employees from accidents and diseases and provide a pleasant working environment to maintain and promote health and safety, Netmarble stipulates and operates health and safety management regulations. Our health and safety management regulations specify health and safety standards in relation to the establishment and implementation of the health and safety management system, the Occupational Safety and Health Committee, and health and safety plans, preventive measures for occupational injuries that may arise in subcontracting, health screenings, preventive measures for health disorders stemming from job stress, musculoskeletal health management, risk assessment, accident investigation and countermeasures, and the selection of qualified subcontractors.

For matters not specified in our health and safety management regulations, we follow applicable laws and regulations and our rules of employment. For matters that are stipulated in our health and safety management regulations but are not specified in terms of implementation methods, we established 6 statutory management guidelines in conformity with applicable laws and regulations to guide working-level personnel in their business conduct.

Health and Safety Management Regulation Structure

Chapter 1 General provisions	**Chapter 5** Health and safety management	**Chapter 9** Supplementary provisions
Chapter 2 Health and safety management organization and its responsibility	**Chapter 6** Risk assessment	Establishment and implementation of **supplementary provisions** (Feb. 1, 2020)
Chapter 3 Occupational Safety and Health Committee	**Chapter 7** Accident investigation and countermeasures	Complete revision and implementation of **supplementary provisions** (Feb. 24, 2022)
Chapter 4 Health and safety training	**Chapter 8** Selection of qualified subcontractors	

Health and Safety Management System

Applicable laws/ regulations

Health & safety policy

Health & safety goal

Selection of key priorities and improvement of execution

ISO 45001 certificate

Health and safety risk management system

To manage risk factors that may undermine the health and safety of our employees, Netmarble's dedicated organization(Safety and Health Team) independently identifies risks for all our employees(including interns and part-time employees) and analyze external environmental factors. In so doing, we identified four types of major risks that are highly likely to occur in the gaming industry, established a management system to focus on the prevention of such risks, and conduct weekly, monthly, quarterly, or semiannual inspections on respective risks on a regular basis to prevent safety accidents.

Prevention of major risks

Musculoskeletal disease · **Brain cardiovascular disease** · **Facility** · **Major Risk** · **Depression, job stress**

Facility and safety risk management

Our Safety and Health Team performs weekly walk-around inspections to prevent accidents involving building facilities, and regularly checks statutory facility inspections results. In addition, we choose monthly inspection themes by taking into account seasonality and our operational characteristics to go over factors that may undermine the health and safety of employees. In 2022, a total of 19 high-risk factors were identified and were fully addressed.

We also conduct quarterly joint safety inspections with subcontractors operating in our office building to help prevent safety accidents for our stakeholders as well as for our own employees. In outsourcing service operations, we assess candidates to select vendors qualified for their occupational injury prevention capabilities. Occupational injury prevention capability assessments are made at least on a semi-annual basis, and the results inform our Safety and Health Team in providing health and safety consulting and relevant support. In 2022, such consulting was provided to subcontractors on 22 occasions.

Process to Select Qualified Subcontractors

Key Activity	Step 1. **Review subcontract work**	Step 2. **Subcontracting bidding**	Step 3. **Review bidding documents**	Step 4. **Contract signing with subcontractors**
Details	· Review subcontracting licenses	· Present safe work plans and health and safety assessment criteria	· Assess subcontractors for health and safety performance	· Select qualified subcontractors
Responsible Division	Safety and Health Team	Relevant division	Safety and Health Team	Relevant division

Preventing musculoskeletal diseases

Netmarble regularly looks into the factors that may give rise to musculoskeletal disease every 3 years, and the results are informed to our healthcare professionals to assist our employees in maintaining good work posture and exercising to alleviate their symptoms and avoid musculoskeletal illnesses. Healthcare also supports physical therapy to help deal with pains, including cool/hot packs, low-frequency massagers, and paraffin treatment. In 2022, such activities helped care for our employees' musculoskeletal symptoms on 509 cases. We also support subcontractor employees with musculoskeletal risk assessment and health counseling to protect them from health disorders, extending our efforts for health management to include partner employees.

Preventing brain cardiovascular diseases

We analyze the results of employee health check-ups to identify the risk of brain cardiovascular diseases that considered highly likely occupational injuries, and provide high-risk employees with 1:1 health counseling, cholesterol tests, blood sugar tests and other varying health promotion programs. In 2022, nearly 38% of high-risk employees who participated in such programs saw improvements in their health conditions. In 2023, we will resume the smoking cessation clinic which was discontinued amid the pandemic and introduce a weight management program to ensure customized health promotion in addition to 1:1 health counseling and testing. This will surely help us consistently expand our brain cardiovascular disease prevention activities for employees.

Operating the mental health crisis management system

Netmarble operates a psychological counseling room staffed with full-time licensed counselors to help our employees systematically manage their mental health. Employees who visit the counseling room receive the specialized tests and counseling conducted to assess their mental health status under the mental health crisis management system. Employees are then categorized into high-risk, at-risk, low-risk, and normal groups under the mental health traffic light system, and are provided with customized counseling and risk management. In 2022, a total of 939 cases of personal counseling and 191 cases of psychological tests and interpretation counseling were conducted. In 2023, we plan to offer wide-ranging mental health promotion programs in alignment with communities to bolster our employees' mental health management.

Mental Health Crisis Management System

Counseling & testing	Conduct theme-based specialized tests and counseling
Risk classification	Determine risk levels and classify mental health status under the traffic light system - Determine risk levels (risk classification criteria: risk level, support system, cooperation ability) - Mental health traffic light system(serious, high-risk, moderate-risk, low-risk)
Management	Provide customized care depending on the risk level identified through the mental health traffic light system Recommend personal counseling, psychological tests, and treatment by external mental healthcare professionals

Reinforcing emergency response capabilities

Netmarble is undertaking prevention activities and is building a response system to enhance employees' capabilities to respond swiftly and effectively in emergency situations.

Building emergency response manuals and conducting emergency drills

We are building manuals to specify our response system in the event of an emergency while fulfilling our obligation to ensure health and safety pursuant to the Serious Accidents Punishment Act. Joint fire evacuation drills are conducted with relevant organizations at least on a semi-annual basis to help our employees become better prepared against such emergencies.


Emergency drill

Emergency response system

To brace for unforeseen safety accidents that occur in spite of our best prevention efforts, we preemptively establish and operate systems and processes to report and categorize incidents and accidents and respond to them accordingly so that we support our employees to take appropriate action and minimize damages.

Accident/Incident Reporting Procedure
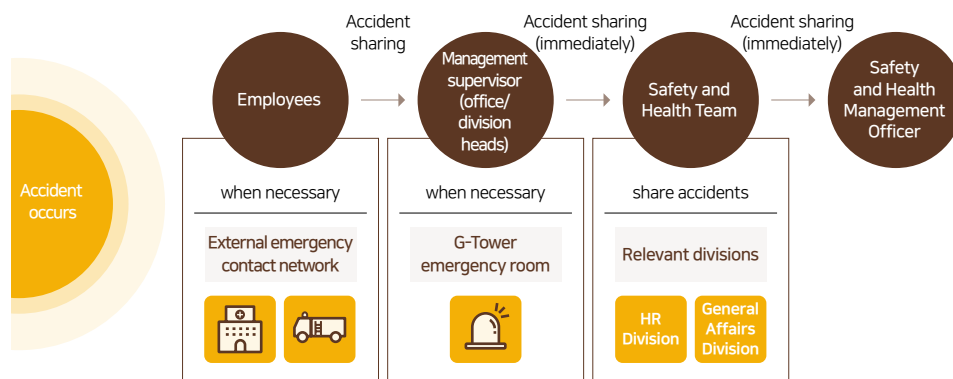
Health and safety trainings and exercises

To ensure all our employees work in a safe and healthy environment, we continue to provide health and safety trainings and exercises to communicate with our employees.

Health and safety training for new/experienced hires

Since December 2022, we included health and safety content to our orientation(onboarding) training for new and experienced hires to help them better understand our health and safety activities and management system. Such trainings inform employees of the characteristics of major building facilities and proper responses to emergencies(fire, being trapped in an elevator, and handling emergency patients) as well as access to healthcare and other facilities. We also provide CPR and AED exercises that are highly demanded by employees to bolster our safety preparedness.

CPR and AED exercise

Launching a health and safety website

In June 2022, we opened a health and safety website to share our health and safety management policy and activities with employees and collect their candid feedback on health and safety. This website provides video content in each of the health, safety, and psychology areas in consideration of different job functions and seasonality. A bulletin board is also up and running to receive requests and suggestions made by employees on health and safety and to take action accordingly and communicate the results. In 2022, concerns were raised over the slippery floor in the lobby on rainy days, and we installed anti-slip mats in the lobby with the help of the facility manager.

Publishing a health and safety newsletter

Netmarble publishes a monthly health and safety newsletter to provide information to alert employees on potential safety accidents and maintain their own safety. The newsletter contains health information tailored to specific seasons and situations on the topic of 'healthy life', and extended its topics to include 'mental health' and 'daily safety' in 2022 to help employees acquire knowledge on health and safety.

Sound Governance

Appointed

a non-executive director as the Chair of the ESG Committee

Improving Management Transparency

Netmarble strives to enhance trust among stakeholders. We are keenly aware of the importance of establishing sound governance and are working to bolster transparency and independence in operating the Board of Directors and its committees. We strictly abide by Board's operational regulations to pursue the value of ethical management, and non-executive directors constitute the majority of the Board of Directors to help the Board faithfully fulfill its role in holding top management in check.

Such efforts allowed us to receive an 'A' rating in the MSCI ESG Ratings released by Morgan Stanley Capital International(MSCI), a global ESG rating agency, in 2022, in recognition of our outstanding performance in ensuring the independent operation of the Board of Directors and major committees. We will explore and implement broader solutions to improve our governance to pave the way for sustainable growth and become a company that stakeholders could trust.
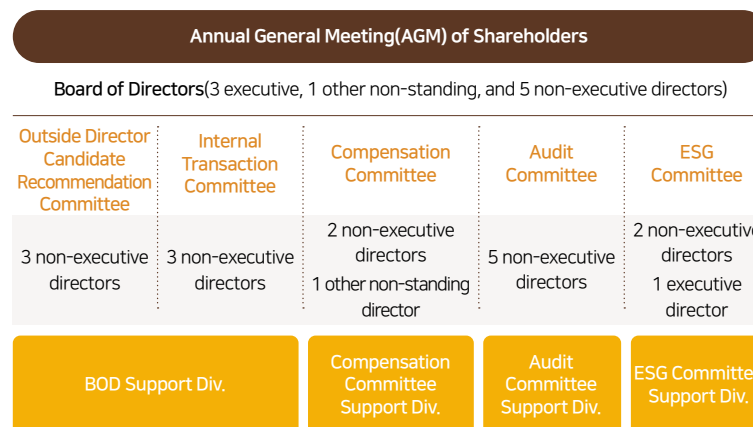
Composition of the Board of Directors

Netmarble complies with the principles of diversity and expertise in the composition of the Board of Directors to ensure the Board substantially fulfills its role in deliberating on and effectively overseeing the major decisions made. As of March 2023, Netmarble's Board of Directors consisted of 3 executive directors, 1 other non-standing director, and 5 non-executive directors. Our directors are appointed for their expertise and experience across a wide array of fields, including IT, entertainment, and marketing as well as management, law, and finance so that their areas of expertise do not overlap and they do not represent any specific interests. We also appointed a female non-Korean director to elevate our global business capabilities and ensure the gender-based diversity of the Board.

1) While Netmarble had previously run by the Executive Officer system to separate business operation and audit functions to improve the transparency of our business conduct, we switched to the CEO system in March 2023 to pursue management efficiency and address business challenges through prompt decision-making in the rapidly-shifting business landscape.

Netmarble's governance structure

(as of Mar. 2023)

Annual General Meeting(AGM) of Shareholders

Board of Directors(3 executive, 1 other non-standing, and 5 non-executive directors)

Outside Director Candidate Recommendation Committee	Internal Transaction Committee	Compensation Committee	Audit Committee	ESG Committee
3 non-executive directors	3 non-executive directors	2 non-executive directors 1 other non-standing director	5 non-executive directors	2 non-executive directors 1 executive director
BOD Support Div.		Compensation Committee Support Div.	Audit Committee Support Div.	ESG Committee Support Div.

Independence of the Board of Directors

At Netmarble, non-executive directors constitute the majority of the Board of Directors, and CEO[1] and Board Chair positions are separated to ensure the structural independence of the Board and the credibility of our internal decision-making system. As of March 2023, 5 out of 9 directors were non-executive directors to establish the independence of the Board to effectively hold top management in check.

To promote fairness in the non-executive director appointment process, our Outside Director Candidate Recommendation Committee is solely composed of non-executive directors. The Outside Director Candidate Recommendation Committee closely examines the legal qualifications of non-executive director candidates and comprehensively assesses their expertise and experience to select qualified candidates, and their appointment is finalized through the Annual General Meeting of shareholders.

Operation of the Board of Directors

Category		2020	2021	2022
Board Meeting	Meetings held	7	9	6
Agenda	Concluded items	18 items	20 items	20 items
	Reported items	7 items	6 items	7 items
Attendance	Total	100%	100%	97%
	Non-executive directors	100%	100%	96%

Composition of the Board and profiles of executives

(as of Mar. 2023)

Executive Director

Bang Jun-hyuk
Gender	Male
Appointment	Aug. 1, 2014
Termination of Tenure	Mar. 2026
Expertise	Corporate management

- Current) Chairman, Netmarble BOD
- Current) Chairman, Coway BOD
- Current) Chairman, Netmarble Cultural Foundation
- Executive Advisor, Game Business Div., CJ E&M
- President, Business Strategy Div., CJ Internet
- President, Business Strategy Div., Planus Ent.
- CEO, Netmarble

Kwon Young-sig
Gender	Male
Appointment	Mar. 29, 2023
Termination of Tenure	Mar. 2026
Expertise	General management

- Current) CEO, Netmarble, General management
- Executive director, Netmarble
- CEO, Netmarble Games
- Head of Planning Division, Game Business Group, CJ E&M
- Head of Internet Publishing Division, CJ Internet

Do Gi-uk
Gender	Male
Appointment	Mar. 29, 2023
Termination of Tenure	Mar. 2026
Expertise	Management strategy

- Current) CEO, Netmarble, management strategy
- Executive director, Netmarble
- Financial strategy, Netmarble
- Head of Finance Division, Game Business Group, CJ E&M

Other Non-standing Director

Piao Yanli
Gender	Female
Appointment	Aug. 1, 2014
Termination of Tenure	Mar. 2026
Expertise	Management

- Current) Vice President, Tencent Games
- CEO, Tencent Korea

Non-executive Director

Jeon Sung-ryul
Gender	Male
Appointment	Mar. 29, 2022
Termination of Tenure	Mar. 2025
Expertise	Marketing

- Current) Business School Professor, Sogang University
- Dean, Sogang University Business School and Graduate School of Business
- Associate Professor, Department of Business Administration, Hankuk University of Foreign Studies
- Assistant Professor, University of Pittsburgh's Graduate School of Business
- Visitor Professor, New York State University's School of Business

Lee Chan-hee
Gender	Male
Appointment	Mar. 29, 2022
Termination of Tenure	Mar. 2025
Expertise	Law

- Current) Chairman, Samsung Compliance Committee
- Current) Visiting professor, Seoul National University Law School
- Current) Standing Advisor, Yulchon Law Firm
- 50th President, Korean Bar Association
- 94th President, Seoul Bar Association

Yoon Dae-gyun
Gender	Male
Appointment	Mar. 29, 2023
Termination of Tenure	Mar. 2026
Expertise	Technology

- Current) Professor, Department of Software, Ajou University
- Outside director, Shinsegae I&C
- Director, Seoul Digital Foundation
- Executive Vice President, Samsung Electronics (Head of Contents & Service, Mobile Division)
- CEO, NHN Technology Services

Lee Dong-heon
Gender	Male
Appointment	Mar. 29, 2023
Termination of Tenure	Mar. 2026
Expertise	Accounting

- Current) Professor, Department of Global Business, College of Convergence Management, Korea University Sejong Campus
- Current) Director, Administrative Office, Korea University Sejong Campus
- Current) Planning Director, Korean Accounting Association

Hwang Deuk-soo
Gender	Male
Appointment	Mar. 29, 2023
Termination of Tenure	Mar. 2026
Expertise	Accounting

- Current) CFO, CJ ENM Entertainment Group
- Head of M&A, CJ Corp
- Head of ENM/CGV Department Business Management Division, CJ Corp
- Head of M&A(Planning Team, Strategy Division), CJ Corp

Securing competency at the Board level

Netmarble bolstered the expertise of the Board of Directors to make our decision-making more efficient and accurate. We use the Board Skills Matrix based on the majors and experiences of respective directors in assessing the competency level of Board members. To facilitate the work of non-executive directors, our internal regulations specify matters on the provision of information through our employees when necessary and the assistance provided by external experts to ensure non-executive directors receive appropriate support in performing their work.

Board Skills Matrix

(as of Mar. 2023)

Category	Definition	Bang Jun-hyuk	Kwon Young-sig	Do Gi-uk	Piao Yanli	Jeon Sung-ryul	Lee Chan-hee	Yoon Dae-gyun	Lee Dong-heon	Hwang Deuk-soo
Core industries(game & digital)	Expertise on the gaming & IT industries	●	●	●	●			●		
Business management & Investment	Expertise on large-scale organizational operation as well as M&As and other investment activities	●	●	●	●	●				●
Finance & Accounting	Expertise on finance & accounting for corporate management and oversight			●					●	●
Law & Regulation	Expertise on polices and laws for analysis of and response to legal risks						●			
International relations	Expertise on the dynamics of international politics and response to regional risks				●					
Marketing & Communication	Expertise on communication with external stakeholders					●				
Gender	Meet the gender diversity needs of the Board	Male	Male	Male	Female	Male	Male	Male	Male	Male

Board committees

To ensure the systemic operation of the Board of Directors, we operate 5 committees under the Board. Along with the existing committees of the Outside Director Candidate Recommendation Committee, the Internal Transaction Committee, the Compensation Committee, and the Audit Committee, the ESG Committee initially established as an internal committee was placed under the leadership of the Board in March 2023. All our committees, in their overall operations, comply with the provisions set out in the Articles of Incorporation, Board operation regulations, and respective committee regulations.

The Board receives reports on the handling results of the matters it delegated to committees, and directors may request the Chair of the Board to convene a meeting to revisit the decisions made by committees. To ensure independence in this regard, however, the decisions made at the Audit Committee are excluded in the scope of such reconsideration.

Composition of Board committees

(as of Mar. 2023)

Committee	Members				Key Role
	Position	Director	Name	Gender	
Audit Committee	Chair	Non-executive director	Lee Dong-heon	Male	Oversee the work of directors and top management, perform audits on overall corporate operations including financial status
	Member	Non-executive director	Lee Chan-hee	Male	
	Member	Non-executive director	Jeon Sung-ryul	Male	
	Member	Non-executive director	Hwang Deuk-soo	Male	
	Member	Non-executive director	Yoon Dae-gyun	Male	
Compensation Committee	Chair	Non-executive director	Jeon Sung-ryul	Male	Improve the transparency of management remuneration and ensure its appropriateness
	Member	Non-executive director	Lee Dong-heon	Male	
	Member	Other non-standing director	Piao Yanli	Female	
Internal Transaction Committee	Chair	Non-executive director	Hwang Deuk-soo	Male	Review the transparency of internal transactions entered into between related parties and approve such transactions
	Member	Non-executive director	Lee Dong-heon	Male	
	Member	Non-executive director	Yoon Dae-gyun	Male	
Outside Director Candidate Recommendation Committee	Chair	Non-executive director	Yoon Dae-gyun	Male	Verify non-executive directors for their qualifications and recommend candidates to the AGM
	Member	Non-executive director	Lee Chan-hee	Male	
	Member	Non-executive director	Hwang Deuk-soo	Male	
ESG Committee	Chair	Non-executive director	Lee Chan-hee	Male	Oversee ESG risks, deliberate and decide on ESG strategies and key issues
	Member	Non-executive director	Jeon Sung-ryul	Male	
	Member	Executive Director	Do Gi-uk	Male	

Activities of the Audit Committee in 2022

Meeting	Agenda	Approval	Attendance
1st meeting (Feb. 2022)	1. Reporting of the external auditor to the Audit Committee for Q4 2021	-	100%
	2. Reporting of the operational performance of the Audit Division for Q4 2021	-	
	3. Reporting of the operational status of the internal accounting control system for 2021	-	
	4. Submission of the financial statements and sales reports for the 11th period to the Audit Committee	-	
	5. Reporting of business performance for Q4 2021	-	
2nd meeting (Mar. 2022)	1. Reporting of external audit plans for 2022	-	100%
	2. Reporting of the work plan of the Audit Division for 2022	-	
	3. Submission of the audit report from the Audit Committee	Approved	
	4. Submission of audit opinions on the internal control devices	Approved	
	5 . Decision on the 2021 internal accounting control system operational status assessment report	Approved	
	6. Decision on the external auditor assessment results of the Audit Committee for 2021	Approved	
	7. Decision on the Audit Committee's self-assessment results for 2021	Approved	
	8. Approval on the Audit Committee's activity plan for 2022	Approved	
	9. Reporting of the agenda items for the 2022 AGM	-	
3rd meeting (May 2022)	1. Appointment of the Chair of the Audit Committee	Approved	100%
	2. Reporting of the external auditor to the Audit Committee for Q1 2022	-	
	3. Reporting of the Audit Division's work performance for Q1 2022 and work plan for Q2 2022	-	
	4. Reporting of business performance for Q1 2022	-	
4th meeting (Aug. 2022)	1. Reporting to the Audit Committee from the external auditor for Q2 2022	-	100%
	2. Reporting of the Audit Division's work performance for Q2 2022 and work plan for Q3 2022	-	
	3. Reporting of business performance for Q2 2022	-	
5th meeting (Nov. 2022)	1. Reporting of business performance for Q3 2022	-	100%
	2. Reporting of the external auditor to the Audit Committee for Q3 2022	-	
	3. Reporting of the Audit Division's work performance for Q3 2022 and work plan for Q4 2022	-	

Training for the Audit Committee in 2022

Date	Offered by	Attending Non-executive Directors	Content
May 26, 2022	Korea Listed Companies Association	Lee Chan-hee	Effective practices in performing audit work based on the activities of the Audit Committee
Nov. 11, 2022	Anjin Accounting Firm	Jeon Sung-ryul, Lee Chan-hee, Kim Joon-hyun	Impact from the introduction of the consolidated internal accounting control system and current readiness
Nov. 30, 2022	Audit Committee Forum	Lee Chan-hee	Considerations for the Audit Committee in relation to virtual assets, improvement in the Audit Committee's role for sustainable corporate development

Enhancing Shareholder Value

Overview of shareholders

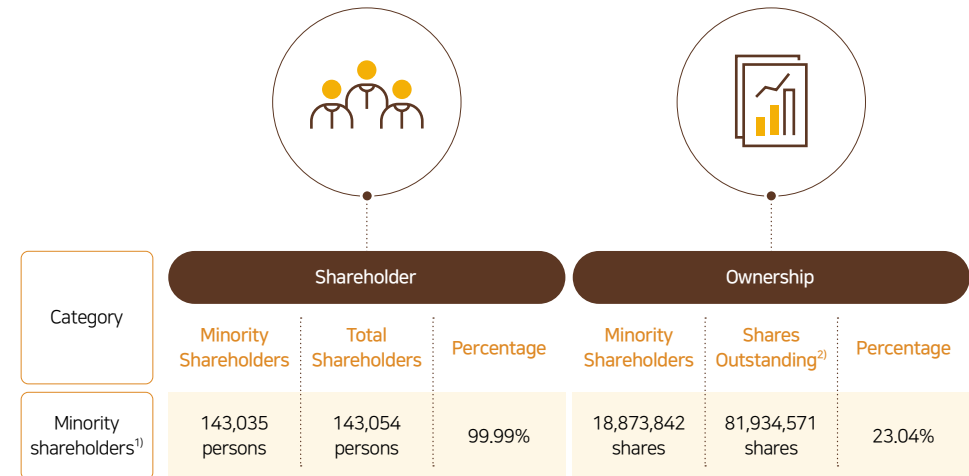According to our Articles of Incorporation, Netmarble is authorized to issue 200,000,000 shares in total (KRW 100 per share in face value), and the number of shares issued amounted to 85,953,502 shares as of December 31, 2022. The shares that we issued are all common shares, and Article 23 of our Articles of Incorporation guarantees the one share one vote rule to ensure all shares carry equal voting rights. Netmarble lends an ear to minority shareholders as well as large shareholders, and ensures that all shareholders can duly exercise their rights pursuant to applicable laws and regulations.

(Unit: %)

85,953,502
shares issued in total

24.12
21.78
17.52
6.80
4.68
25.10

- **Largest shareholder**
  20,729,472 shares
- **NCSOFT**
  5,842,800 shares
- **CJ E&M**
  18,720,000 shares
- **Treasury shares**
  4,018,931 shares
- **HAN RIVER INVESTMENT PTE. LTD.**
  15,057,800 shares
- **Others**
  21,584,499 shares

Minority shareholders

Category	Shareholder			Ownership		
	Minority Shareholders	Total Shareholders	Percentage	Minority Shareholders	Shares Outstanding[2]	Percentage
Minority shareholders[1]	143,035 persons	143,054 persons	99.99%	18,873,842 shares	81,934,571 shares	23.04%

1) Shareholders who own less than 1% of the total shares issued with voting rights
2) Total number of shares issued with voting rights(excluding 4,018,931 treasury shares)

Shareholder and investor communication

Netmarble engages in shareholder-friendly IR(Investor Relations) activities through wide-ranging channels to reach out ever closer to shareholders and investors and improve their understanding and trust. To increase shareholders' access to information, we made the IR section of our website available both in Korean and English. We also regularly attend a range of domestic and global IR events including non-deal roadshows and conferences to incorporate the feedback of shareholders and investors in our business operations.

Shareholder return policy

To improve shareholder value, Netmarble established our mid/long-term shareholder return policy through the decision made by the Board of Directors in 2018. As part of this policy, we return up to 30% of adjusted controlling shareholder's net profit to shareholders either through share buyback or cash dividends in comprehensive consideration of annual business performance.

Risk Management

Risk improvement tasks

21 cases

Risk Management System

Risk governance

Netmarble established a reporting system and an internal organization for systemic risk management. Our Audit Division reports the key risk issues identified through regular management diagnoses and whistleblowing and the progress made in improving on such risks to the Audit Committee under the Board of Directors. To bolster our risk management execution at all levels, we organized the 'Policy Management Taskforce' to share the status of risk management among responsible divisions and to preemptively discuss solutions for overall risks that occur in line with the changing business conditions that affect the gaming industry, including user communication and reinforcement of user rights and interests, climate change, information security, working conditions, diversity, and game regulations.

Risk management strategy

Each year, we thoroughly identify and preemptively manage the key risks that affect our business operations both in game business and non-game business areas. Management diagnoses and investigations of whistleblowing reports are conducted at least once a year to categorize potential risks by work stream, and checklists are made available for relevant divisions to self-review and prevent risks. In 2022, we identified potential risks in the areas of financing & finance, HR, management system, procurement, and law & compliance among others. Quarterly reviews are made on risks by type and the results go through the final assessments made by the internal accounting manager and the CEO.
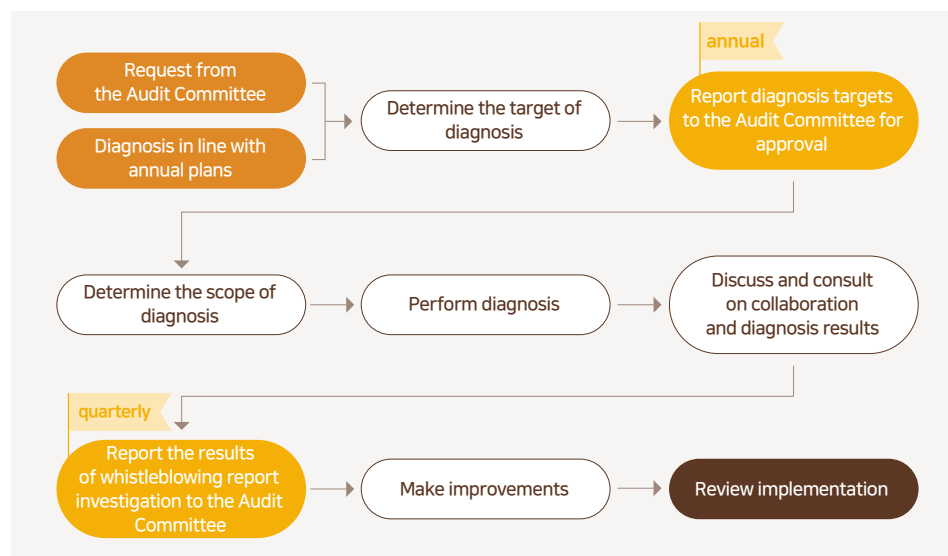
Risk Management Area	Responsible Division	Category
Government regulations, policy change, legislation	Policy Division · CR Division	
Climate change, environmental risk	General Affairs Division	Policy Management Taskforce
Occupational safety, right to health, partners		
Labor, human rights, employees	HR Division	
User protection, communication	CIM Division	

Risk Management Area	Responsible Division	Category
Data privacy, data security	Security Division	
Technology innovation, new business	Technology Strategy Officer · Strategic Planning Division	Function-specific specialized organization
Liquidity, financial risk	Finance Planning Division	
Law, compliance	Legal Affairs Division · Policy Division	
Ethical management	Audit Division	

Management diagnosis

Netmarble's Audit Division performs regular management diagnoses(implementation reviews) on our key businesses, functions, and corporations to identify risks and eliminate their root causes in an aim to improve our business soundness. The diagnosis is carried out at the request of the Audit Committee and in line with the set audit plans to support the Audit Committee and top management to make decisions and secure substantial business competitiveness. Management diagnoses serve to check the credibility of management information while verifying the appropriateness of our work execution based on corporate regulations and identifying necessary improvements in so doing to improve management integrity. In 2022, regular assessments were conducted on our marketing outsourcing process to establish an advanced outsourcing cost management system in consideration of the high proportion of outsourcing transactions in our business operations. This led us to identify vulnerabilities in 7 areas including budget appropriation and compliance, and to define 21 improvement tasks, and we are currently working on these tasks. Furthermore, progress reviews were made on the improvement tasks defined based on the IT infrastructure management diagnoses performed in 2021. This helped us assess our progress towards 15 improvement tasks concerning IT infrastructure asset management, maintenance, and IDC operation and check whether substantial improvements were achieved.
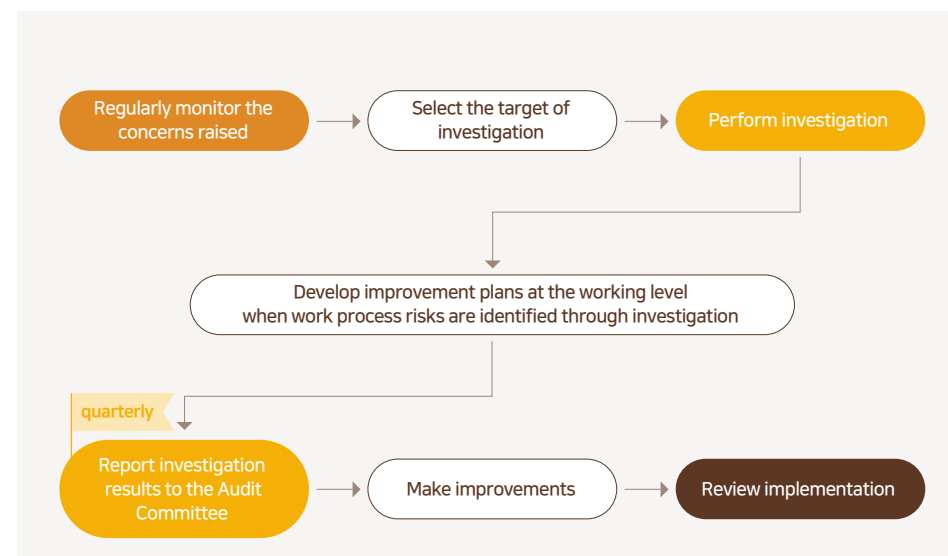
Investigation of whistleblowing reports

Our Audit Division investigates into submitted whistleblowing reports to categorize the risks that may occur by work area and ensures that relevant divisions self-review and prevent such risks through checklists. The investigations ensure that we identify the reasons behind specific risks and conduct regular monitoring and training for relevant divisions to prevent their reoccurrence and contribute to enhancing our management soundness. In 2022, investigations were made on the concerns raised in relation to game operation, and this was followed by the development of work process improvement plans and annual regular monitoring to verify whether substantial improvements were made.

Risk Management Process through Management Diagnosis(Implementation Review)

annual
- Request from the Audit Committee
- Diagnosis in line with annual plans
→ Determine the target of diagnosis
→ Report diagnosis targets to the Audit Committee for approval
→ Determine the scope of diagnosis
→ Perform diagnosis
→ Discuss and consult on collaboration and diagnosis results
→ quarterly: Report the results of whistleblowing report investigation to the Audit Committee
→ Make improvements
→ Review implementation

Risk Management Process through Whistleblower Report Investigation

- Regularly monitor the concerns raised
→ Select the target of investigation
→ Perform investigation
→ Develop improvement plans at the working level when work process risks are identified through investigation
→ quarterly: Report investigation results to the Audit Committee
→ Make improvements
→ Review implementation

Multilateral Risk Issue Monitoring

Business risk management through external collaboration

To effectively manage business-related risks, Netmarble teams up with diverse stakeholders to carefully consider how the gaming industry impacts our society and seek appropriate countermeasures.
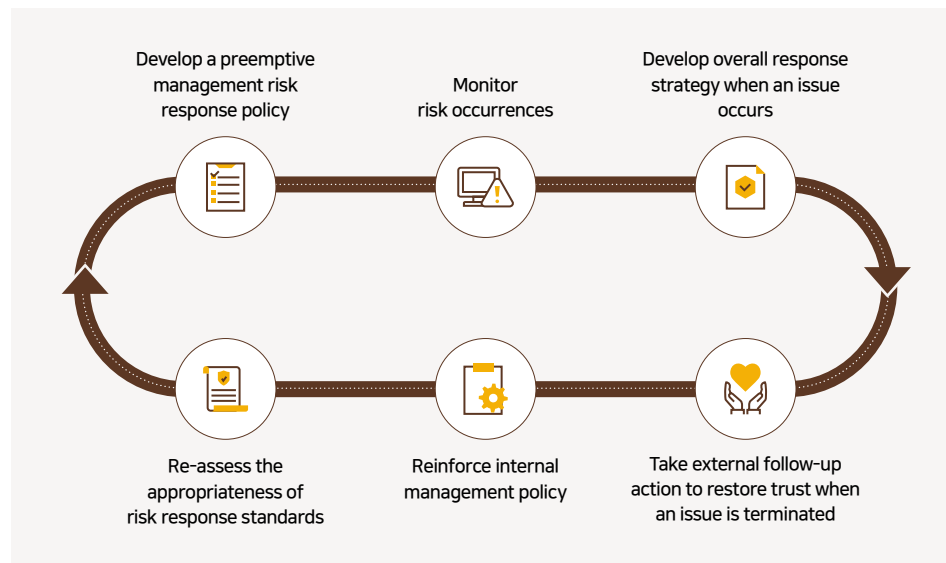
In partnership with the Korea Association of Game Industry, the Game Culture Foundation, the Game Self-governance Organization of Korea, and other associated organizations, we manage risks that stem from negative perceptions on games and proactively respond to relevant issues. We also host Game & Science, Game & Society and other forums along with diverse academic experts to facilitate communication between working-level employees and academia to shape meaningful discourse in this aspect. Such forums will drive our efforts to provide evidence for institutional improvement and regulatory amendment and take a science-based approach to performing in-depth analyses on issues related to the gaming industry.

Netmarble sponsors research on the social impact of games. We contributed to the establishment of the Game-n-Science Institute under the Game Culture Foundation to support academic research and presentations on the positive benefits and social value of games, proactively communicating with society and working to improve awareness on the advancement of game culture.

ESG risk management

Netmarble manages ESG risks to adapt to the rapidly-shifting natural and social landscape. As a company's growth is heavily affected by non-financial risks such as stakeholder relationships and environmental regulations as well as conventional financial risks, we categorized financial risks such as capital risk as well as non-financial risks in the areas of user protection, human rights management, and climate change while establishing our risk management system to develop respective response strategies. Furthermore, we established the following risk management process and organized a risk management response organization at the organizational head level to prevent risks and promptly respond to risks when they emerge.

ESG Risk Management Process

Develop a preemptive management risk response policy

Monitor risk occurrences

Develop overall response strategy when an issue occurs

Re-assess the appropriateness of risk response standards

Reinforce internal management policy

Take external follow-up action to restore trust when an issue is terminated

ESG Risk Management Areas

User Protection
Protect user rights including data privacy in the service use phase

Communication
Manage negative sentiments stemming from game-related issues and complaints, as well as external reputation

Information Security
Ensure information security against theft of source codes or other technology, abuses, and hacking

Policy and Regulation
Analyze new businesses for their risk and opportunity, preemptively respond to government policies, enactments and regulations

Human Rights Management
Review factors undermining the human rights of internal/external stakeholders

Employees and Talent Attraction
Ensure gender equality, respect for diversity, talent capacity-building, and technology development

New Technology
Manage the social impact of new technology

Health & Safety
Manage the pandemic crisis, establish occupational health and safety and workplace safety

Transparent, Ethical Management
Comply with business ethics and fair trade regulations, build trust with users and partners

Climate Change
Use renewable energy, respond to climate change risks, and reduce negative environmental impact

Ethics and Compliance

Action taken for ethical whistleblower reports

100 %

Ethical Management

Ethical management principles

Netmarble advances transparent and sound business operations based on our Code of Conduct stipulated in 2019. Netmarble's Code of Conduct, which consists of six chapters by stakeholder group(Our Mission, Our Promise, Protecting Corporate Values, Practicing Fairness and Mutual Prosperity, Our Goal, and Our Approach to Ethics) is made available in 7 languages including Korean, English, and Chinese on our website. This Code applies to all employees of Netmarble and its subsidiaries(permanent, contract, dispatched, and internship employees at the headquarters and subsidiaries) regardless of their type of employment, and they sign the ethical management pledge each year to commit to full compliance with the Code of Conduct in business conduct. Netmarble partners are also encouraged to understand the intent of the Code of Conduct and ensure their compliance with the Code. If partners fail to comply and undermine the value of the Code, we require them to take corrective action or suspend any further progress in our business relationship with them.
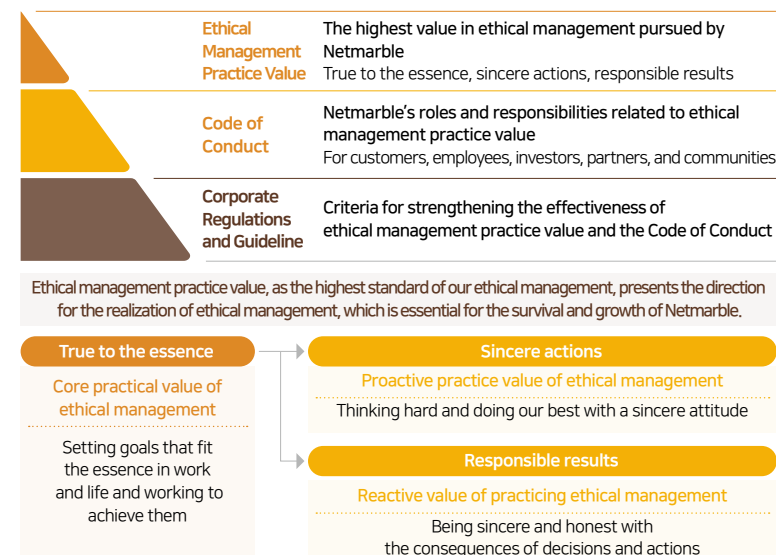
Code of Conduct	
① Our Mission	- Netmarble's mission - Game service, health & safety
② Our Promise	- Respect for diversity, non-discrimination, privacy, working environment - Mutual respect and communication, prohibition of bullying, working conditions
③ Protecting Corporate Values	- Asset protection, accounting & work documentation - External communication, political activity - Ban on the use of undisclosed critical information
④ Practicing Fairness and Mutual Prosperity	- Fairness for partners, mutually beneficial business relationships - Third-party information and assets handling - Guidelines for regalement, gifts, accommodations
⑤ Our Goal	- Netmarble's goal
⑥ Our Approach to Ethics	- Conflict of interest(outside employment, lectures, etc.) - Compliance with the law, prohibited misconduct

Ethical management operation system

Netmarble established the Audit Committee and the Audit Division to systematically advance ethical management. The Audit Division is an independent organization under the direct leadership of the Audit Committee, and heads our audit operations including the development and implementation of internal audit plans and the reporting of their results to improve our work efficiency through risk elimination and substantial process improvement. Risk management activities are split into management diagnosis, implementation review, and whistleblower report investigation(on an on-going basis) at respective organizations of Netmarble and Company affiliates and at respective key work process functions. Article 21 of the Audit Committee operational regulations specifies the qualifications of audit personnel to ensure expertise in performing audit work, and the Audit Division employs experts in the areas of management, law, and accounting in compliance with these qualifications.

All activities of the Audit Division, including management diagnosis, implementation review, ethical management training, and internal accounting control system oversight, are addressed as matters requiring reporting or decision-making at the Audit Committee. The Audit Committee is solely composed of non-executive directors to perform substantial management oversight for ethical management issues.

Netmarble's Ethical Management System

Ethical Management Practice Value	The highest value in ethical management pursued by Netmarble True to the essence, sincere actions, responsible results
Code of Conduct	Netmarble's roles and responsibilities related to ethical management practice value For customers, employees, investors, partners, and communities
Corporate Regulations and Guideline	Criteria for strengthening the effectiveness of ethical management practice value and the Code of Conduct

Ethical management practice value, as the highest standard of our ethical management, presents the direction for the realization of ethical management, which is essential for the survival and growth of Netmarble.

True to the essence

Core practical value of ethical management

Setting goals that fit the essence in work and life and working to achieve them

Sincere actions

Proactive practice value of ethical management

Thinking hard and doing our best with a sincere attitude

Responsible results

Reactive value of practicing ethical management

Being sincere and honest with the consequences of decisions and actions
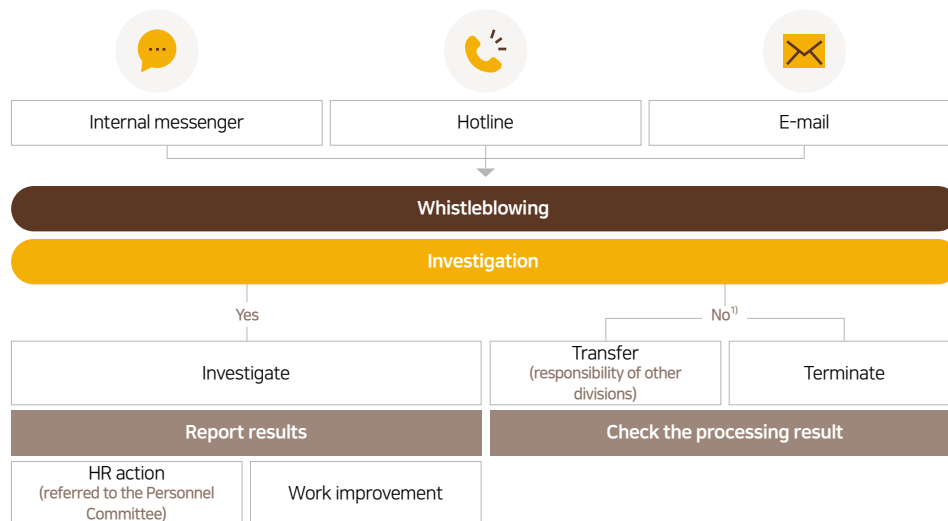
Receiving and addressing whistleblower reports

Netmarble's Audit Division operates Netmarble Ethics Center for employees to make inquiries and seek counseling on ethical management and non-compliance with the Code of Conduct on an on-going basis. The Audit Division has established a collaboration system to make counseling highly accessible for employees, and inquiries submitted through diverse channels are systematically reviewed and addressed accordingly through internal collaboration. The details of the investigation conducted on the whistleblowing reports submitted through Netmarble Ethics Center are regularly reported to top management and the Audit Committee.

Ethical Management Whistleblowing and Handling Process

Internal messenger	Hotline	E-mail

Whistleblowing

Investigation

Yes — No[1]

Investigate	Transfer (responsibility of other divisions)	Terminate

Report results	Check the processing result

HR action (referred to the Personnel Committee)	Work improvement

1) When the whistleblower does not want to proceed with investigation or it is impossible to confirm additional factual grounds

Netmarble Ethics Center

E-mail | ethics@netmarble.com
Post | Netmarble Ethics Center
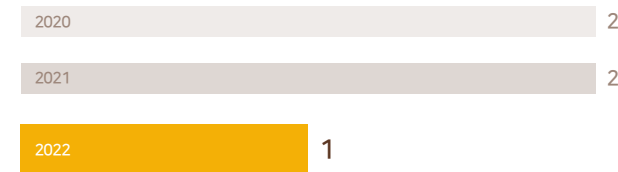G-Tower, 38, Digital-ro 26-gil, Guro-gu, Seoul, Korea (08393)

Netmarble Ethics Center

Actions taken for whistleblowing reports

Over the past three years, 5 ethical whistleblowing reports that fall in the 'others' category were submitted to Netmarble Ethics Center(2 in 2020, 2 in 2021, and 1 in 2022), and all of these reports were addressed in conformity with our internal regulations. Ethical whistleblowing reports are categorized into data leaks, negligence, damage to corporate reputation, workplace bullying, discriminatory treatment(on the grounds of gender or place of origin), sexual harassment and others. Reports related to human rights including those on workplace bullying, discriminatory treatment, and sexual harassment have been referred to the HR Division for handling following explanation to whistleblowers since July 2019.
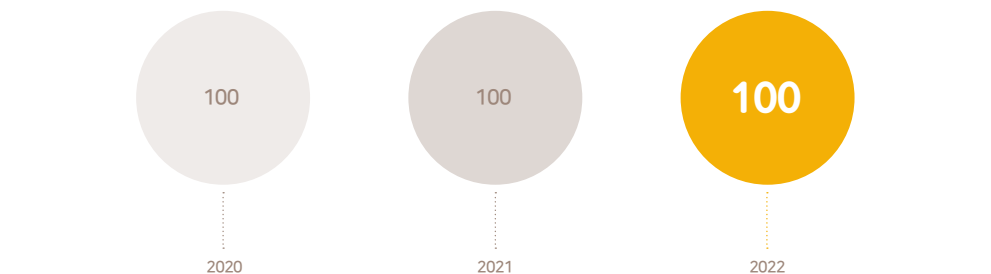
Other Ethics-related Reports Filed

(Unit: Cases)

Year	Cases
2020	2
2021	2
2022	1

Percentage of Other Ethics-related Reports Addressed

(Unit: %)

2020	2021	2022
100	100	100

Whistleblower protection

Netmarble extends full protection to those who report violations of the Code of Conduct. Article 38 of the Internal Audit Regulations sets out provisions on the protection of whistleblowers and the prohibition of retaliation. In detail, the Regulations specify that 'whistleblowers(including those who cooperate), the act of whistleblowing, and the details of the report submitted remain confidential, and any attempt to identify whistleblowers or impose identity-related disadvantages is prohibited' to make sure that whistleblowers and employees who participate in investigation do not encounter any form of disadvantage.

Anti-corruption management

To fundamentally prevent unethical solicitation, our internal ERP system generates warning messages when entertainment-related cost inputs run counter to applicable laws and makes it impossible to process such inputs. We have employees of Netmarble and major Company affiliates sign the ethical management pledge each year to commit themselves to complying with our Code of Conduct, and made it mandatory for our partners to do the same.

Pledge to Practice Ethical Management

Netmarble established the Code of Conduct to become a company trusted by customers, employees, shareholders, and partners by generating performance based on ethical management. As a member of Netmarble, we recognize that by practicing ethical management, we take action to achieve our vision and vow to comply with the following to perform work fairly.

First, we will comply with the Code of Conduct in business conduct and will not engage in any non-compliance with the Code of Ethics including following practices.
- Manipulation of documents and numbers or false reporting
- Illegal use of corporate assets and unauthorized external disclosure of such assets
- Damage to the dignity and reputation of the company
- Receipt of gifts, entertainment, favors, sponsorships, and benefits from stakeholders
- Conflict of interest such as side jobs
- Non-compliance with other laws and corporate regulations

Second, when we become aware of non-compliance with ethical management on the part of Netmarble employees or stakeholders or receive proposals to run counter to ethical management, we will immediately communicate this to Netmarble's Audit Division.

Third, when an investigation is made into acts of non-compliance, we will sincerely cooperate to meet the requests of the Company(interview, confirmation letter, document submission, etc.)

We pledge to faithfully abide by the above, and take full responsibility for our non-compliance.

Ethical management awareness survey

Each year, we survey our employees on their ethical management awareness to take stock of our ethical management performance and use the results in making necessary improvements. The survey questionnaire covers 4 domains(ethical management awareness, practice, training & promotion, and whistleblowing), and collects employee feedback on issues in need of improvement. The 2022 survey revealed that there were year-over-year improvements in the implementation of ethical management and relevant training and promotion activities. Such survey results prompted us to expand our online ethical management program in consideration of employee preferences. We have also added online ethical management training for newly-appointed leaders since November 2022, and opened an ethical management website to publicize and raise awareness on ethical management.

Timeline and method Jul. 11(Mon.) to Aug. 12(Fri.) 2022, online survey

Result 2,691 out of 3,201 employees at Netmarble and Company affiliates responded(response rate 84%, up by 5%p from the previous year)

Topic	Number	Question	Purpose
Ethical management awareness	1	I am aware of Netmarble's ethical management.	Identify basic-level awareness on Netmarble's ethical management
Ethical management practice	2	I practice ethical management in business conduct in accordance with the Company's regulations and processes.	Assess individual employees' implementation of ethical management
	※	If you answered "Strongly Disagree" or "Disagree", what are the reasons behind your disagreement?	Identify issues and verify improvement directions
	3	Our organization(employees) practice ethical management.	Assess the Company's implementation of ethical management
	※	If you answered "Strongly Disagree" or "Disagree", what are the reasons behind your disagreement?	Identify issues and verify improvement directions
Ethical management training and promotion	4	What do you think is the most effective way of communicating on ethical management?	Sharpen the focus of our ethical management training and promotion activities
Whistleblowing	5	I am willing to blow the whistle when I become aware of non-compliance with ethical management.	Identify one's willingness to blow the whistle on non-compliance with ethical management
	※	If you answered "Strongly Disagree" or "Disagree", what are the reasons behind your disagreement?	Identify issues and verify improvement directions
Open-ended question (optional)	6	If you have any feedback to share concerning issues in need of improvement from the viewpoint of ethical management, please feel free to share your thoughts.	Collect employee feedback on ethical management

Employee training on ethical management

Netmarble provides wide-ranging on/offline training to all employees to ensure the effective implementation of ethical standards. Ethical management training is included in our annual basic common training for employees, and ethical management training is provided to new employees including interns and new/experienced hires. In 2022, we produced ethical management training materials for newly-appointed leaders(in team leader and higher positions), and conducted monthly ethical management training for these new leaders to help cultivate leadership for ethical management.

Ethics Training Completed

Category	Participant	Attendance	Total Training Hours	Training Hours per Person
Training for all employees	885 persons	100%	443 hours	0.5 hours
Training for newly-appointed leaders	7 persons	100%	7 hours	1.0 hours
Training for new hires (new/experienced hires, interns)	186 persons	100%	56 hours	0.3 hours

Ethical management guide for newly-appointed leaders

Disseminating a culture of ethical management

Netmarble engages in a variety of activities to disseminate Netmarble's distinctive culture of ethical management and elevate their ethical awareness. Each month, we send newsletters pairing requirements for ethical management with cultural content, and host events to encourage employees' participation. We post promotional materials on ethical management on an on-going basis, and launch no-gift campaigns during holidays as part of our sustained promotional efforts.
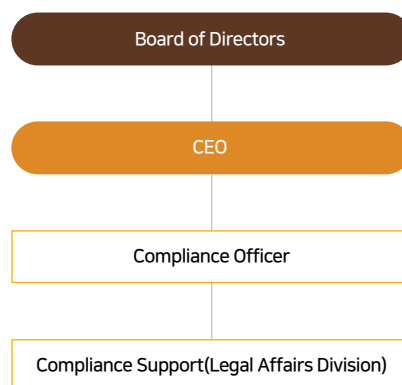
Compliance Management

Netmarble's compliance control standards stipulate matters on the Compliance Officer and other compliance control activities with an aim to advance compliance management to establish an exemplary corporate culture and gain trust from stakeholders. These standards set forth provisions on the appointment of the Compliance Officer, the authorities and obligations of the Compliance Officer, detailed compliance control activities, and the handling of non-compliance. The Compliance Officer is mandated to perform on-going monitoring on our regulatory compliance, major contracts signed, necessary improvements, and compliance with e-commerce regulations among others in conformity with our compliance control standards.

Compliance management governance

Netmarble established our compliance management governance consisting of the Board of Directors, the CEO, the Compliance Officer, and a compliance support organization to systematically implement compliance management at all levels. The Board makes major decisions on compliance control standards and other relevant matters, and the CEO aligns our compliance control system and oversees its effective operation in line with the decisions made by the Board. The Compliance Officer, along with the Legal Affairs Division, heads working-level compliance control operations, and reviews and reports on whether our compliance control standards are well observed. We are increasing the proportion of lawyers and other professionals to establish the expertise of our Legal Affairs Division.

Compliance Management Governance

Board of Directors

CEO

Compliance Officer

Compliance Support(Legal Affairs Division)

Compliance management system

Netmarble has established a compliance support organization to regularly review compliance risks. To bolster the objectivity, fairness, and expertise of our compliance management operations, we appointed a third-party law firm as our legal advisor to perform cross-checks while updating our procurement review process as well as inter-affiliate service and monetary transaction standards by constantly reflecting change in applicable laws and the practical case studies of the Fair Trade Commission.

As a global game company, Netmarble ensures rigorous compliance with the laws and regulations of the countries where we operate in providing our services. We proactively manage our overseas corporations to respond to compliance issues, and in the event that providing our game services requires governmental screening, registration, and reporting or user notifications, we make sure we abide by relevant laws and regulations.

Tax

Tax management principles

Netmarble recognizes that faithfully fulfilling our obligations as a major taxpayer in the communities where we operate is an essential prerequisite for ethical management. We stringently abide by country-specific tax laws and the tax treaties signed in the countries where we operate to prevent tax risks, and conduct all types of transactions with the boundary of applicable tax laws. We also proactively cooperate with the tax policies of respective countries while maintaining transparent relationships with domestic and overseas tax authorities and promptly responding to their information requests.

Disclosing the details of income tax expenses and improving our tax transparency

Netmarble fully and regularly discloses our tax-related information to internal and external stakeholders. Details of our income tax expense and other transaction-related information are provided within the business reports disclosed on the DART electronic disclosure system of the Financial Supervisory Service. We also meet our obligations to submit reports and relevant documents to improve the transparency of our tax operations.

Fulfilling global tax obligations

We thoroughly abide by the tax laws of respective countries where we conduct business. We recognize differences in country-specific tax laws and sincerely fulfill our obligation for tax filing and payment and for document submission. Furthermore, we proactively cooperate with tax policies and maintain cooperative relationships with tax authorities. We ensure fairness in our transfer pricing practices in full compliance with the arm's length principle set out in the OECD guidelines that serve as the standard for cross-border transactions made with foreign related parties.

Tax risk management

We operate an internal dedicated division and seek regular advice from third-party experts to prevent and manage tax risks that may occur across our business operations. As abiding by tax laws and duly paying taxes constitute a company's obligation and a prerequisite for its sustainable management, we review tax risks and consider their impact in making important business decisions. For high-priority tax issues, we make inquiries in advance to conduct business based on the authoritative interpretations provided by tax authorities, and carefully review, prevent, and manage tax risks that could occur in various types of transactions, including transaction in services and goods, and transactions with and investments in Company affiliates(related parties).

Environmental   90

Social   91

Governance   96

FACTBOOK

StoneAge

Environmental

GHG Emissions[1]

Classification		Unit	2021	2022 Netmarble	2022 Subsidiaries
Scope 1 emissions		tCO_2eq	550	481	733
Scope 2 emissions			2,832	3,655	1,989
Total GHG emissions			3,382	4,136	2,723
GHG emissions intensity		tCO_2eq/ KRW 100 million	0.256	0.430	–

1) 2021 data were restated due to change in calculation criteria.

Energy Consumption[2]

Classification			Unit	2021	2022 Netmarble	2022 Subsidiaries
Energy consumption (domestic)[3]	Total		GJ	70,441	87,802	56,526
	Energy use intensity		GJ/ KRW 100 million	5.338	9.121	–
	Direct energy	Fixed combustion (diesel)	GJ	2,720	5	129
		Fixed combustion (LNG(GHP))		6,687	9,033	14,155
		Total		9,407	9,038	14,284
	Indirect energy	Electricity		59,189	76,385	41,577
	Renewable energy[4]	Geothermal		1,405	1,923	536
		Solar		343	437	122
		Hydrogen fuel cell		95	17	4

2) 2021 data were restated due to change in calculation criteria.
3) Jan.-Feb. 2021: G-Valley(former office building) data, Mar.-Dec. 2021: G-Tower(new office building) data
4) Operated from Mar. 2021 after moving into the new building

Water Resource Management[5]

Classification		Unit	2021	2022 Netmarble	2022 Subsidiaries
Water intake	Waterworks	m^3	23,918	23,322	16,743
Water recycling			88	719	199

5) 2021 data were restated due to change in calculation criteria.

Waste Discharge[6]

Classification		Unit	2021	2022 Netmarble	2022 Subsidiaries
General waste[7]	Waste generated	ton	96	166	46
	Waste recycling		96	166	46

6) 2021 data were restated due to change in calculation criteria.
7) The amount of waste generated surged as we returned to on-site work in 2022.

Environmental Investment[8][9]

Classification		Unit	2020	2021	2022
Environmental investment expenses	Total	KRW	31,188,432,251	6,300,000	14,526,811
	Energy·GHG management system		792,891,840	–	–
	New and renewable energy		3,790,813,104	–	–
	Energy efficiency system		19,740,391,500	–	–
	Eco-friendly materials use		2,982,935,085	–	–
	Ecological environment		3,881,400,723	6,300,000	14,526,811

8) Data for 2020 represent environmental investment expenses incurred during the construction of the new building; In 2021 and 2022, as the warranty period, no separate maintenance costs were executed except for ecological environment costs.
9) Calculated as the investments made by Netmarble as most of the investments are made by Netmarble

Violation of Environmental Laws and Regulations

Classification		Unit	2020	2021	2022
Violation of environmental laws and regulations	Violations of legal regulations	times	0	0	0
	Non-monetary sanctions	cases	0	0	0
	Total fines	KRW in millions	0	0	0

The scope of subsidiaries in the Environmental area includes the following 7 companies: Netmarble Neo, Netmarble Nexus, Netmarble Monster, Netmarble F&C, Netmarble N2, GUROBAL Games, and Ntri

Social

Customer Satisfaction

Classification		Unit	2020	2021	2022
VOCs submitted and addressed	VOCs submitted	cases	769,859	653,251	454,935
	VOCs addressed[1]		803,047	683,421	477,994
User satisfaction level (in-house survey)[2]	PC	points	62.2	61.3	66.6
	Mobile		3.4	3.2	3.5

1) The number of cases addressed exceeded the number of cases submitted as additional answers were provided.
2) PC: out of 100 points, Mobile: out of 5 points

Mandatory Measures Regarding Communication Security

Classification		Unit	2020	2021	2022
Seizure warrant[3]	Requested	cases	836	728	429
	Processed		766	675	109
Communications restriction	Requested		0	0	0
	Processed		0	0	0
Communications fact confirmation material	Requested		2,559	1,807	1,131
	Processed		1,980	1,531	627

3) Netmarble provides personal information to investigate agencies when they require it with seizure warrants.

Investment in Information Security

Classification	Unit	2020	2021	2022
Investment in information security[4]	KRW in millions	-	7,367	6,597

4) Management and disclosure of investment in information security has been conducted from 2021 in accordance with the information security disclosure policy.

Personal Information Protection

Classification			Unit	2020	2021	2022
Number of users whose information is used for secondary purposes	Total		persons	0	0	0
	By country	Active account		0	0	0
		Dormant account		0	0	0
	Provision to third parties	Dormant account		0	0	0
Monetary losses as a result of legal proceedings associated with user privacy[5]	Total		KRW in millions	0	0	0
	Domestic			0	0	0
	Overseas			0	0	0
Data breach	Number of data breaches	Total	cases	0	0	0
		Domestic		0	0	0
		Overseas		0	0	0
	Infringement costs related to personally identifiable information(PII)	Total	KRW in millions	0	0	0
		Domestic		0	0	0
		Overseas		0	0	0
	Number of users affected by privacy infringement	Total	persons	0	0	0
		Domestic		0	0	0
		Overseas		0	0	0
	Financial loss due to legal procedures related to privacy issue	Total	KRW in millions	7.2	0	0
		Domestic		7.2[6]	0	0
		Overseas		0	0	0
	Grievances submitted externally in relation to user data breaches[7]		cases	-	-	0
	Grievances submitted by regulatory institutions in relation to user data breaches[8]			-	-	0

5) Financial loss due to violation of laws and regulations related to user information protection
6) Same as marketing and labeling law violations
7), 8) Data collection started from Dec. 2021 and data for 2020 and 2021 are not available.

Training on Information Protection

Classification		Unit	2020	2021	2022
In-house training on data security	Participants	persons	875	854	888
	Participation rate	%	99	100	100
	Total training hours	hours	826	854	888
Training on personal information protection	Participants	persons	763	875	888
	Participation rate[1]	%	96	97	100
	Participation rate based on statutory obligations	%	100	100	100
	Total training hours	hours	763	844	888

1) Some absentees due to leave of absence or retirement in 2020 and 2021

Violation of Marketing and Labeling Laws

Classification		Unit	2020	2021	2022
Domestic	Violations	cases	1	0	0
	Fines and penalties	KRW in millions	7.2	0	0
Overseas	Violations	cases	0	0	0
	Fines and penalties	KRW in millions	0	0	0

Employees

Classification			Unit	2020	2021	2022
Employees	Total number of employees[2]		persons	768	822	839
	Employment type[3]	Full-time	persons	739	792	805
		Percentage of full-time employees	%	96.2	96.4	95.9
		Part-time	persons	29	30	34
		Percentage of part-time employees	%	3.8	3.6	4.1
	Gender	Male	persons	486	540	542
		Percentage of male employees	%	63.3	65.7	64.6
		Female	persons	282	282	297
		Percentage of female employees	%	36.7	34.3	35.4
	Age	Employees aged under 30	persons	169	178	189
		Percentage of employees aged under 30	%	22.0	21.7	22.5
		Employees aged 30 to 50	persons	598	639	644
		Percentage of employees aged 30 to 50	%	77.9	77.7	76.8
		Employees aged over 50	persons	1	5	6
		Percentage of employees aged over 50	%	0.1	0.6	0.7
	Nationality	Korea	persons	758	811	834
		Percentage of Korean employees	%	98.7	98.7	99.4
		Foreign	persons	10	11	5
		- China		8	7	3
		- Canada		1	3	2
		- Türkiye		1	1	0
		Percentage of foreign employees	%	1.3	1.3	0.6
	Position	Employees	persons	743	800	818
		Percentage of employees	%	96.7	97.3	97.5
		Executives	persons	25	22	21
		Percentage of executives	%	3.3	2.7	2.5

2) Including full-time and part-time employees and unregistered executives(except for members of the Board of Directors including executive directors, non-executive directors, other non-standing directors, auditors, and member of the Board of Directors)
3) Full-time position: full-time employees, top management, and advisors, Part-time position: direct contract workers

Employees

Classification			Unit	2020	2021	2022
Workforce diversity	Female	Female executives	persons	2	1	3
		Percentage of female executives[1]	%	8.0	4.5	14.3
		Percentage of female managers[2]		18.8	19.0	20.8
		Percentage of female team members		40.7	38.1	38.8
		Percentage of female employees in IT positions[3]		20.9	22.5	24.5
	Disability	Employees with disabilities	persons	11	7	11
		Percentage of employees with disabilities	%	1.4	0.9	1.3
		Percentage of executives with disabilities		0	0	0
Employee engagement[4]			%	12.1	22.0	19.8

1) Number of female executives / total number of executives
2) Number of female employees in team leader and higher positions / total number of position holders; 2020 and 2021 data were restated due to change in calculation criteria
3) Number of female employees in IT positions / total number of employees in IT positions
4) Number of highly-engaged employees(scored 80 points and higher in the engagement-related questions of the Culture Survey) / number of employees who participated in the Survey

Employee Turnover

Classification			Unit	2020	2021	2022
Voluntary turnover		Total voluntary turnover[5]	persons	121	128	153
		Total voluntary turnover rate	%	15.6	17.3	19.3
	Gender	Male	persons	66	75	100
		Percentage of male employees	%	54.5	58.6	65.4
		Female	persons	55	53	53
		Percentage of female employees	%	45.5	41.4	34.6
Transfer to affiliates			persons	8	9	32

5) 2020 and 2021 data were restated due to change in calculation criteria.

New Employment[6]

Classification		Unit	2020	2021	2022
Number of hires(full-time + part-time)		persons	120	217	224
Employment type	Full-time	persons	104	191	201
	Percentage of full-time employees	%	86.7	88.0	89.7
	Part-time	persons	16	26	23
	Percentage of part-time employees	%	13.3	12.0	10.3
Gender	Male	persons	80	142	137
	Percentage of male employees	%	66.7	65.4	61.2
	Female	persons	40	75	87
	Percentage of female employees	%	33.3	34.6	38.8
Nationality	Korea	persons	119	214	223
	Percentage of Korean employees	%	99.2	98.6	99.6
	Foreign	persons	1	3	1
	Percentage of foreign employees	%	0.8	1.4	0.4
Position	Employees	persons	118	214	220
	Percentage of employees	%	98.3	98.6	98.2
	Executives	persons	2	3	4
	Percentage of executives	%	1.7	1.4	1.8
Disability	Employees with disabilities	persons	1	1	2
	Percentage of employees with disabilities	%	0.8	0.5	0.9
Transfer from affiliates		persons	5	4	4

6) 2020 and 2021 data were restated due to change in calculation criteria.

Supporting Employee Growth

Classification			Unit	2020	2021	2022
Training hours	Total		hours	10,213	8,998	8,876
	Gender	Male		7,402	6,169	5,591
		Female		2,811	2,830	3,285
	Employment type	Full-time		10,047	8,800	8,652
		Part-time		166	199	224
Average training hours per employee				13.3	10.9	10.6
Ratio of training hours to working hours			%	0.8	0.7	0.6
Training expense per employee			KRW	210,455	112,086	218,123

Labor Costs

Classification	Unit	2020	2021	2022
Overall average labor cost[1]	KRW in millions	73[2]	81	74
Average wage of employees[3]		67	75	73

1) Based on payroll statements(for full-time and direct contract employees, except for registered executives, dispatched workers, part-timers, and interns)
2) 2020 data were restated due to the correction of calculation errors.
3) Excluding incentive items out of total average personnel expenses

Performance Appraisal and Compensation

Classification			Unit	2020	2021	2022
Performance appraisal	Percentage of employees who received performance appraisal		%	100	100	100
Compensation	Wage ratio of new female and male employees			100	100	100
	Ratio of entry-level employee wages to minimum wage at significant locations of operation	Development positions		164	197	187
		Non-development positions		148	177	168
Retirement pension plan[4]	Defined contribution (DC)	Asset under operation	KRW in millions	0	0	2,751
		No. of subscribers	persons	0	0	146
	Defined benefit (DB)	Asset under operation	KRW in millions	21,077	27,118	29,270
		No. of subscribers	persons	638	618	551

4) As to the asset under operation of the hybrid(DB+DC) plan, the amount is split and reflected according to the respective allocation ratio, and duplication is reflected in the number of subscribers.

Parental Leave

Classification		Unit	2020	2021	2022
Parental leave users	Total	persons	20	22	10
	Male		6	7	2
	Female		14	15	8
Employees who returned to work after parental leave	Total		20[5]	21	14
	Male		7[5]	4	4
	Female		13	17	10
Employees who returned to work after parental leave that were employed 12 months after their return	Total		12	21	17
	Male		2	4	4
	Female		10	17	13
Percentage of employees who returned to work after parental leave	Male	%	100	100	67
	Female		100	100	91
Percentage of employees who continue to work after parental leave	Male		80	29	100
	Female		64	77	76

5) 2020 data were restated due to the correction of calculation errors.

Open Council Operation

Classification		Unit	2020	2021	2022
Members of the Open Council		persons	10	10	10
Number of meetings held		times	6	10	8
Number of meetings between the management and the Open Council		times	4	4	4
Addressing employee grievances	Grievances filed	cases	4	24	6
	Grievances addressed	cases	1	23	5
	Percentage of grievances addressed	%	25	96	83
Addressing employee suggestions	Suggestions filed	cases	2	12	12
	Suggestions addressed	cases	2	10	10
	Percentage of suggestions addressed	%	100	83	83

Workplace Safety

Classification		Unit	2020	2021	2022
Occupational accidents	Netmarble	cases	1[1]	0	1[2]
Fatalities	Netmarble	persons	0	0	0
	Partners	persons	0	0	0
Serious occupational accidents		cases	0	0	0
Serious occupational accident rate		%	0	0	0
Domestic	Converted accident rate	%	0.13	0	0.12
	Fatality rate per 10,000 population	%	0	0	0
LTIFR(Lost Time Injury Frequency Rate)[3]	Employees	persons/ million work hours	0.63	0	0.57

1) In 2020, an ankle injury occurred while taking the stairs in the office building.
2) An incident involving a finger cut occurred while cleaning the office in 2022.
3) (Number of occupational injuries X 1 million hours worked) / (total annual hours worked per person X number of employees)

Health Support Service[4]

Classification		Unit	2020	2021	2022
Service users	Total	persons	4,763	3,469	10,825
	Visitors to Health Care[5]		4,584	3,326	8,475
	Recovery room users[5]		161	138	2,350
	Participation in smoking cessation programs		18	5	-[6]

4) Including subsidiaries operating at G-Tower
5) The number of users surged due to returning to on-site work in 2022.
6) Program not conducted in 2022 due to COVID-19(resumed in April 2023)

Social Contribution of Netmarble Cultural Foundation

Classification			Unit	2020	2021	2022
Social contribution performances	Beneficiaries		persons	24,668	28,190	28,259
	Donation[7]		KRW in millions	3,155	2,222	2,662
	Funds raised for the Netmarble Sharing Funds[8]	Funds raised by employees		43.5	42.8	35.5
		Matching grants provided		43.5	42.8	35.5

7) Total social contribution expense(implementation cost + administrative cost); Data in 2020 includes donations for response to COVID-19 and flood damage recovery
8) Used to execute social contribution programs

Volunteer Activities of Employees[9]

Classification	Unit	2020	2021	2022
Participants	persons	-	-	-
Total volunteer activity hours	hours	-	-	-
Volunteer activity hours per employee		-	-	-

9) Volunteer activities not conducted in 2020, 2021 and 2022 due to COVID-19

Governance

Financial Performance

Classification		Unit	2020	2021	2022
Summarized statement of financial position (consolidated basis)	Total assets	KRW 100 million	82,234	106,638	89,356
	Total liabilities		25,728	46,561	33,138
	Total shareholders' equity		56,506	60,077	56,218
	Debt-to-equity ratio	%	45.53	77.50	58.94
Summarized income statement (consolidated basis)	Revenue — Total	KRW 100 million	24,848	25,069	26,734
	Revenue — Domestic		14,651	13,816	10,054
	Revenue — Overseas		10,197	11,253	16,680
	Operating expense — Total		22,128	23,559	27,821
	Operating expense — Domestic		12,009	12,560	10,999
	Operating expense — Overseas		10,119	10,999	16,822
	Operating profit — Total		2,720	1,510	-1,087
	Operating profit — Domestic		2,642	1,256	-945
	Operating profit — Overseas		78	255	-142
	Operating expense to revenue ratio(domestic and overseas)	%	89.05	93.98	104.07
	Net income before income tax expense	KRW 100 million	4,746	3,512	-9,415
	Income tax expenses		1,366	1,020	-551
	Net income		3,380	2,492	-8,864
	Net income attributable to shareholder		3,130	2,402	-8,192

Distribution of Economic Value

Classification		Unit	2020	2021	2022
Employees	Wages	KRW in millions	442,298	522,643	618,116
	Retirement payment		23,774	30,478	41,300
	Employee benefits		60,512	76,613	109,685
Partners	Purchase expenses[1]		1,507,991	1,522,212	1,720,670
Community	Donations		3,668	958	2,844
Investors	Dividends		62,761	43,261	-
	Interest expenses		23,128	36,223	112,780
Government	Income tax expenses	KRW 100 million	1,366	1,020	-551

1) 2020 and 2021 data were restated due to change in calculation criteria.

Overview of Shares Issued and Shareholders

Classification		Unit	2020	2021	2022
Shareholders	Largest shareholder	%	24.2	24.2	24.2
	Foreign investors		22.6	22.8	22.6
	Domestic institutions		37.5	37.8	36.9
	Treasury shares		4.7	4.7	4.7
	Minority shareholders		11.0	10.5	11.6
Shares issued	Outstanding shares	shares	85,845,303	85,953,502	85,953,502
	Floating shares		81,826,372	81,934,571	81,934,571
Shares without voting rights	Number of shares	shares	4,018,931	4,018,931	4,018,931
	Percentage	%	4.68	4.68	4.68
Shares with voting rights	Number of shares	shares	81,826,372	81,934,571	81,934,571
	Percentage	%	95.32	95.32	95.32

BOD Operation

Classification		Unit	2020	2021	2022
BOD composition	Total members	persons	5	5	5
	Non-executive directors	persons	3	3	3
	Percentage of non-executive directors	%	60	60	60
BOD meeting	Meetings held	times	7	9	6
Agenda	Concluded items	cases	18	20	20
	Reported items		7	6	7
Attendance	Total	%	100	100	97
	Non-executive directors		100	100	96

Board Committees

Classification			Unit	2020	2021	2022
Board committees	Outside Director Candidate Recommendation Committee	Meeting	times	0	0	1
		Agenda	items	0	0	1
	Audit Committee	Meeting	times	5	5	5
		Agenda	items	25	22	24
	Internal Transaction Committee	Meeting	times	1	1	3
		Agenda	items	1	1	4
	Compensation Committee[1]	Meeting	times	-	2	4
		Agenda	items	-	2	6
	ESG Committee[2]	Meeting	times	-	-	8
		Agenda	items	-	-	13

1) Established in 2021
2) Established at the end of 2021, Reorganized as a committee under the direct leadership of the Board of Directors in Mar. 2023

Independence, Diversity, and Expertise of the BOD

Classification			Unit	2020	2021	2022
Independence	Average year of service of directors		years	5.1	6.1	3.8
	Percentage of non-executive directors with conflicts of interest		%	0	0	0
Diversity	Female directors		persons	1	1	1
	Percentage of female directors		%	20	20	20
	Age	Under 30	%	0	0	0
		30 to 50		60	40	40
		Over 50		40	60	60
	Foreign directors		persons	1	1	1
Expertise	Percentage of directors with experience in IT or gaming industries		%	60	60	60

Independent Auditors

Classification		Unit	2020	2021	2022
Audit service agreement	Auditor	-	Deloitte Anjin		
	Audit details	-	Review of quarterly and semi-annual financial statements on a separate and consolidated basis, audit on separate and consolidated financial statement, and audit on internal accounting management system		
	Audit fee	KRW in millions	890	930	990
	Total audit time	hours	9,025	8,975	9,268
Independent auditors' opinion	Audit opinion	-	Unqualified	Unqualified	Unqualified
	Significant matter in the audit report	-	Not applicable	Not applicable	Not applicable

BOD Remuneration

Classification		Unit	2020	2021	2022
Registered directors (excluding non-executive directors)	Executive directors	persons	2	2	2
	Executive officers		2	2	2
	Total remuneration	KRW in millions	8,763	3,399	3,013
	Average remuneration per person		2,191	850	753
Non-executive directors[3]	Members	persons	3	3	3
	Total remuneration	KRW in millions	44	45	93[4]
	Average remuneration per person		15	15	31

3) All non-executive directors are members of the Audit Committee.
4) Including compensation provided to retired directors in their capacity as registered executives

Transactions with Partners

Classification		Unit	2020	2021	2022
Partners	Number of partners	companies	197	210	221
	Number of newly registered partners		89	66	9
	Subject to regular evaluation[1]		56	0	0

1) Evaluation not conducted in 2021 and 2022 due to supplementation of regular evaluation contents

R&D Performance

Classification		Unit	2020	2021	2022
Patent registration	New	cases	52	55	18
	Accumulated[2]		195	232	251
Other IPR (trademark, design, copyright)	New		12	19	23
	Accumulated[2]		920	974	1,019

2) 2020 and 2021 data were restated due to change in calculation criteria.

Ethics–related Reports and Actions[3]

Classification		Unit	2020	2021	2022
Total number of ethics-related reports filed		cases	6	7	3
Percentage of ethics-related reports addressed		%	100	100	100
Ethics-related reports by type	Human rights-related reports	cases	4	5	2
	Human rights-related reports addressed	cases	4	5	2
	Percentage of human rights-related reports addressed	%	100	100	100
	Other ethics-related reports[4]	cases	2	2	1
	Other ethics-related reports filed	cases	2	2	1
	Percentage of other ethics-related reports addressed	%	100	100	100
Total number of incidents of discrimination[5]		cases	0	0	0

3) 2020 and 2021 data were restated due to change in calculation criteria.
4) Reports regarding Information leakage, damage to company dignity, etc.
5) Incidents of discrimination based on race, skin color, gender, religion, political view, and country of origin, etc.

Training on Ethical Management

Classification		Unit	2020	2021	2022
Training on ethical management[6]	Participants	persons	954	1,024	1,078
	Participation rate	%	100	99	100
	Total training hours	hours	327	361	505
	Training hours per person		0.3	0.4	0.5
Ethical training related to game operation[7][8]	Participants	persons	290	5	338
	Participation rate	%	99	2	100
	Total training hours	hours	290	5	350
	Training hours per person		1.0	1.0	1.0

6) Internal company-wide training, training for newly-appointed leaders, and new hire training were provided in addition to statutory training.
7) Subject to subsidiary IGS; For the headquarters and Daegu branch in 2020 and 2021, and expanded to include overseas branch in 2022(for the headquarters only as to new hire training)
8) In 2021, ethical training related to game operation was replaced with "Work Ethics Compliance Campaign" due to the full-time remote work in accordance with COVID-19. Training in 2021 was only provided to some new employees.

Compliance Management

Classification		Unit	2020	2021	2022
Violation of laws and regulations	Number of violations	cases	1	0	0
	Number of lawsuits filed	cases	0	0	0
	Monetary sanctions	KRW in millions	7.2	0	0
	Non-monetary sanctions	cases	0	0	0
	Compared to sales	%	0.0003	0	0
Content management of country or government	Number of countries with government censorship, blocking, filtering, etc.	countries	3(Korea, China, Vietnam)	3(Korea, China, Vietnam)	3(Korea, China, Vietnam)
	Number of content removal requests made by governments	cases	0	0	0
	Percentage of compliance with government request for content removal	%	-	-	-
Incidents of corruption substantiated and actions taken	Total detected incidents of corruption and their characteristics	cases	0	0	0
	Total cases which resulted in employee dismissal or disciplinary action due to detected incidents of corruption	cases	0	0	0
	Total cases which did not result in the termination or renewal of contract with business partners due to corruption-related non-compliance	cases	0	0	0
	Public legal cases raised due to the incidents of corruption involving the organization or employees during the reporting period and the consequences of such cases	-	-	-	-
Legal action taken against anti-competitive, anti-trust and monopolistic practices	Legal actions on-going or completed in relation to anti-competitive practices and non-compliance with anti-trust laws involving the organization during the reporting period	cases	0	0	0
	Key consequences of the legal actions completed	-	-	-	-
	Total financial losses resulting from regulatory non-compliance related to anti-competitive practices	KRW in millions	0	0	0

APPENDIX

The Seven Deadly Sins: Grand Cross

Stakeholder Communication

Netmarble defines users, employees, investors & shareholders, partners, communities, and governments as our key stakeholders inside and outside the Company. We proactively communicate with our stakeholders for their key areas of interest while collecting their feedback and integrating such feedback into our overall business operations.

	Users	Employees	Investors and Shareholders	Partners	Community	Government
Major Interest	• Release of new services • Improvement of service quality and user satisfaction • Data privacy	• Guarantee of basic rights in the workplace and employment stability • Pleasant and safe working environment • Fair performance appraisal and self-development opportunity • Work-life balance and welfare benefit system	• Establishment of sound governance • Transparent disclosure of financial and non-financial performances • Preemptive risk management • Communication with investors and shareholders	• Fair trade and fair treatment • Shared growth	• Fulfillment of corporate social responsibility • Vitalization of local economy	• Economic value creation • Compliance with relevant laws and regulations • Participation in industry-related policies
Communication Channels	• Corporate website • Channel Netmarble & official social media channels • Online communities & customer centers by service • Call center and offline counseling center • Disclosure materials	• In-house portal • Netmarble Ethics Center • Open Council(labor-management council) • Sports center & psychological counseling room	• Annual General Meeting • NDR and conference with institutional investors • Disclosure materials and reports • Earnings release conference call • 1:1 meeting with investors • Corporate website	• Purchase system & purchase information session • Channel Netmarble • Netmarble Ethics Center • Disclosure materials	• Corporate website • Channel Netmarble • Netmarble Cultural Foundation website • Disclosure materials	• Corporate website • Disclosure materials
Main Activities	• Release of new services & live service update • Improvement in operational stability through risk management • Closer communication through official live broadcasting, G-STAR, social media, etc.	• Hold the Open Council • Operation of grievance mechanisms • Construction of the sports center and operation of the psychological counseling center • Operation of a fair compensation system through MBO • Improvement of the working environment through feedback collection • Flexible work arrangements and expansion of benefit programs	• Share revenue generation performance achieved through new businesses, new markets, etc. • Disclosure of business reports, corporate governance reports, and ESG reports • Management of business risks and ESG risks • Execution of IR meeting on a regular and non-regular basis	• Operation of Netmarble Ethics Center for grievance reporting • Stipulation of the Charter of Purchase Ethics and the Code of Conduct for Purchasing • Implementation of fair pricing and compliance with payment conditions • Reinforce regular communication and cooperation	• Share cultural values through Play Centers, Family Game School, and the e-Festival for Students with Disabilities • Support for the growth of future talent through Game Academy, Netmarble Visit, and the Netmarble Para-Rowing Team	• Job creation through increased recruitment, etc. • Establishment of a compliance support organization and compliance risk review • Implementation of country-specific tax obligations and improvement in tax transparency

GRI Standards Index

Index	Description	Page	Note
GRI 2: General Disclosures			
2-1	Organizational details	8, 9, 96	
2-2	Entities included in the organization's sustainability reporting	3	
2-3	Reporting period, frequency and contact point	3	
2-4	Restatements of information	90-98	
2-5	External assurance	106-108	
2-6	Activities, value chain and other business relationships	8-11, 28, 47	
2-7	Employees	92	
2-8	Workers who are not employees	-	
2-9	Governance structure and composition	78-80	
2-10	Nomination and selection of the highest governance body	78	
2-11	Chair of the highest governance body	78	
2-12	Role of the highest governance body in overseeing the management of impacts	14-16, 84	
2-13	Delegation of responsibility for managing impacts	14-15	
2-14	Role of the highest governance body in sustainability reporting	15	
2-15	Conflicts of interest	78-79, 97	
2-16	Communication of critical concerns	15	
2-17	Collective knowledge of the highest governance body	-	
2-18	Evaluation of the performance of the highest governance body	-	
2-19	Remuneration policies	-	Business Report p.379-382
2-20	Process to determine remuneration	80	
2-21	Annual total compensation ratio	-	
2-22	Statement on sustainable development strategy	6-7	
2-23	Policy commitments	62, 85	
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2-26	Mechanisms for seeking advice and raising concerns	86	
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3-3	Management of material topics	18-19	
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GRI 401: Employment			
401-1	New employee hires and employee turnover	93	
GRI 404: Training and Education			
404-1	Average hours of training per year per employee	94	
404-2	Programs for upgrading employee skills and transition assistance programs	58-59	
404-3	Percentage of employees receiving regular performance and career development reviews	94	
Enhancing user satisfaction			
GRI 416: Customer Health and Safety			
416-1	Assessment of the health and safety impacts of product and service categories	-	
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	-	Not applicable
Information security and data privacy			
GRI 418: Customer Privacy			
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	91	
Contributing to communities			
GRI 413: Local Communities			
413-1	Operations with local community engagement, impact assessments, and development programs	50-54	
413-2	Operations with significant actual and potential negative impacts on local communities	-	Not applicable

Index	Description	Page	Note
GRI 201: Economic Performance			
201-1	Direct economic value generated and distributed	96	
201-2	Financial implications and other risks and opportunities due to climate change	41	
201-3	Defined benefit plan obligations and other retirement plans	70, 94	
GRI 202: Market Presence			
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	94	
GRI 205: Anti-Corruption			
205-3	Confirmed incidents of corruption and actions taken	98	
GRI 206: Anti-Competitive Behavior			
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	98	
GRI 207: Tax			
207-1	Approach to tax	88	
207-2	Tax governance, control, and risk management	88	
207-3	Stakeholder engagement and management of concerns related to tax	88	
GRI 302: Energy			
302-1	Energy consumption within the organization	90	
302-3	Energy intensity	90	
302-4	Reduction of energy consumption	90	
GRI 303: Water and Effluents			
303-1	Interactions with water as a shared resource	43	
303-2	Management of water discharge-related impacts	43	
303-3	Water withdrawal	90	
GRI 305: Emissions			
305-1	Direct(Scope 1) GHG emissions	90	
305-2	Energy indirect(Scope 2) GHG emissions	90	
305-4	GHG emissions intensity	90	
GRI 306: Waste			
306-2	Waste by type and disposal method	43	
306-3	Significant spills	90	
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Index	Description	Page	Note
GRI 401: Employment			
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	70	
401-3	Parental leave	68, 94	
GRI 402: Labor/Management Relations			
402-1	Minimum notice periods regarding operational changes	65	
GRI 403: Occupational Health and Safety			
403-1	Occupational health and safety management system	75	
403-2	Hazard identification, risk assessment, and incident investigation	76	
403-3	Occupational health services	76	
403-4	Worker participation, consultation, and communication on occupational health and safety	77	
403-5	Worker training on occupational health and safety	77	
403-6	Promotion of worker health	70, 95	
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	76	
403-8	Workers covered by an occupational health and safety management system	75	
403-9	Work-related injuries	95	
GRI 405: Diversity and Equal Opportunity			
405-1	Diversity of governance bodies and employees	93, 97	
GRI 406: Non-discrimination			
406-1	Incidents of discrimination and corrective actions taken	98	
GRI 417: Marketing and Labeling			
417-1	Requirements for product and service information and labeling	38	
417-2	Incidents of non-compliance concerning product and service information and labeling	92	
417-3	Incidents of non-compliance concerning marketing communications	92	

SASB Index

Sustainability Disclosure Topics & Accounting Metrics: Technology & Communication – Software & IT Services

Classification	Code	Accounting Metric	Netmarble's Status	Page
Environmental Footprint of Hardware Infrastructure	TC-SI-130a.1	(1) Total energy consumed	(Netmarble) 87,802GJ (subsidiaries) 56,526GJ	90
		(2) Percentage grid electricity	(Netmarble) 87.0% (subsidiaries) 73.6%	-
		(3) Percentage renewable	(Netmarble) 2.69% (subsidiaries) 1.17%	-
	TC-SI-130a.2	(1) Total water withdrawn	(Netmarble) 23,322m^3 (subsidiaries) 16,743m^3	90
		(2) Total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	-	-
	TC-SI-130a.3	Discussion of the integration of environmental considerations into strategic planning for data center needs	The ESG Management Division and the Environmental Management Council manage risks and opportunities associated with data center power consumption.	41
Data Privacy & Freedom of Expression	TC-SI-220a.1	Description of policies and practices relating to behavioral advertising and user privacy	Established the 3-step information security policy consisting of the personal data processing guidance and the privacy guidance and others, operate the country-specific data privacy management system and the service data privacy impact assessment process	34-38, Corporate website
	TC-SI-220a.2	Number of users whose information is used for secondary purposes	0 cases	91
	TC-SI-220a.3	Total amount of monetary losses as a result of legal proceedings associated with user privacy	KRW 0	91
	TC-SI-220a.4	(1) Number of law enforcement requests for user information	Seizure warrant request: 429 cases Communications restriction request: 0 cases Communications fact confirmation material request: 1,131 cases	91
		(2) Number of users whose information was requested	Data aggregation system under development	-
		(3) Percentage resulting in disclosure	Data aggregation system under development	-
	TC-SI-220a.5	List of countries where core products or services are subject to government-required monitoring, blocking, content filtering, or censoring	3 (Korea, China, Vietnam)	98
Data Security	TC-SI-230a.1	(1) Number of data breaches	0 cases	91
		(2) Percentage involving personally identifiable information(PII)	0%	91
		(3) Number of users affected	0 persons	91
	TC-SI-230a.2	Description of approach to identifying and addressing data security risks, including use of third-party cybersecurity standards	Remains certified to ISMS-P and ISO/IEC 27001, created the Security Incident Response Team, performed risk assessments at least once a year in line with the information asset risk management procedure	34-37, 82-84
Recruiting & Managing a Global, Diverse & Skilled Workforce	TC-SI-330a.1	(1) Percentage of employees that are foreign nationals	0.6%	92
		(2) Percentage of employees that are located offshore	All employees, except one president position member, work in Korea.	-
	TC-SI-330a.2	Employee engagement as a percentage	19.8%	93
	TC-SI-330a.3	(1) Percentage of gender and racial/ethnic group representation for management	Percentage of female executives 14.3%	93
		(2) Percentage of gender and racial/ethnic group representation for technical staff	Percentage of female employees in IT job 24.5%	93
		(3) Percentage of gender and racial/ethnic group representation for all other employees	Percentage of female employees 35.4%	92
Intellectual Property Protection & Competitive Behavior	TC-SI-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	KRW 0	98
Managing Systemic Risks from Technology Disruptions	TC-SI-550a.1	(1) Number of performance issues	(2020-2022) 0 cases	-
		(2) Number of service disruptions	(2020-2022) 0 days	-
		(3) Total customer downtime	(2020-2022) 0 days[1]	-
	TC-SI-550a.2	Description of business continuity risks related to disruptions of operations	-	-

1) Based on cases when all Netmarble's PC and mobile games are made unavailable

TCFD Index

Classification	Recommended Disclosures	Netmarble's Status	Page	Content
Governance	a) Describe the board's oversight of climate-related risks and opportunities. b) Describe management's role in assessing and managing climate-related risks and opportunities.	At Netmarble, the ESG Committee under the Board of Directors plays a pivotal role in responding to climate-related risks that may occur in our overall business operations. The ESG Committee reviews the risks and opportunities that may affect our business model from multiple angles in consideration of climate-related legislative trends, environmental initiatives, and internal/external assessments. The Committee deliberates and decides on our key environmental strategies based on such considerations, and manages and oversees their implementation. In 2023, the Board of Directors will implement such mid/long-term tasks as environmental management strategy and phased-in participation in environmental initiatives.	40	Environmental Management System – Environmental management governance
Strategy	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term. b) Describe the impact of climate-related risks and opportunities on the organization's business, strategy, and financial planning. c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2℃ or lower scenario.	Given that a significant portion of our sales is generated in overseas markets, Netmarble is closely reviewing the risks and opportunities that stem from global environmental regulations and initiatives and from environmental issues emerging across the IT and gaming industries, including data center power consumption. We identify climate-related risks and opportunities based on their likelihood (short-term, mid/long-term), and risk level(urgency, relevance to management), and specifically identify the impact of climate change on game business to preemptively manage direct and potential risks.	40	Environmental Management System – Environmental management strategy
Risk Management	a) Describe the organization's processes for identifying and assessing climate-related risks. b) Describe the organization's processes for managing climate-related risks. c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	At Netmarble, the ESG Management Division and the Environmental Management Council play a central role in identifying climate-related risks and opportunities, and report relevant details to the ESG Committee. We follow the 4-step process of 'risk identification – definition – management & response – follow-up measure' in managing climate-related risks, and develop risk-specific response strategies and mid/long-term tasks in line with the definition of risks to support their company-wide implementation.	41	Environmental Management System – Environmental risk management
Metrics and Targets	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process. b) Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas(GHG) emissions, and the related risks. c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	To systematically manage climate-related risks and opportunities, Netmarble measures and monitors GHG emissions and energy consumption at the headquarters and 7 subsidiaries. In 2022, GHG emissions of Netmarble headquarters amounted to 4,136 tCO$_2$eq, with the majority of these emissions stemming from electricity consumption. Netmarble established a management system to mitigate GHG emissions through the introduction and operation of high-efficiency, eco-friendly equipment, and will continue with our efforts to lower carbon emissions by increasing our generation of renewable energy.	41-45, 90	Environmental management system – Environmental management activities and achievements FACTBOOK – GHG emissions

Membership Associations and Certifications

Membership Associations

Association	Membership	Details	Website
UN Global Compact(UNGC)	Member	The UN Global Compact is the world's largest voluntary corporate citizenship initiative, and was launched as an international agreement in New York, the US, in 2000 to urge businesses to fulfill their social responsibility. Netmarble participated in the UNGC as the first to do so in Korea's gaming industry, and remains committed to upholding its 10 principles in 4 areas of human rights, labor, environment, and anti-corruption and makes annual disclosures on our progress towards the UN SDGs(Sustainable Development Goals).	https://unglobalcompact.org/
Korea Online Privacy Association[1]	Member	A private organization established to promote the self-regulation of businesses and the protection of users for the responsible use of personal data and location data	https://www.opa.or.kr/
Game Culture Foundation	Fundraising company	As an incorporate association established to create and spread a sound game culture, it focuses on improving game awareness through activities such as operation of Game Culture Family Camp, an Game Overimmersion Healing Center, and game literacy education.	http://www.gameculture.or.kr/
Korean Council of Chief Information Security Officers	Regular member	As an incorporated association aimed at strengthening information security and building a cooperative system, its major activities include policy proposal to enhance information security environment through cooperation between CISOs, improvement of awareness of information security, and joint response to cyber infringement accidents.	http://cisokorea.org/
Korea Chief Privacy Officers' Forum[2]	Member	An organization of executives responsible for data privacy operations to promote discussions on data privacy issues among Chief Privacy Officers as well as interaction and information-sharing for data privacy	https://www.cpoforum.or.kr/
Korea Association of Game Industry(K-GAMES)	Vice-Chairman	As an incorporated association established through cooperation between game companies to promote the game industry and fulfill its social responsibilities, it engages in the operation of the International Game Exhibition(G-STAR), game industry research, game policy and public relations research.	http://www.kgames.or.kr/
Game Self-governance Organization of Korea(GSOK)	Member	As a self-controlled organization established for protecting game users and promoting game culture, it establishes and implements self-regulatory policies for recent game industry issues such as loot box, game adverts, etc.	http://www.gsok.or.kr/
Korea Internet Corporations Association	Member	As a support group of ICT industry-based business operators, it engages in improving regulations and systems for internet-based companies(policy research, cooperative project with government, etc.).	http://www.kinternet.org/
Consortium of Computer Emergency Response Team (CONCERT)	Regular member	As a corporation established to explore joint responses to improve information security among domestic private-sector businesses and institutions and to share information on data security technology and trends, it engages in discussions and other activities on information security issues through the dissemination of emergency situation alerts in the event of security breaches as well as regular meetings.	https://www.concert.or.kr/

1), 2) Joined in February 2023

Certifications

Certification	Date	Validity Period	Details
Family Friendly Management Certification	2021.12.01	2021.12.01-2023.11.30	Certified by the Ministry of Gender Equality and Family as a company that operates an exemplary family-friendly system; our efforts to expand the operation of family-friendly programs since we were first certified in 2018 have enabled us to remain certified as of today following certification renewal in 2021.
ISMS-P(Personal Information & Information Security Management System)	2020.12.16	2020.12.16-2023.12.15	Measures and activities for corporate information security and privacy protection are being appropriately promoted
International information protection management system(ISO/IEC 27001)	2018.07.29	2021.07.30-2024.07.29	The most authoritative international certification in the field of information security
GSOK Self-regulation	2023.01.18	2023.02.09-2024.02.08	Certified for continuous efforts to create a healthy game culture through reasonable consumption
Health and Safety Management System	2022.03.30	2022.03.30-2025.03.29	Certified by KMR that business and advisory services are in conformity with the safety and health management system standards
Green Building Certification(G-SEED) on G-Tower	2020.10.27	2020.10.27-2025.10.26	Certified as a green building(highest grade) in accordance with the Green Building Construction Support Act
Building Energy Efficiency Rating on G-Tower	2020.10.19	2020.10.19-2030.10.10	Certified as the Grade 1+ Building in energy efficiency according to the building energy efficiency grade certification and zero-energy building certification rule

GHG Verification Statement

KMR

GHG Verification Statement
Independent Verification Statement

Netmarble Corporation.

Business sites subject to verification : G-Tower (Excluding subsidiaries)
The Korea Management Registrar Inc. (hereinafter "KMR") has conducted the verification on the greenhouse gas (hereinafter "GHG") emission (Scope 1&2) of Netmarble Corporation. (hereinafter "the Company") in 2022.

Scope

Verification of places of business and emission facilities under the control of the Company.

Standards

- ISO 14064-1:2006, ISO 14064-3:2006
- IPCC Guidelines for National Greenhouse Gas Inventories (2006)
- Guidelines for Reporting and Certification of Emissions in the Greenhouse Gas Emissions Trading Scheme

Limitations

The verification has inherent limitations that may arise in the process of applying standards and methods.

Opinion

- GHG verification has been performed to meet the limited assurance level according to the verification standards.
- We express that no significant errors were found in the calculation of emissions during the verification process, and that relevant activity data and evidence were appropriately managed and calculated. As a result, we express an "qualified" opinion.

GHGs Emissions	Scope1 (Direct Emission)	Scope2 (Indirect Emission)	Total (tCO$_2$-eq)
2022	481	3,655	4,136

Energy Consumption	Fuel	Electricity	Steam	Total (TJ)
2022	9	79	-	87

※ Total emissions are summed by company after cutting the decimal point at the workplace.

June 14th, 2023

E J Hwang

Authorized By **CEO Eun Ju Hwang**

Independent Assurance Statement

To readers of Netmarble ESG Report 2023

Introduction

Korea Management Registrar (KMR) was commissioned by Netmarble to conduct an independent assurance of its ESG Report 2023(the "Report"). The data and its presentation in the Report is the sole responsibility of the management of Netmarble. KMR's responsibility is to perform an assurance engagement as agreed upon in our agreement with Netmarble and issue an assurance statement.

Scope and Standards

Netmarble described its sustainability performance and activities in the Report. Our Assurance Team carried out an assurance engagement in accordance with the AA1000AS v3 and KMR's assurance standard SRV1000. We are providing a Type 2, moderate level assurance. We evaluated the adherence to the AA1000AP (2018) principles of inclusivity, materiality, responsiveness and impact, and the reliability of the information and data provided using the Global Reporting Initiative (GRI) Index provided below. The opinion expressed in the Assurance Statement has been formed at the materiality of the professional judgment of our Assurance Team.

Confirmation that the Report was prepared in accordance with GRI standards 2021 was included in the scope of the assurance. We have reviewed the topic-specific disclosures of standards which were identified in the materiality assessment process.

- GRI Sustainability Reporting Standards 2021
- Universal standards
- Topic specific standards
  - GRI 401: Employment
  - GRI 404: Training and Education
  - GRI 413: Local Communities
  - GRI 416: Customer Health and Safety
  - GRI 418: Customer Privacy

As for the reporting boundary, the engagement excludes the data and information of Netmarble' partners, suppliers and any third parties.

KMR's Approach

To perform an assurance engagement within an agreed scope of assessment using the standards outlined above, our Assurance Team undertook the following activities as part of the engagement:

- reviewed the overall Report;
- reviewed materiality assessment methodology and the assessment report;
- evaluated sustainability strategies, performance data management system, and processes;
- interviewed people in charge of preparing the Report;
- reviewed the reliability of the Report's performance data and conducted data sampling;
- assessed the reliability of information using independent external sources such as Financial Supervisory Service's DART and public databases.

Limitations and Recommendations

KMR's assurance engagement is based on the assumption that the data and information provided by Netmarble to us as part of our review are provided in good faith. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. To address this, we referred to independent external sources such as DART and National Greenhouse Gas Management System (NGMS) and public databases to challenge the quality and reliability of the information provided.

Conclusion and Opinion

Based on the document reviews and interviews, we had several discussions with Netmarble on the revision of the Report. We reviewed the Report's final version in order to make sure that our recommendations for improvement and revision have been reflected. Based on the work performed, it is our opinion that the Report applied the GRI Standards. Nothing comes to our attention to suggest that the Report was not prepared in accordance with the AA1000AP (2018) principles.

Inclusivity
Netmarble has developed and maintained different stakeholder communication channels at all levels to announce and fulfill its responsibilities to the stakeholders. Nothing comes to our attention to suggest that there is a key stakeholder group left out in the process. The organization makes efforts to properly reflect opinions and expectations into its strategies.

Materiality
Netmarble has a unique materiality assessment process to decide the impact of issues identified on its sustainability performance. We have not found any material topics left out in the process.

Responsiveness
Netmarble prioritized material issues to provide a comprehensive, balanced report of performance, responses, and future plans regarding them. We did not find anything to suggest that data and information disclosed in the Report do not give a fair representation of Netmarble' actions.

Impact
Netmarble identifies and monitors the direct and indirect impacts of material topics found through the materiality assessment, and quantifies such impacts as much as possible.

Reliability of Specific Sustainability Performance Information

In addition to the adherence to AA1000AP (2018) principles, we have assessed the reliability of economic, environmental, and social performance data related to sustainability performance. We interviewed the in-charge persons and reviewed information on a sampling basis and supporting documents as well as external sources and public databases to confirm that the disclosed data is reliable. Any intentional error or misstatement is not noted from the data and information disclosed in the Report.

Competence and Independence

KMR maintains a comprehensive system of quality control including documented policies and procedures in accordance with ISO/IEC 17021·2015 - Requirements for bodies providing audit and certification of management systems. This engagement was carried out by an independent team of sustainability assurance professionals. KMR has no other contract with Netmarble and did not provide any services to Netmarble that could compromise the independence of our work.

June 2023 Seoul, Korea

CEO   E J Hwang

netmarble