

2024–2025  
Noul Sustainability Report

# Beyond Diagnostics

A New Decade of Breakthroughs for One Billion Lives

noul



Over the past decade,  
Noul has pioneered decentralized diagnostic technologies  
to transform access to blood and cancer diagnostics,  
guided by a steadfast commitment to advancing human health and life.

Powered by our proprietary bio-original technology,  
on-device AI optimized for point-of-care diagnostics, and compact robotic automation,  
the miLab™ platform has successfully completed early market validation  
in both high-income and low- and middle-income regions,  
and is now poised for global scale-up.

Noul is now moving into the phase of global business expansion,  
marking the beginning of a new decade of breakthroughs.





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# Message from Management

Dear Valued Stakeholders,

We are privileged to address you in our fifth Sustainability Report, reflecting on a decade of transformative innovation in blood and cancer diagnostics.

The year 2024 marks the tenth anniversary of Noul’s founding. As the saying goes, “Ten years make an epoch,” and so it has for Noul. Starting as a startup, Noul has undergone remarkable growth and transformation. Our early ambition to dramatically improve healthcare accessibility has since taken form through a product roadmap and business strategy centered on decentralizing and digitizing blood and cancer diagnostics. On the technology front, we have completed more than 40 key innovations spanning bioengineering, AI, and robotics—from foundational technology development to commercialization. This journey has resulted in approximately 90 patent applications and registrations.

Our organizational functions and systems have evolved in lockstep with Noul’s growth. Noul proactively obtained global certifications for medical device quality, optimized development processes at each stage of our organizational expansion, and, following our listing on the KOSDAQ, strengthened transparent governance and responsible management systems as benefits a publicly listed company. Most recently, we have integrated and restructured our core functions and processes across the value chain from a holistic business perspective equipping us with the capabilities and readiness for full-scale global expansion.

In this regard, 2024 was more than a milestone marking our 10th anniversary. It was a pivotal year, concluding a decade of technology-driven development and ushering in a new decade focused on business scale-up and value creation.

To officially launch this next chapter, in February 2025, Noul became the first technology-special listed company to unveil a “Corporate Value-up Plan.” This plan outlines our mid-to-long-term strategies to become a profitable, high-growth global healthcare leader, supported by five core initiatives and detailed execution plans. We are fully committed to delivering on these commitments to our stakeholders over the next three years.

The 2024–2025 Sustainability Report highlights our key activities and outcomes across three areas: 1) business operations focused on customer engagement and market expansion, 2) R&D efforts to validate product performance in global markets, and 3) organization-wide initiatives to strengthen internal execution capabilities. Furthermore, we present the economic and social value generated through these efforts with relevant data and context. Notably, this report includes a new section that directly addresses key questions raised by our stakeholders over the past year, providing insights into our current progress and future plans.



Since our inception, sustainability has been a cornerstone of Noul’s management philosophy. Far from being mere rhetoric, we have pursued this philosophy through balanced, practical steps, aligned with our stage of business growth. While explicit ESG-related requests from stakeholders were rare in our first decade, we proactively analyzed stakeholder expectations and implemented mid-to-long-term improvement plans as a KOSDAQ-listed company. In 2024, we received our first formal sustainability policy request from a European partner. In response, we established and implemented a comprehensive company-wide Code of Conduct covering all sustainability domains. Moving forward, we will continue to prioritize stakeholder expectations and actively reflect them in our sustainability roadmap to drive impactful progress.

Looking ahead to the next ten years, Noul will focus on strengthening product competitiveness and profitability to build a robust business foundation, while sustaining R&D investments in cancer diagnostics to secure long-term growth momentum. On the sustainability front, we will advance responsible management practices in line with global standards and bolster company-wide execution capabilities. Through these efforts, we aim to establish Noul as a global healthcare innovator, positively impacting one billion lives.

We invite you to join us once again on this next decade-long journey to advance human health and life. Thank you.

David Lim  
Chief Executive Officer

Peter Kim  
Chief Legal Officer

Justin Ahn  
Chief Sustainability Officer



# PART 1

# Purpose-Driven Company

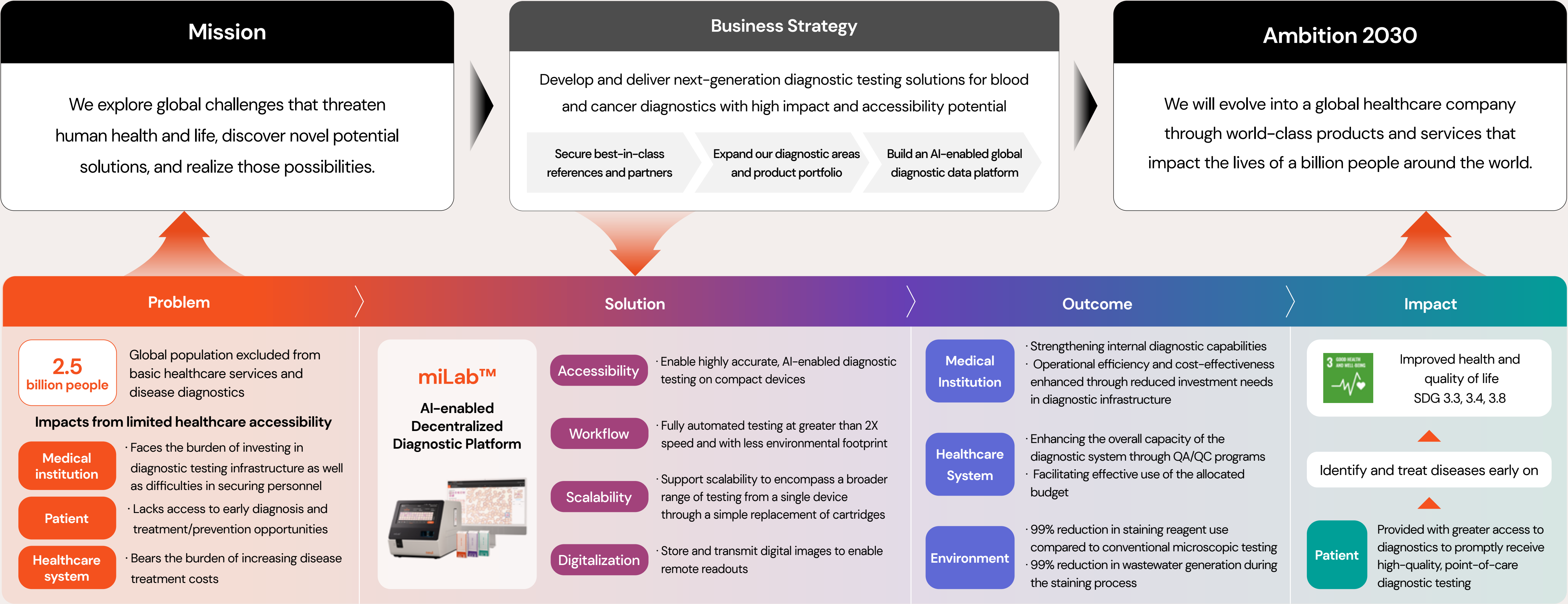
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# About Noul

Noul is a digital healthcare company driving innovation in blood and cancer diagnostics through AI and biotechnology. With decentralized diagnostic solutions that overcome physical, temporal, and geographic barriers, we aim to address unmet needs in diagnostics, dramatically improve healthcare accessibility, and contribute to better global health.

Noul pursues a hybrid business model that creates both social and economic value by delivering innovative solutions that address global health challenges.



\* Decentralized diagnostics: An innovative technology that resolves the dilemma between accessibility and accuracy in diagnostics. It enables highly accurate testing at easily accessible sites, such as local clinics, with performance comparable to that of large hospitals. To make decentralized diagnostics possible, multiple advanced technologies must converge—including high-accuracy on-device AI, lab-on-a-chip systems that replicate the functions of an entire laboratory, real-time remote communication, and fully automated hardware that handles the core process of specific diagnostic tests.



# Key Activities and Outcomes across the Value Chain



\*All figures refer to 2024 unless otherwise specified.



Our Products

# Do Less, See More

with AI-Powered Digital Microscopy, miLab™

miLab™ Platform, Noul’s on-device AI diagnostic solution, enables point-of-care blood analysis and cancer screening. Its AI technology optimized for small-sized devices enables universal access to blood analysis and cancer screening across the world.



## miLab™ Platform

The world’s only platform device that fully automates the entire microscopic diagnostic process, from sample preparation to AI-based analysis

## miLab™ Cartridge

Smart cartridge designed for scalable application across diverse diagnostic tests in blood and tissue fields



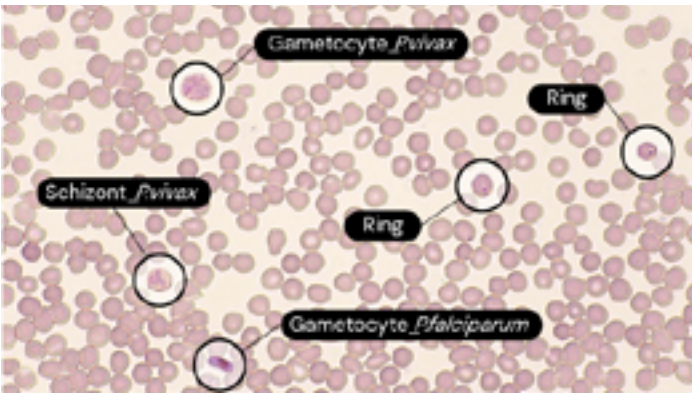
miLab

## miLab™ Analysis Software

Web-based AI analysis solution that enables remote result readouts anytime, anywhere—overcoming the physical boundaries of traditional laboratories.

## Product Portfolio

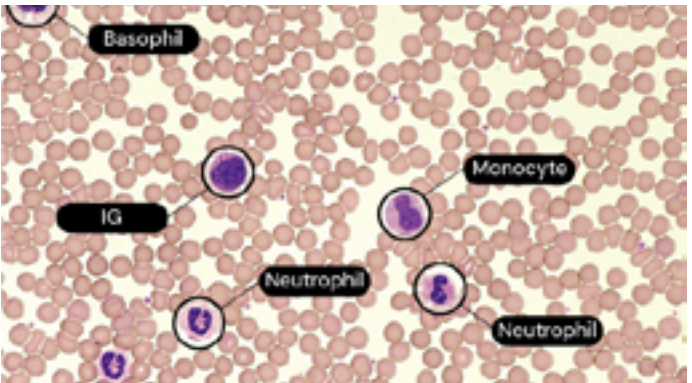
### Malaria Testing Solution



**miLab™ Cartridge MAL** is Noul’s malaria diagnostic testing solution equipped with both microscopic diagnostic infrastructure and technical capabilities of WHO-certified level 1 microscopists

**Impact**  
miLab™ Cartridge MAL performs speedy yet high-quality hospital-grade malaria tests within 15 minutes, even in locations with limited access to healthcare, helping enable timely treatment and contributing to the reduction of malaria-related mortality.

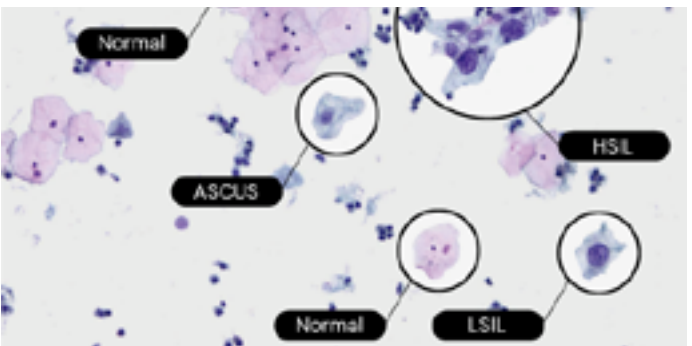
### Blood Analysis Solution



**miLab™ Cartridge BCM** is a blood analysis solution that provides high-resolution images and pre-classification of red blood cells, white blood cells, and platelets.

**Impact**  
miLab™ Cartridge BCM expands access to blood testing in settings with limited skilled personnel and high labor costs, contributing to the early prevention of disease.

### Cervical Cancer Screening Solution



**miLab™ Cartridge CER** is a cytopathology solution that automatically identifies the stages of cervical cells.

**Impact**  
miLab™ Cartridge CER contributes to enabling more women to detect cervical cancer at an earlier stage and to receive timely treatment.



# 2024–2025 Highlights

## Business & Growth

In 2024, Noul focused its company-wide efforts on strengthening business fundamentals and building a foundation to convert growing customer interest and demand into actual sales. As a result, we achieved meaningful progress on key market entry objectives—surpassing targets in securing regulatory approvals by country, generating clinical evidence, and stabilizing global distribution channels. These accomplishments laid the groundwork for global market expansion. The following summarizes Noul’s major business and organizational achievements from 2024 through the first half of 2025.

### Expansion of Global Supply Agreements and Public Procurement Business

Noul has expanded its global footprint by signing a series of sole distributorship agreements in key European and Asian markets while also accelerating its entry into the public procurement business.

- Signed a sole distributorship agreement for MAL with a distributor in **Italy** (May, 2024)
- Signed a sole distributorship agreement for BCM and MAL with a distributor in **Indonesia**, valued at KRW 2.15 billion (October 2024)
- Signed a sole distributorship agreement for MAL and BCM with Limbach Group SE in **Germany** (December 2024)
- Signed a sole distributorship agreement miLab™ MAL signed with the **Republic of Benin**, valued at KRW 6.3 billion (February 2025)
- Signed a sole distributorship agreement for MAL, BCM, and CER covering **Panama and five other Central American countries**, valued at KRW 2.0 billion (March 2025)
- Signed a sole distributorship agreement for MAL and BCM, **Kuwait** (April 2025)

### Global Regulatory Approvals Secured

We completed regulatory approvals and registrations ahead of schedule, establishing a foundation for expanding into global markets.

- Obtained marketing approval for MAL and BCM (Class III AI-based medical devices) in **Saudi Arabia** (August 2024)
- Obtained marketing approval for MAL and BCM (AI-based medical devices) in **Indonesia** (October 2024)
- Obtained domestic medical device approval for BCM in **Korea** (October 2024)
- Completed FDA registration for MAL and BCM (Class I medical devices) in the **United States** (November 2024)
- Completed registration of MAL, BCM, and CER (AI-based medical devices) in the **United Kingdom** (January 2025)

### Core Technology Patents Secured

We secured six registered patents and filed eight new applications for our innovative technologies, reinforcing protection for our core proprietary technologies and strengthening technological competitiveness.

- Filed an international patent (PCT) for on-device AI-based sample classification technology (August 2024)
- Registered a U.S. patent for solid staining-based tissue diagnosis technology (December 2024)

### Global Recognition of Blood and Cancer Diagnostic Technologies

Our blood and cancer diagnostic technologies have been recognized by leading international health and research institutions, validating the global competitiveness of our products.

- **WHO – UNITAID report recommends Noul’s AI-based cervical cancer diagnostic solution** (October 2024)
- AI research using BCM published in a Nature-affiliated journal (October 2024)
- Institut National de Santé Publique (INSP) of Côte d’Ivoire conducted a clinical evaluation of miLab™ MAL and issued an official report confirming its high performance (November 2024)
- Selected as one of the Top 10 National R&D Projects for Next-Generation Cancer Diagnostics (February 2025)

### Enhancing Corporate Value and Stakeholder Engagement

**As the first technology-special listing company to join the Value-Up Program**, Noul has established and disclosed a mid- to long-term implementation plan to enhance corporate value. We are committed to faithfully executing this plan over the next three years while actively sharing progress and engaging with stakeholders. (February 2025)

### Validation of Outstanding Product Performance

The clinical performance of Noul’s malaria diagnostic solution (MAL) has been validated through collaborative studies with globally recognized institutions.

#### Peer-reviewed Publications

- Clinical study in Ethiopia and Ghana published in PLOS Global Public Health (May 2024)  
→ In diagnosing P.f infections, 94.3%, in sensitivity and 94% in specificity  
→ In diagnosing P.v infections, 97.0% in sensitivity and 97.6% in specificity
- Clinical study in Malawi published in Frontiers (July 2024)  
→ In diagnosing P.f infections, 95.15%, in sensitivity and 91.43% in specificity
- **Joint study with Labcorp, the largest diagnostic lab chain in the U.S., published in Journal of Clinical Microbiology** (December 2024)  
→ **In diagnosing P.f infections, 100%, in sensitivity and 100% in specificity**

#### Scientific Presentations

- Performance study across three major African countries presented at MIM PAMC 2024 (Africa’s largest malaria conference, April 2024)  
→ In diagnosing P.f infections, 94.4%, in sensitivity and 98.1% in specificity  
→ In diagnosing P.v infections, 97.0% in sensitivity and 97.6% in specificity
- Performance study on European patient samples conducted by the National Center for Microbiology, Spain, presented at ICTMM 2024 (International Congress for Tropical Medicine and Malaria, September 2024)  
→ In diagnosing P.f infections, 94.4%, in sensitivity and 97.2% in specificity

\*MAL : miLab™ Cartridge MAL (Malaria Testing Solution), BCM : miLab™ Cartridge BCM (Blood Analysis Solution), CER : miLab™ Cartridge CER (Cervical Cancer Screening Solution)



# 2024-2025 Highlights

**ESG**    The ESG Highlights section reports on Noul’s key ESG activities and outcomes, including both achievements and areas in need of improvement. Among these, outcomes requiring improvement are additionally labeled as **Area for Improvement**

## E Environmental

### Greenhouse Gas (GHG) Emissions

**451.365 tCO<sub>2</sub>eq**

(Approx. 22.9% increase from previous year)

331.005

367.019

451.365

2022

2023

2024

Greenhouse Gas (GHG) Emissions tCO<sub>2</sub>eq

### GHG Emissions Intensity

**1.32 kgCO<sub>2</sub>eq/unit**

(Approx. 70.1% decrease from previous year)

2022

2023

2024

4.72

4.42

1.32

GHG Emissions Intensity kgCO<sub>2</sub>eq/unit

GHG emissions intensity is calculated based on the emissions (kgCO<sub>2</sub>eq) per unit of miLab™ Cartridge.

### ‘Zero Carbon Playlist’, Noul’s internal carbon reduction campaign

**100 employees**

Participants

**2.0 tCO<sub>2</sub>eq**

Carbon reduction from campaign activities

- Company-wide tumbler policy replaced the use of 29,671 single-use cups
- Developed a reusable miLab™ Cartridge structure for up to 50 use (Expected to reduce plastic waste from disposed cartridge lower parts by approx. 98.6% per 50 tests)

## S Social

**116,730units**

Malaria and blood diagnostic cartridges distributed to low- and middle-income countries in 2024

**Occupational accident rate**  
**0%**

**Lost Time Injury (LTI)**  
**0**

**Total Recordable Injury Frequency Rate (TRIFR)\***  
**23.6%**

\*In 2024, even minor incidents were systematically recorded through incident reports, resulting in a slight increase in the total recordable injury frequency rate compared to 2023.

**Area for Improvement**

**Overall Gender Ratio**

42% Female

58% Male

**Gender Ratio in Mid-level Leadership**

26% Female

74% Male

**Gender Ratio in New Hires**

50% Female

50% Male

- 8.3 out of 10 points Average score of positive responses to mutual respect among team members
- 25 average training hours per person
- Family-friendly business designation
- 100% in employees who returned to work after parental leave and continued to work

## G Governance

**Area for Improvement**

**Ratio of Outside Directors on the Board**

as of March 2025

Independent

50%

Not Independent

50%

**Gender Ratio on the Board**

as of March 2025

Female

16%

Male

84%

### Newly Established Audit Committee as of March 2025

Although Noul is not legally required to establish an Audit Committee due to its company size, the committee was proactively established to strengthen internal controls and ensure financial soundness.

- 100% in Board attendance rate
- 100% Code of Conduct training completion rate
- 2 cases of member-led sustainability projects
  - Proposal to improve accessibility of the internal grievance process
  - Proposal to promote employee mental health

\*All figures refer to 2024 unless otherwise specified.



PART 2

Approach to Sustainability

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# Noul’s Sustainability Implementation System



**Our Sustainability Policy**

Noul has defined its management principles based on a sustainability perspective and specified them in its Articles of Incorporation. These principles serve as the policy foundation for sustainability initiatives carried out at both company-wide and departmental levels.

[► Noul’s Articles of Incorporation](#)

**Sustainability Implementation System**

The Noul Sustainability Circle is an implementation system designed to strategically and systematically apply the management principles—stipulated in the Articles of Incorporation—across all aspects of organizational operations. It consists of three implementation areas and a set of guiding approaches. The implementation areas reflect the company’s priorities and strategic direction in sustainability, while the guiding approaches articulate the core values that must be consistently upheld in the execution of sustainability management.

**Sustainability Implementation Areas**

**01 Compliance**  
We abide by laws and regulations.

Compliance with laws and regulations is the minimum requirement for securing social legitimacy in business activities. We comply with applicable laws and international standards in every country where we operate and strive to embed ethical business practices across all aspects of our organizational operations.

**02 Responsible Business Conduct**  
We consider responsible business practices throughout our entire operations.

A strong relationship of trust with stakeholders is essential to achieving sustainable growth and fulfilling our mission. We aim to meet the expectations and needs of those we affect—both directly and indirectly—and responsibly manage the social and environmental impacts of our business activities.

**03 Social Value Creation**  
We create social value throughout our business operations.

We are committed to the opportunity and responsibility of improving healthcare accessibility for all through our innovative decentralized diagnostic solutions. As our products and services scale globally, we expect diagnostic capabilities at local medical institutions and across healthcare systems to be strengthened—ultimately improving healthcare access for more people.

**Sustainability Implementation Approaches**

**01 Corporate Citizenship**  
Our identity is tied to our corporate citizenship

As legally recognized members of society, corporations must make decisions and act with a strong sense of corporate citizenship. Across all business activities, we consider not only economic value creation but also the prosperity and advancement of the communities we operate in.

**02 Stakeholder Engagement**  
We promote stakeholder communication and engagement.

Diverse stakeholder perspectives and input contribute to better decision-making and organizational performance. We are committed to transparent and honest communication that gathers stakeholder expectations and needs, and we do our utmost to reflect them faithfully in our practices.

**03 Collaboration**  
We pursue collaboration and collective impact.

We seek collaboration and synergy that go beyond individual organizations to address complex challenges. We strategically partner with global experts and actively participate in opportunities to create collective impact based on shared goals.



# Activities and Achievements by Sustainability Focus Areas

Noul established 5 Sustainability Focus Areas and corresponding Commitments in 2023 to effectively communicate its sustainability efforts and outcomes with stakeholders. These Focus Areas and Commitments serve as guiding milestones for company-wide sustainability implementation. The Key Actions under each area represent capacity-building priorities that should be addressed first, based on their relevance and impact on stakeholders. The detailed sustainability implementation plan for the period 2023 to 2029 is provided on 48p.



**Environment**  
Protecting the Planet

**Commitment**

- We are keenly aware of our impact on the earth ecosystem and systematically transition to greener alternatives.

**Key Action**

- Improve measurement methods for GHG emissions (Scope 1 & 2) and systematize the management of pollutant emissions data
- Establish a plan to progressively increase the use of recycled materials in packaging

**SDGs**



**Social**  
Improvement in Access to Healthcare      Responsible and Inclusive Workplace

**Commitment**

- We develop innovative diagnostic testing solutions and work with global public/private partners to broaden our market presence.
- We establish an effective strategy to create impact insofar as healthcare access and systematically manage that impact.
- We internalize a system and culture that respects all employees, and collectively practice the values of diversity, equity, and inclusion.
- We consider our social responsibility as a corporate citizen and communicate with stakeholders.

**Key Action**

- Establish an impact framework
- Develop an impact measurement and management system
- Establish our DEI (Diversity, Equity, Inclusion) guidelines and implement awareness-building programs
- Develop content for employee capacity-building

**SDGs**



**Governance**  
Compliance, Ethics, and Risk Management      Sound and Sustainable Governance

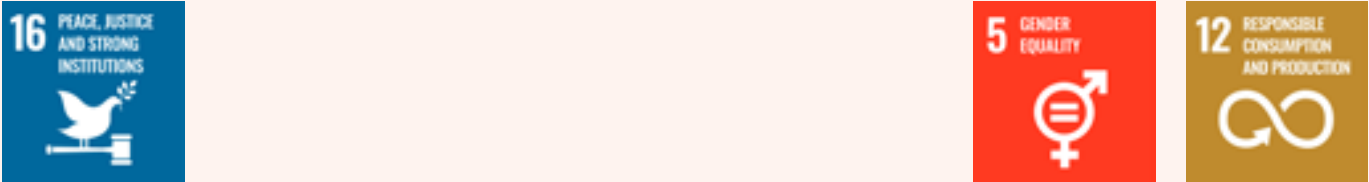
**Commitment**

- We abide by laws and standards, and go even further to act ethically
- We systematically prevent and address tangible/non-tangible management risks.
- We strengthen the transparency and soundness of our board-driven decision-making system
- We integrate sustainable management practices across the entire decision-making system and organizational operations.

**Key Action**

- Establish policies and regulations for compliance, ethics, and risk management
- Strengthen the effectiveness of internal control systems
- Establish a sustainability risk management process
- Set goals to strengthen the independence, expertise, and diversity of the Board of Directors
- Amend the Board’s operational regulations to reflect our commitment to enhancing independence, expertise, and diversity

**SDGs**



## Activities and Achievements by Sustainability Focus Areas

## Implementation and Outcomes of Noul's Mid- to long-term sustainability initiatives

Noul established a company-wide Mid- to long-term sustainability initiatives in 2023 and has since been progressively enhancing its sustainability performance. The first implementation phase (2023–2024) focused on establishing the foundational policies, systems, and cultural practices necessary for sustainable operations. During this phase, the sustainability team and related departments jointly carried out 16 key activities. Details and outcomes of these activities are disclosed on the corresponding pages of this report. Items that were deemed sensitive or not essential for public disclosure have been reported internally in accordance with our sustainability reporting procedures and are not included in this report.

## Implementation Results

Of the 16 key activities, 3 were fully implemented as planned, while 11 were partially achieved. The remaining 2 activities are currently in progress, with their timelines adjusted in response to changes in the business environment.

Stage of Progress	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div></div>
Number of tasks	3	7	4	2

## Analysis and Areas for Improvement

- Reasons for Partial or Deferred Implementation : All 11 partially achieved activities and 2 rescheduled activities required timeline adjustments due to shifts in the business environment and evolving stakeholder expectations, while remaining aligned with the original strategic intent.
- Specifically, certain activities such as establishing evaluation criteria and procedures for Board members' management performance and developing a DEI policy were deferred based on an assessment of their urgency and impact in relation to the company's current stage of growth and pace of development. Other activities—including improving the ratio of recycled materials in packaging—could not be completed within the planned timeframe due to limited internal expertise and resource constraints.
- Improvement Direction : To enhance alignment and execution of our mid- to long-term sustainability initiatives across the company, we revised and supplemented the detailed plans to strengthen their linkage with Noul's enterprise-wide mid- to long-term business growth goals, announced in February, 2025 as part of our value enhancement strategy.

Approach	2023–2024 Key Activity	Progress	Reporting Status
Compliance, Ethics, and Risk Management	Establish integrated statutory non-compliance management procedures and operate compliance awareness-raising programs	<div><div></div><div></div><div></div><div></div><div></div></div>	p.22
	Lay the basis for the health & safety management system	<div><div></div><div></div><div></div><div></div><div></div></div>	p.26
	Improve the effectiveness of the internal control system	<div><div></div><div></div><div></div><div></div><div></div></div>	p.31
	Establish ethics/anti-corruption policies and stipulate ethical norms	<div><div></div><div></div><div></div><div></div><div></div></div>	p.22
	Establish a human rights/sustainability risk management process	<div><div></div><div></div><div></div><div></div><div></div></div>	p.32
	Establish and implement a CS process	<div><div></div><div></div><div></div><div></div><div></div></div>	p.27
	Establish policies and regulations and develop systems for information security	<div><div></div><div></div><div></div><div></div><div></div></div>	p.23
Sound and Sustainable Governance	Amend the Board operational regulations in reflection of our commitment to strengthening independence, expertise, and diversity in the composition and operation of the Board	<div><div></div><div></div><div></div><div></div><div></div></div>	p.45
	Set goals and programs to strengthen the independence, expertise, and diversity of the Board of Directors	<div><div></div><div></div><div></div><div></div><div></div></div>	Not reported
	Establish standards and procedures to assess directors’ management activities	<div><div></div><div></div><div></div><div></div><div></div></div>	Not reported
Responsible and Inclusive Workplace	Establish our DEI (Diversity, Equity, Inclusion) policy and its operational approach	<div><div></div><div></div><div></div><div></div><div></div></div>	p.34
	Develop content for employees’ capacity building	<div><div></div><div></div><div></div><div></div><div></div></div>	p.37
Protecting the Planet	Improve GHG emissions (Scope 1 & 2) measurement methodologies and systematize pollutant discharge data management	<div><div></div><div></div><div></div><div></div><div></div></div>	p.40
	Progressively improve the use percentage of recyclable packaging	<div><div></div><div></div><div></div><div></div><div></div></div>	p.46
Improvement in Access to Healthcare	Establish an impact framework	<div><div></div><div></div><div></div><div></div><div></div></div>	p.45
	Develop an impact measurement and management system	<div><div></div><div></div><div></div><div></div><div></div></div>	p.45

## Sustainability Self-Assessment and Results

To consistently advance our sustainability philosophy and flexibly respond to internal and external business changes, Noul has developed a checklist-style sustainability performance index since 2021 and has conducted self-assessments annually. The checklist consists of 80 items based on material issues across stakeholder groups and is updated each year to reflect domestic and international ESG disclosure standards as well as evolving global sustainability trends.

## Assessment Process

- Phase 1: Initial assessment conducted by nine relevant departments, including Compliance, HR, Finance & Accounting, Health & Safety, Quality Systems, Sales/Marketing, and IT/security functions
- Phase 2: Consolidated review conducted by the sustainability team
- Improvement planning and implementation – Based on the assessment results, an improvement plan was developed, reported to management, and subsequently implemented

## Assessment Results

In 2024, our overall implementation rate increased by 4% compared to the previous year. This improvement was largely driven by the establishment of the Noul Code of Conduct in December 2024, which enhanced policy-related implementation across all assessment areas.

### Our Sustainability Implementation Rate

Year	Implementation Rate
2022	41%
2023	54%
2024	58%

The Code outlines the company's policy direction and employee commitments on 25 sustainability topics, including fair trade, human rights, personal data protection, and product quality.

Our ongoing efforts to embed a strong health and safety management system and improve the grievance handling process have contributed to maintaining a high implementation rate in the area of safe and healthy working environments. In contrast, our environmental performance remained similar to that of 2023. Given the company's current stage of growth and its corresponding environmental impact, our current approach has focused primarily on collecting baseline environmental data and managing basic risks. In 2025, we aim to further raise employee awareness of environmental issues and gradually expand feasible environmental initiatives—such as developing and improving product packaging—as part of our sustainable growth journey.



# Material Issues for Stakeholders

## Stakeholder Engagement

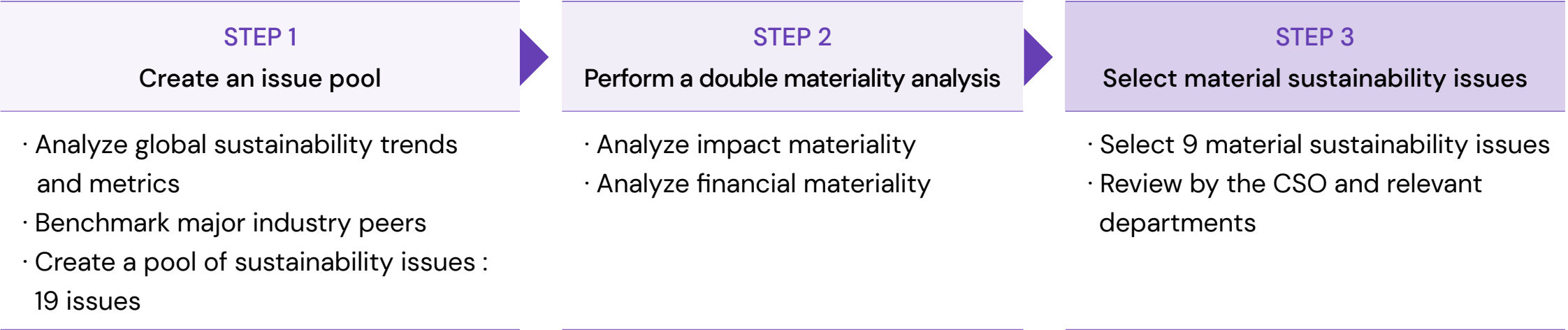
Noul sees transparent and honest communication with stakeholders as the first step toward building trust and remains committed to maintaining and strengthening mutually respectful relationships. While formal sustainability-related demands from key stakeholders have been limited to date, the tightening of ESG standards in global markets—particularly in Europe—has increased the likelihood of such expectations emerging. In 2024, a European partner requested confirmation of our sustainability policy and Code of Conduct. In response, Noul proactively incorporated broader global ESG requirements into the development of its Code of Conduct, which was already in progress, and completed its implementation. We engage regularly with key stakeholders through designated channels to identify material sustainability issues and improve our strategies and action plans accordingly.



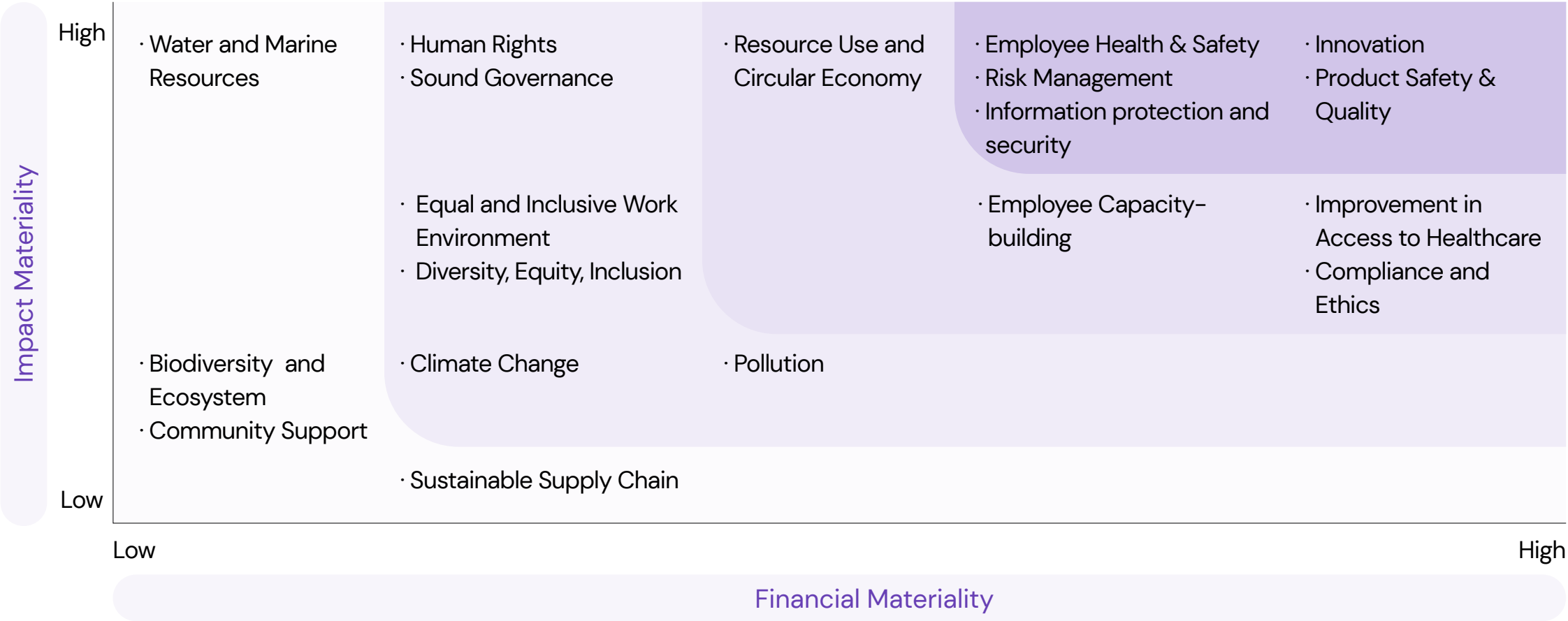
## Material Issues for Stakeholders

Noul conducts an annual materiality assessment to identify the positive and negative impacts of our business activities on stakeholders and to respond faithfully to their expectations and needs. In 2025, we enhanced our list of material issues and assessment criteria by referencing the materiality assessment approaches adopted by global companies reporting under the EU Sustainability Reporting Standards (ESRS). Following the principle of double materiality, we analyzed both the impact of our business on society and the environment, as well as the financial relevance of sustainability issues to the company. Based on this analysis, we identified nine key sustainability issues.

## Double Materiality Assessment Process



## Material Issues



The 2024–2025 Sustainability Report provides detailed information on our activities and performance related to nine key issues identified as having both high environmental and social impact materiality and high financial materiality. In addition, while certain topics such as climate change response may have relatively lower financial materiality, they are considered highly significant in terms of environmental and social impact or as critical global agendas. Accordingly, related activities and outcomes have been included in this report upon an internal review.



# PART 3

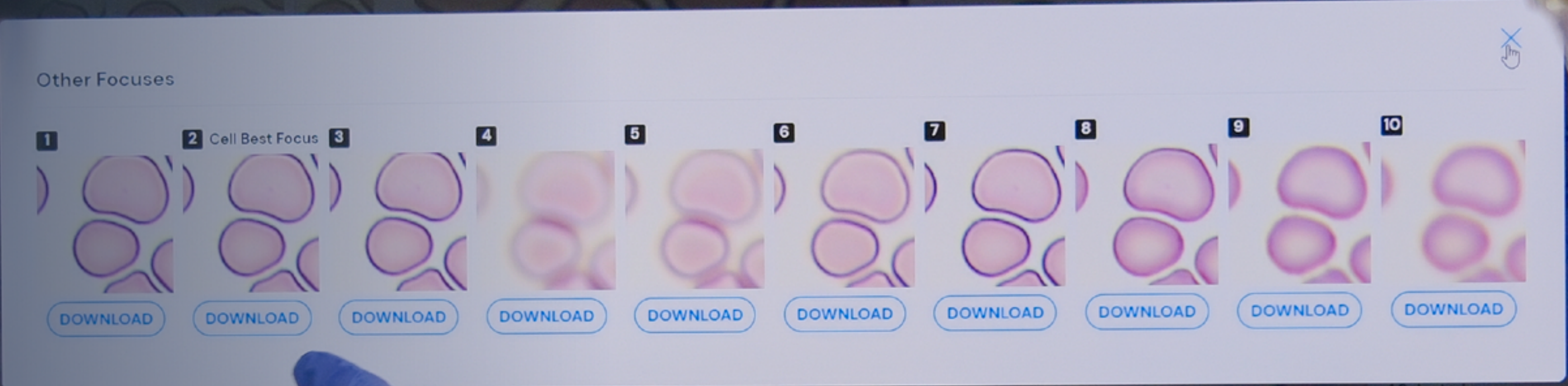
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# Improvement in Access to Healthcare

- Driving Innovation
- Scaling Product Distribution





# Driving Innovation

## Our Approach

Noul has consistently emphasized innovation and breakthroughs as core values in our technology and product development processes to significantly improve access to healthcare on a global scale. Since 2024, when our business began to expand in earnest, we have focused on identifying unmet needs that actual users face in clinical settings and embedding essential features and performance enhancements into our products to fundamentally address those needs.

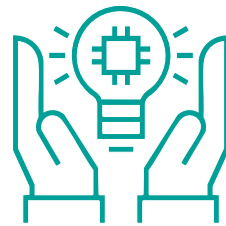
Our definition of innovation is guided by our company-wide management principle of “Breakthrough over Improvement,” which means going beyond incremental or surface-level fixes to tackle root causes and drive systemic change. In line with our R&D roadmap, we are sequentially developing and launching solutions that enhance the efficiency, accuracy, affordability, and usability of diagnostics in both blood and cancer care.

Through these innovations, Noul aims to empower healthcare providers to deliver faster and more accurate diagnoses, ultimately contributing to positive change and greater social impact by improving healthcare access for more than 2.5 billion people around the world.

### 6 Innovation Technology Patents Secured

(Jan 2024 – May 2025)

- Filed an international PCT patent application for on-device AI-based specimen classification technology
- Registered a U.S. patent for core tissue diagnostic technology based on solid-based staining



### 3 Peer-Reviewed Clinical Studies Published

- Clinical study in Ethiopia and Ghana : PLOS Global Public Health
- Clinical study in Malawi : Frontiers
- Joint study with Labcorp, the largest diagnostic lab chain in the U.S. : Journal of Clinical Microbiology

## Our Key Actions

### miLab™ MAL Achieves World-Class Diagnostic Accuracy in Global Clinical Trials

Following years of effort to improve clinical performance, miLab™ MAL has demonstrated exceptional diagnostic accuracy through clinical trials conducted since 2024 across the U.S., Europe, and Africa. In a collaborative study with Labcorp—one of the largest diagnostic companies in the U.S.—the solution achieved 100% sensitivity and 100% specificity. It also accurately detected parasites that were missed by standard microscopy, highlighting Noul’s technological innovation. This objective validation by a globally respected institution reinforces the solution’s credibility and potential for broader adoption in the U.S. and other international markets.

### WHO–UNITAID Report Highlights miLab™ CER as an Innovative AI Solution for Cervical Cancer Screening

In 2024, miLab™ CER was featured in a technical landscape report published by UNITAID—a global health agency under the World Health Organization (WHO)—as the world’s first fully automated solution for cervical cancer cytology screening—covering staining, scanning, and AI-powered analysis. Notably, miLab™ CER was presented alongside products from global leaders such as Roche and Hologic. Among the solutions introduced, Noul stood out as the only startup included in the report, highlighting not only the technological capabilities of miLab™ CER but also Noul’s innovation and growth potential. Building on these results, Noul aims to strengthen collaboration with global institutions such as WHO and UNITAID and contribute to improving access to cervical cancer screening worldwide.

### Enhancing Diagnostic Performance of miLab™ BCM Through Expanded Hematologic Capabilities and Improved Image Quality

In 2024, Noul expanded the diagnostic scope of miLab™ BCM from standard white blood cell 5-part differential (WBC 5-diff) analysis to include complete blood count (CBC) parameters. CBC is a basic blood test that quantifies the number and condition of red blood cells, white blood cells, and platelets, and is widely used for the early diagnosis of various hematologic disorders. In addition to the existing WBC 5-diff function, which classifies normal white blood cells, Noul has developed a new feature that provides more detailed categorization of abnormal white blood cells, enabling more precise analysis of leukocyte abnormalities. Alongside this advancement, Noul has also improved its proprietary staining method, resulting in significantly enhanced image quality that allows for clearer visualization of hematologic morphology. Going forward, Noul plans to further expand the system’s capabilities by incorporating additional blood-related parameters—including immune response indicators—to deliver broader and more precise diagnostic functionality for hematologic diseases.

#### Key Improvements in Image Quality

- Enhanced granule staining of Neutrophils enables more accurate interpretation in the diagnosis of inflammatory responses and hematologic disorders.
- Improved morphological preservation and stain uptake in Lymphocytes offer greater precision in immune status analysis.
- Enhanced chromatin staining in Monocytes supports more accurate analysis of blood cells related to cancer and genetic disorders.

\*miLab™ MAL : miLab™ Cartridge MAL (Malaria Testing Solution), miLab™ BCM : miLab™ Cartridge BCM (Blood Analysis Solution), miLab™ CER : miLab™ Cartridge CER (Cervical Cancer Screening Solution)

\*This information is provided for the purpose of reporting on sustainability initiatives, not for advertising purposes.



# Scaling Product Distribution

## Our Approach

As the first platform-based diagnostic solution with a decentralized model in the market, miLab™ is designed to maximize utility in terms of diagnostic accessibility. To achieve this, accelerating product diffusion and opening new markets at national and regional levels are considered critical. Noul is therefore moving beyond conventional sales and business development approaches by proactively building its business foundation through a stage-specific strategy optimized for market formation, demand validation, product supply, and scale-up.

In line with its broader commitment to improving healthcare access, Noul has established tailored go-to-market strategies that reflect the healthcare landscapes and demand characteristics of both high-income countries (HICs) and low- and middle-income countries (LMICs). Business development and sales activities are carried out in differentiated ways across regions. In addition, Noul is continuously expanding strategic efforts to accelerate the adoption and utilization of the miLab™ solution globally—including building strategic partnerships, securing regulatory approvals in advance, and collecting real-world usage data.

410,890

Total diagnostic cartridges which were distributed across the world  
(as of May 2025)

116,730

Malaria and blood diagnostic cartridges distributed to low- and middle-income countries in 2024

\* miLab™ MAL : miLab™ Cartridge MAL (Malaria Testing Solution), miLab™ BCM : miLab™ Cartridge BCM (Blood Analysis Solution), miLab™ CER : miLab™ Cartridge CER (Cervical Cancer Screening Solution)  
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## Our Key Actions

### Accelerating Global Market Entry Through Stronger Regulatory and Product Registrations

Noul is fast-tracking its entry into global markets by surpassing targets for regulatory approvals and product registrations. To enter key markets such as the United States and Europe, Noul has developed country-specific regulatory strategies supported by a structured implementation process. In 2024, the company adopted a proactive regulatory approach to reduce approval timelines, resulting in significantly shortened review periods and early completion of regulatory approvals and registrations ahead of schedule. As of January 2025, Noul has successfully obtained 31 approvals across 9 countries.

As a key part of its global expansion strategy, Noul is actively preparing for U.S. FDA certification. In November 2024, Noul completed its facility registration with the FDA and successfully registered four Class I medical devices. The company also submitted a Pre-submission package for its malaria and hematology diagnostic software and is proceeding through the approval process in phases. Noul remains committed to completing the FDA approval procedures according to plan, further strengthening the competitiveness and credibility of its products in the global market. At the same time, the company will continue to rapidly expand access to miLab™ solutions in environments where healthcare availability is limited by social, economic, or geographic constraints.

### Expanding Adoption of miLab™ in National Public Healthcare Systems

Noul has been actively working to expand into the public healthcare sector, where regulatory and operational entry barriers remain high, with the goal of integrating miLab™ into national healthcare systems. To validate product effectiveness in line with government standards, Noul secured an official evaluation report from the Institut National de Santé Publique (INSP) in Côte d'Ivoire. The company has additionally signed a supply agreement worth approximately KRW 6.3 billion with the Government of Benin in February 2025. In addition, Noul has entered public procurement agreements through national screening programs in six Central American countries and Kuwait. These efforts will facilitate the adoption of miLab™ in local public healthcare institutions, enabling faster and higher-quality diagnostic services for patients in underserved regions.

### Supplying miLab™ MAL to Germany’s Largest Diagnostic Lab for Infectious Disease Preparedness in Europe

Demand for malaria diagnostic solutions continues to grow even in non-endemic regions such as Europe. In countries like Germany, where malaria case numbers are low, infectious disease control is managed rigorously at the national level, and testing for suspected cases is conducted at a high standard. miLab™ MAL has received strong evaluations for meeting these expectations in the European market. As a result, in December 2024, Noul signed a supply agreement with Limbach Group—Germany’s largest diagnostic laboratory—for its malaria and hematology diagnostic solutions. This agreement serves as a key milestone demonstrating the applicability of Noul’s technology within Europe’s top-tier diagnostic networks. Building on this achievement, Noul aims to expand its supply to neighboring European countries and contribute to strengthening the region’s infectious disease preparedness and response systems.

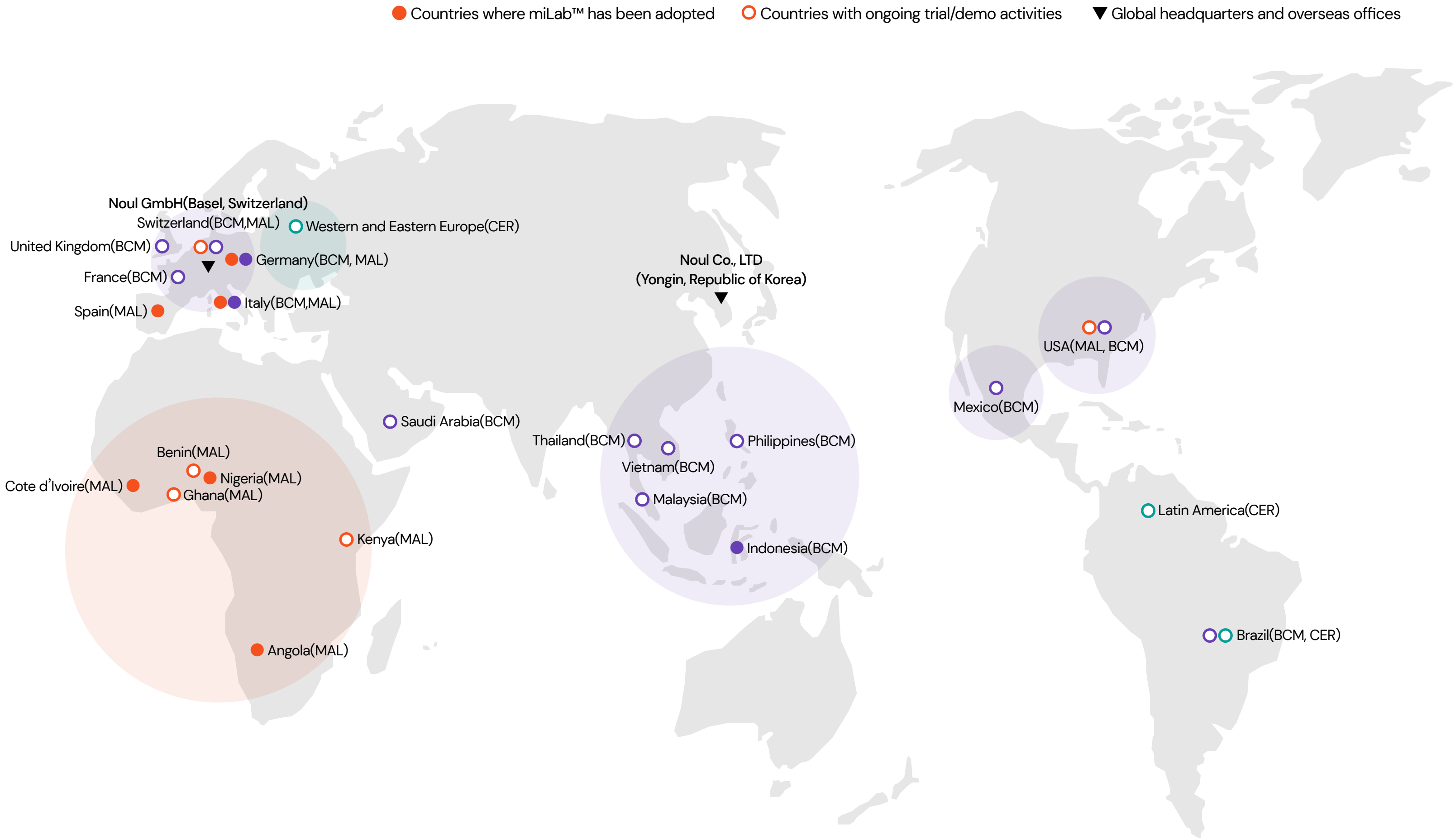
### Accelerating Global Expansion of miLab™ BCM with Technologies Optimized for Local Healthcare Environments

In 2024, Noul began full-scale expansion of miLab™ BCM into global markets, successfully signing supply agreements with key countries in Asia and Europe—including Indonesia, Italy, and Germany. Among these, Indonesia—Southeast Asia’s largest economy—is experiencing rapid growth in its healthcare market and rising demand for innovative and reliable diagnostic solutions. Starting with the agreement signed in October 2024, Noul is working to broaden its distribution across Southeast Asia. Given Indonesia’s geographical characteristics and disparities in healthcare accessibility, miLab™ BCM—with its compact hardware and remote diagnostic capabilities—is expected to play a significant role in improving diagnostic accessibility nationwide.

In parallel, Noul is strengthening its presence in the European market through supply agreements with a major hospital in Italy and Limbach Group, Germany’s largest diagnostic laboratory. Building on these agreements, Noul aims to strengthen global partnerships across Europe and expand the use of miLab™ BCM to meet rising demand for precision diagnostics, particularly in healthcare systems facing the challenges of aging populations.

Global Deployment of miLab™

As of May 2025, miLab™ has been deployed in 28 countries worldwide. It is currently used by both public and private healthcare institutions in 10 African countries, 8 European countries, 3 Asian countries, 3 Middle Eastern countries, and 4 countries across North and Latin America.



\*MAL : miLab™ Cartridge MAL (Malaria Testing Solution), BCM : miLab™ Cartridge BCM (Blood Analysis Solution), CER : miLab™ Cartridge CER (Cervical Cancer Screening Solution)

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Partnerships and Initiatives

Republic of Korea

Global Headquarters

- Noul Co., LTD. (Yongin, Republic of Korea)

Partners

- RIGHT Foundation
- Institut Pasteur Korea
- UN Global Compact
- Impact Alliance
- Seoul National University SOFT Foundry Institute

Europe

Noul GmbH (Basel, Switzerland)

- Regional base for collaboration with international organizations and healthcare companies

Partners

- FIND (Foundation for Innovative New Diagnostics)
- Swiss Tropical and Public Health Institute
- Swiss Malaria Group

Africa

- Noul Tropical Infectious Diseases Center (Muzuzu, Malawi)
- Research center focused on diagnosing antibiotic resistant and febrile diseases (Cooperation with Wezi Medical Centre)

Partners

- National Malaria Control Program (Malawi)
- Ghana Infectious Disease Center (Ghana)
- Center for Health System Strengthening (Ghana)
- University of Lagos (Nigeria)

United States of America

Partners

- University of Notre Dame du Lac
- Boston Children's Hospital
- The Earth Institute
- PATH



# Compliance, Ethics and Risk Management

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- Compliance and Ethics
- Respect for Human Rights
- Health and Safety
- Quality Management System





# Compliance and Ethics

## Our Approach

Noul recognizes compliance with domestic and international laws and regulations, as well as international standards and norms, as a top priority for responsible business conduct. We are committed to building and effectively implementing a comprehensive compliance management system.

To embed compliance-based risk management and ethical business practices across our operations, we have identified “Compliance, Ethics, and Risk Management” as a core area of our sustainability execution strategy. A mid-to long-term roadmap is being implemented in phases to systematically prevent and manage both visible and non-visible business risks.

Grounded in our mission, core values, and sustainability philosophy, the Noul Code of Conduct serves as the foundation for company-wide decision-making and organizational culture. Through its implementation, we continue to enhance the stability and operational efficiency of our business.

## Our Key Actions

### Establishing a Compliance Risk Monitoring Framework

Since 2023, Noul has been gradually building a compliance risk management system. In 2024, our primary focus was on establishing an integrated procedure for managing legal violations. As part of this effort, we defined the monitoring scope by identifying key applicable regulations and created a legal registry to systematically organize the laws the company must comply with. While we have not yet reached the stage of conducting risk assessments based on the prioritized regulations or developing a full monitoring framework, our top priority in 2025 is to establish and

100%

Completion rate for work ethic training provided to executives and employees

100%

Employee signing rate for ethics pledge

implement a risk assessment procedure. Alongside this, we plan to operate a regular compliance monitoring process to effectively prevent legal risks.

### Enhancing Compliance Capability Through Industry- and Role-Specific Training

To raise awareness of legal compliance and foster a compliance-oriented culture across the organization, Noul provides regular compliance training to all employees—including management. While previous training focused on general concepts such as the scope of compliance and the importance of lawful management, since 2024 we have shifted toward practical, job-relevant training that reflects industry- and role-specific characteristics. This approach supports employees in identifying and addressing potential legal issues they may encounter in their day-to-day work.

Training Topic	Target	Persons (Completion Rate)	Timeline
Compliance	Management and all members	138 persons (100%)	2024.01
Training on Preventing Rebates and the Improper Solicitation and Graft Act	Management and all members	128 persons (87%)	2024.06
Anti-Corruption Training in Commemoration of International Anti-Corruption Day	Management and all members	80 persons (60%)	2024.12
Training on General Legal Principles and Practical Cases Related to Medical Device Advertising Regulation	Management and all members	114 persons (86%)	2025.01
Training on Employee Invention Compensation, Legal Review Procedures, and Key Considerations When Drafting Contracts	All members	114 persons (86%)	2025.01

### Strengthening Company-ide Ethical Accountability by Establishing the Noul Code of Conduct.

To prevent compliance risks and foster a shared sense of ethical responsibility across the organization, Noul established the Noul Code of Conduct in October 2024. The Code was developed with reference to international standards such as the UN Global Compact (UNGC), the International Labour Organization (ILO), and

the Responsible Business Alliance (RBA) Code of Conduct. As a high-level guiding framework, the Noul Code of Conduct outlines fundamental compliance and ethical standards on key topics of sustainability and corporate ethics. It supports all employees in making responsible decisions aligned with a consistent set of principles.

## Topics Covered in the Noul Code of Conduct

- 1. Fostering a Culture of Human Dignity** : Respect for Human Rights, Non-Discrimination, Prevention of Harassment, Diversity and Inclusion, Health and Safety
- 2. Promoting Ethical Conduct and Integrity** : Prevention of Conflicts of Interest, Prohibition of Bribery, Gifts and Hospitality, Financial and Accounting Integrity, Research Ethics
- 3. Ensuring Responsibility Across the Value Chain** : Fair Competition, Relations with Government Agencies, Supply Chain Responsibility, Environmental Protection, Responsible Marketing
- 4. Creating Customer Value** : Healthcare Accessibility Enhancement, Product Quality, Pursuit of Innovation, Customer Satisfaction
- 5. Safeguarding Information and Corporate Assets** : Protection of Company Information, Personal Data Protection, Intellectual Property Rights, Prohibition of Insider Trading

To ensure all employees clearly understand the purpose and content of the Code of Conduct and to strengthen their commitment to ethical practices, Noul held an official introduction session on December 9, 2024, coinciding with International Anti-Corruption Day. The session included anti-corruption training alongside a company-wide rollout of the Code. In January 2025, the Code’s core principles were further emphasized during the company-wide Noulia Work Ethic Training, during which all employees—including executive leadership—participated in an Ethics Pledge reaffirming their shared commitment to Noul’s ethical values and Code of Conduct.

**\*The Noulia Work Ethic Training** is an annual program held at the beginning of each year. It outlines the foundational mindset and behavioral principles expected of all Noul employees, covering the company’s core values and principles, compliance, HR and finance protocols, and other key internal policies.



**Responding to Compliance Violations Through Transparent and Structured Procedures**

Noul addresses compliance violations through a structured five-step process. All members are encouraged to report any misconduct—including fraud, workplace harassment, sexual harassment, and abuse of authority—at any time via internal reporting channels. All reports are handled confidentially, and whistleblowers are fully protected from any form of retaliation.

Upon receiving a report, the first step is to determine whether it falls under compliance-related matters. If it does, the relevant facts are reviewed through discussions with the involved parties, and expert opinions are sought when necessary. Appropriate actions—ranging from improvement requests to formal disciplinary measures in accordance with internal regulations—are taken based on the severity of the case. Following resolution, Noul provides training and carries out ongoing monitoring to prevent recurrence.

In 2024, one case of internal ethics violation was reported. After investigation, appropriate action was taken in accordance with company policy.

**Compliance Violation Response Process**

Step 1 Report submission	Step 2 Identification	Step 3 Investigation	Step 4 Action	Step 5 Follow-up
CLO, CSO, HR department leader	Identify the concern raised  Determine whether to investigate	Investigate factual grounds  Seek expert feedback	Determine action to be taken	Conduct training to prevent a reoccurrence and monitor

**Information Security**

**Strengthening the Effectiveness of Our Information Security Management System Through Company-wide Policies and Implementation Guidelines**

To safeguard critical information assets against global cybersecurity threats and establish an effective information security management system, Noul adopted a company-wide Information Security Policy in March 2025. This policy was developed based on the 14 control areas outlined in ISO 27001 and the corporate security guidelines issued by the Korea Internet & Security Agency (KISA). To ensure practical implementation, Noul also introduced seven practical guidelines—including information system security protocols—designed to help employees understand and apply information security practices in their daily work. In addition, specific protection measures have been established across key areas such as PC security, network security, and account management to enhance the policy’s practical effectiveness. Looking ahead, Noul plans to conduct quarterly security inspections and expand internal training programs to raise company-wide awareness, thereby enhancing the policy’s effectiveness.

**Continuously Advancing Our Security System to Strengthen Real-Time Risk Response Capabilities**

Noul is progressively building an internationally aligned security system based on the Zero Trust principle, which assumes no access is trusted until verified. In 2024, we made targeted improvements in the following two areas:

- After comparing and analyzing global security solutions in the areas of SASE (Secure Access Service Edge), DLP (Data Loss Prevention), and EDR (Endpoint Detection and Response), we conducted a two-month pilot program with a test group. Based on the results, we fully implemented the most suitable solution across the company. Since then, we have been operating a security system that effectively detects and blocks abnormal access attempts to sensitive information.
- In addition, we established a centralized system for managing security events and implemented a real-time dashboard to improve visibility into security threats and enhance response capabilities.

Looking ahead, Noul plans to continue improving its security standards through regular security audits and policy updates, aiming to maintain a robust, internationally compliant security framework.





# Respect for Human Rights

## Our Approach

Noul complies with international human rights and labor standards—including the Universal Declaration of Human Rights (UDHR)—the UN Global Compact (UNGC), and conventions of the International Labour Organization (ILO). We are committed to building institutional and cultural foundations that ensure all employees are respected as individuals with equal dignity.

Our top-level policy documents—including the Code of Conduct and HR regulations—clearly prohibit all forms of discrimination and harassment. A Non-Discrimination Policy is applied to every aspect of recruitment and employment. For actions that violate company values or cause serious harm to others, we uphold a Zero Tolerance principle and respond through a fair and structured process, placing the highest priority on protecting affected individuals.

From a cultural perspective, we provide regular training to enhance employees’ sensitivity to human rights issues and conduct organizational culture assessments. We encourage employees to actively practice respect for human rights and are committed to supporting employees to practice these values across the organization.

## Our Key Actions

### Delivering Practical and Impactful Training to Strengthen Human Rights Awareness Among Employees

To ensure mandatory annual training programs go beyond fulfilling formal requirements, Noul carefully designs each program by considering content, instructor selection, and delivery methods to maximize its effectiveness for employees. In 2024, the workplace sexual harassment prevention training incorporated role-playing exercises based on real scenarios involving sexual harassment and gender discrimination in the workplace. This approach helped enhance employees’ gender sensitivity and their capacity to appropriately address such issues.

Noul remains committed to operating effective training and awareness campaigns that help employees internalize and practice the values and significance of human rights in their daily work.

### Improving the Reliability and Effectiveness of Our Grievance Mechanism

Noul is continuously improving its grievance handling system to ensure it is trusted and effective across the organization. We operate company-wide online and of-line channels through which employees can report a wide range of work- and company-related concerns—such as workplace harassment, discrimination, unfair treatment, interpersonal conflicts, compensation and benefits, and health and safety issues—as well as public interest matters. Upon receiving a report, we notify the submitter within 24 hours to confirm receipt and provide follow-up information on next steps. Throughout the process, we prioritize the protection and confidentiality of whistleblowers and complainants.

#### Grievance and Whistleblowing Channels at Noul

- Online anonymous whistleblowing and Suggestion Box for offline whistleblowing
- Grievance counselors : CSO (Chief Sustainability Officer), 4 HR managers, 3 members of the Labor-management Council
- Hotline to reach top management and the HR officer : [speakup@noul.com](mailto:speakup@noul.com)

To raise employee awareness and trust in our grievance mechanisms, we conducted an internal perception survey in November 2024. Approximately 84% of respondents expressed confidence in the current system. Key areas identified for further improvement included stronger protection for whistleblowers and victims, prevention of secondary harm or retaliation, and greater fairness in case handling. In response, Noul plans to reinforce confidentiality protocols and expand training for those involved in grievance handling.

#### Grievances Submitted and Handled in 2024

- Type and Number of Grievances : 0 cases for ethical non-compliance, 1 case for human rights issues, 0 cases under other categories
- Action Taken : Action was taken according to internal regulations for 1 case

### Fully Committing to the Creation of a Fair Business Environment to Avoid Any Discrimination Based on Gender or Type of Employment Contract.

We follow reasonable criteria in determining compensation, such as the nature of the work performed and the career experience and individual competency, and do not discriminate in pay based on gender. Even for entry-level positions, Noul sets compensation based on consistent criteria—such as individual competency and work experience—regardless of gender. As of 2024, the median salary of female employees was approximately 75.3% that of male employees. The average years of experience for male employees was 13.5 years, compared to 10 years for female employees. While we recognize that this disparity may reflect a combination of factors—such as differences in job types and representation in leadership roles—we have yet to conduct a full quantitative analysis to derive conclusive insights. At present, we monitor gender ratios in leadership through monthly executive and leadership meetings and continue to improve our internal processes to detect and prevent gender-based disparities in recruitment, career development, and job assignment.

Since its founding, Noul has applied wage standards above the legal minimum for both hourly part-time workers and interns. Interns are compensated at the level of the Gyeonggi-do living wage, and aside from long-term employment-related welfare programs, all other benefits are provided equally to both interns and full-time employees regardless of employment type.



## Improving Internal Policies and Working Conditions Through Noul Harmony, Our Labor-Management Council

In alignment with the intent and requirements of relevant labor laws, Noul operates its Labor-Management Council, Noul Harmony. Serving as a collaborative platform, Noul Harmony facilitates open discussions and joint problem-solving between the company and its members based on mutual trust. In 2024, four regular meetings were held, and key agenda items discussed during these sessions were reflected in improvements to working conditions and HR policies. Moving forward, we will continue to enhance communication and cooperation grounded in trust, fostering a healthy work environment where both Noul and its members can grow together.

### Key Improvements Made Through Noul Harmony in 2024

- All Noul Harmony employee representatives completed grievance counselor training
- Business trip policies and processes were improved
- Working conditions for in-house cafe baristas were improved
- A formal procedure was introduced to gather input from employee representatives during organizational restructuring or strategic business shifts





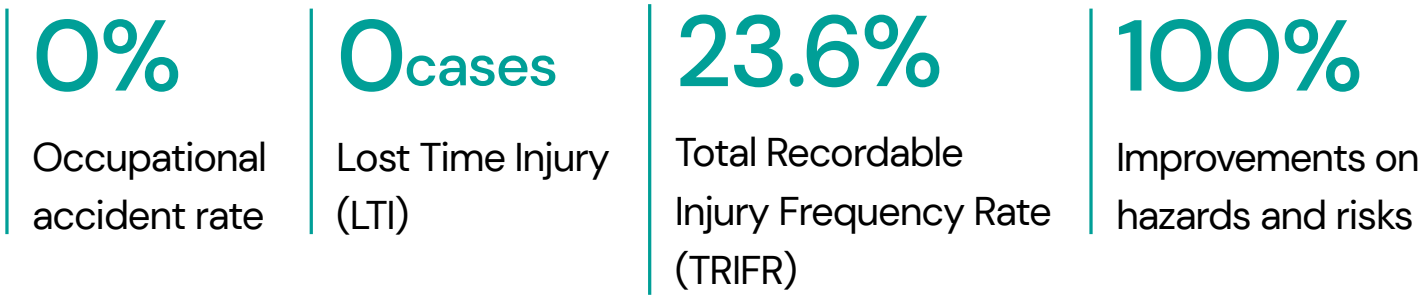
# Health and Safety

## Our Approach

Noul is committed to preventing occupational accidents and ensuring that all employees work in a safe and comfortable environment by actively complying with occupational safety and health regulations. We are gradually establishing a comprehensive safety and health management system by incorporating concrete implementation strategies into our mid- to long-term sustainability improvement plan, aligned with international standards.

From a systems and governance perspective, Noul has developed and applied internal safety and health standards that are appropriate for the scale and conditions of the organization. We have also established a dedicated function to implement and manage these standards systematically. In addition, we have built internal capabilities to independently carry out essential safety and health functions—such as workplace inspections and employee health management—without reliance on external service providers.

On the cultural front, we recognize that achieving a truly accident-free workplace requires more than compliance with systems; it demands the internalization of safety awareness at both the individual and organizational levels. We therefore emphasize employee engagement and collaboration across all safety and health initiatives. For example, we operate a structured proposal and feedback system for safety and health issues, and we continuously implement meaningful improvements based on the input received.



\*In 2024, all incidents—including minor ones—were systematically documented through incident reports, resulting in a slight increase in the Total Recordable Incident Frequency Rate (TRIFR) compared to 2023.

## Our Key Actions

### Systematically Addressing Workplace Hazards Through Internal and External Assessments

#### ● Conducted a Company-wide Risk Assessment Through an All-employee Listening Survey

Noul performs regular and ad hoc risk assessments to identify and mitigate occupational hazards in the workplace. In 2024, to gain a comprehensive understanding of potential risks across the company, we conducted a listening survey with all employees. More than 80% of employees participated, identifying a total of 364 potential hazards across 73 processes. Among them, 19 high-risk items were selected and fully addressed through actions such as reinforcing safety facilities, improving work procedures, and enhancing personal protective equipment.

#### ● Underwent a Laboratory Safety Inspection by the Ministry of Science and ICT

In 2024, Noul underwent its second on-site laboratory safety inspection organized by the Ministry of Science and ICT, following the first in 2019. The inspection was conducted to verify compliance with legal safety requirements and evaluate the actual implementation of safety protocols in our labs. The results included two corrective orders and three recommendations, with no fines imposed. All items were promptly resolved. This inspection also served as an opportunity to identify and mitigate additional potential risks and reinforce a safer laboratory environment.

### Strengthening Our Occupational Health Management Through the Appointment of a Dedicated Health Officer and Establishment of an In-house Health Center

To enhance preventive care and manage workplace health risks more systematically, Noul appointed a licensed nurse as an in-house health officer and established a dedicated health management office in 2024. In addition to providing regular general and special health checkups, the health officer provides one-on-one consultations to monitor employee health conditions and detect potential risks at an early stage. Tailored health management plans are provided accordingly. The office also collects and analyzes health-related data to develop health management strategies aligned with the specific needs of our workplace.

### Company-wide Health and Safety Awareness and Response Capabilities Are Being Enhanced Through Employee Engagement

#### ● Workplace Walkthrough Inspections

Beginning in 2024, Noul internalized its workplace walkthrough inspection process, which had previously been conducted jointly with external agencies. Now, the internal safety and health managers conduct regular inspections to proactively identify hazards and gather employee feedback for continuous improvement. Risks identified through employee participation are addressed via action plans developed and reviewed by the Occupational Safety and Health Committee, which convenes quarterly or on an ad-hoc basis.

### Outcomes from Workplace Inspections and Employee Feedback



#### ● Tracking and Managing Days Without Accidents

Since January 2025, Noul has set targets and begun tracking the number of days without accidents to foster a positive safety culture and motivate employee engagement in achieving safety goals. The tracked progress is visualized to encourage proactive participation from all employees.

#### ● Enhancing Safety and Health Readiness Through Emergency Response Training

Noul conducts annual emergency response drills to ensure prompt and effective action in case of unexpected incidents. In 2024, a fire evacuation drill was carried out for all employees, providing hands-on training in evacuation routes and the use of fire extinguishers and hydrants. In 2025, Noul plans to implement customized drills tailored to the unique working conditions and job functions of each department, further improving the effectiveness of training and emergency response capabilities.



# Quality Management System

## Our Approach

Noul places the highest priority on delivering safe and reliable products and services as the foundation of customer value. We are committed to achieving the highest attainable standards of quality within our operational scope.

We have obtained and maintained ISO 13485:2016 & EN ISO 13485:2016 certification—the international standard for medical device quality management systems—from the global certification body BSI. In alignment with these standards, we continue to establish and embed a robust quality management system across our product development and process operations.

In addition, we are developing supply chain management processes appropriate to our organizational scale and stage of growth, ensuring consistent product quality and safety that meet the expectations of customers and stakeholders. We are also strengthening procedures for gathering and reflecting customer feedback into product and service improvements.

## Our Key Actions

### Establishing a Quality Management System for Software as a Medical Device Aligned with International Standards

In 2024, Noul successfully established and began operating a Quality Management System (QMS) for Software as a Medical Device (SaMD), earning the Clinical GMP Certificate of Compliance for its in-vitro diagnostic software product group. This certificate serves as an official recognition that Noul’s development, manufacturing, and quality control processes for SaMD meet international standards, laying a solid foundation for enhancing the competitiveness of our software-based medical devices. During the QMS development process, we systematically implemented core quality processes in accordance with ISO 13485 and other regulatory requirements. Continuous improvement efforts were carried out through internal audits. Furthermore, the system was designed to meet regulatory requirements related to clinical trials and device approvals, thereby strengthening our regulatory compliance capabilities. Going forward, Noul will continue to enhance the integrity

of its company-wide quality management system and build a trusted environment for the development of medical devices through quality improvement and proactive regulatory compliance.

### Successfully Reduced the Likelihood of all 116 Identified Risks by Applying a Risk-based Approach

To ensure the effective operation, maintenance, and continuous improvement of our Quality Management System, Noul applies a risk-based approach to manage product development and related processes. Risks are identified and verified based on their severity and likelihood of occurrence in the product development and process management process, and identified risks are controlled following the six-step process.

Establish process handling procedures	Set quality forms	Appoint the process manager	Define and grant qualifications for the process manager	Conduct trainings and exercises	Others
37	8	9	-	7	3

In 2024, 11 new risks were identified compared to the previous year, and risk controls were applied to a total of 116 identified risks. The likelihood of occurrence for each was reduced to a level deemed acceptable under Noul’s internal risk tolerance standards. In 2025, Noul plans to continue conducting risk identification and control activities based on a risk-based approach, further strengthening the effectiveness of its quality management system.

116 cases

implementing risk control for identified risks

100 %

Manage and assess our products categorized as in-vitro diagnostic medical devices in accordance with the international quality management system standard for medical devices

### Strengthening CS Capabilities to Incorporate Customer Feedback and Address Key Issues

To ensure timely responses to customer feedback, Noul established a dedicated customer service (CS) function in 2024 and is gradually developing a company-wide CS management system. In 2025, we conducted a customer satisfaction survey to proactively address customer needs and enhance trust in the quality of our products and services. The survey results helped us identify gaps between customer expectations and actual experience, as well as areas for improvement. A service manual was developed focusing on frequently asked questions and recurring product issues, enabling customers to identify and resolve potential errors independently during product use. As we are currently in the process of defining our CS operations, we plan to further structure the procedures and roles involved in each step to improve our responsiveness. Going forward, we aim to regularly collect customer feedback and apply it to the continuous improvement of our products and services, thereby increasing customer satisfaction and trust.

Key Results of the 2024 Customer Service Process

· 100% of customer complaints were resolved with corrective actions taken.

· No product recalls occurred due to quality-related issues.

### Establishing a System to Minimize Quality and Delivery Risks in the Supply Chain

Noul is progressively developing its supply chain management system in alignment with the company’s growth stage, with a long-term focus on ensuring high product quality and cost competitiveness. To proactively manage supply chain risks, we conduct comprehensive assessments during the onboarding process for new suppliers. These assessments evaluate suppliers’ capabilities in operations and production management, quality and risk control, and hazardous substance management. Following registration, suppliers undergo an annual performance review to assess their reliability in terms of product quality and operational stability. To further enhance the quality and supply stability of key components and materials, we are establishing a dual-vendor system wherever feasible, rather than relying on sole vendors. This approach allows for alternative sourcing in the event of delivery delays or quality issues, thereby reducing potential supply disruptions.



# Sound and Sustainable Governance

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- Corporate Governance
- Governance for Sustainability





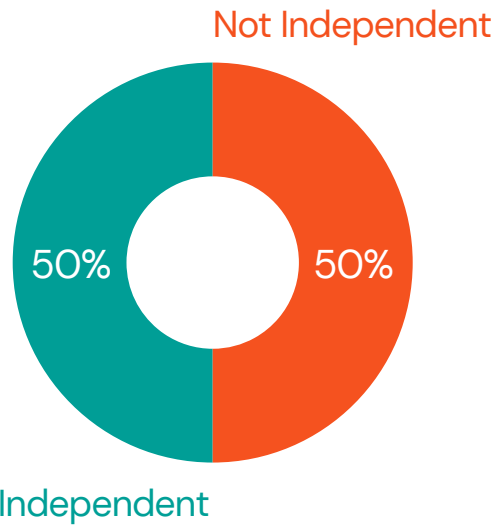
# Corporate Governance

## Our Approach

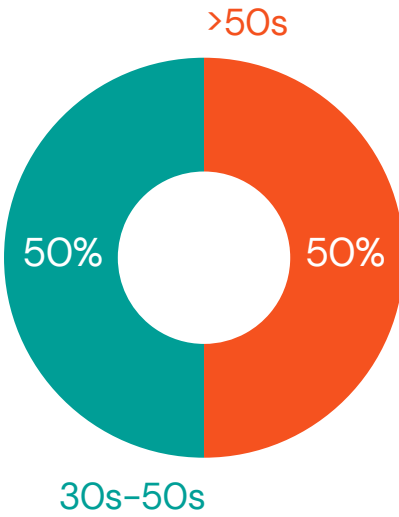
Noul recognizes that sound and transparent governance is a fundamental prerequisite for sustainable growth and for earning the trust of shareholders and stakeholders. As a KOSDAQ-listed company, we strive to proactively establish a governance structure that meets legal requirements and capital market expectations to minimize decision-making risks in business and operations and contribute to the enhancement of long-term corporate value.

To systematically implement this vision, we have identified “Sound and Sustainable Governance” as one of the core pillars of our sustainability strategy. We continue to strengthen a transparent and efficient decision-making structure centered on the Board of Directors, along with an internal control system.

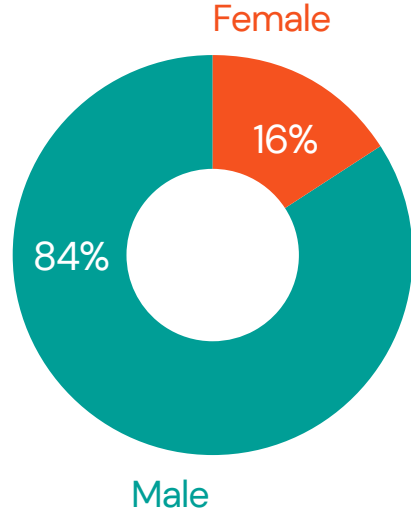
Board Independence



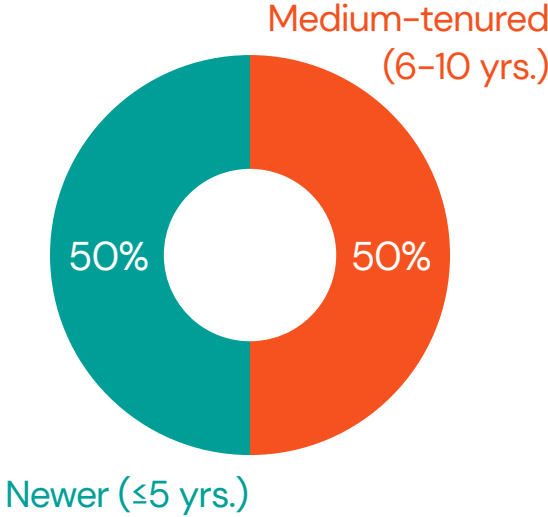
Board Age Diversity



Board Gender Diversity



Board Tenure Diversity



As of April 2025

Name	Area of Expertise	Key Experience	Tenure	Independence	Audit Committee
David Lim	General management (R&D)	(Current) CEO, Noul (Previous) Managing Partner, SOL Invest (Previous) Manager, Partners Investment (Previous) Head of Product Development, MGB Endoscopy	Dec. 2015 ~ Mar. 2027 (reappointed in Mar. 2024)		
Peter Kim	Law, Patents, Quality control	(Current) CLO, Noul (Previous) Lawyer, Legal Affairs Team, KT (Previous) Senior researcher, Institute for Future Internet Technology Convergence, LG Electronics (Previous) Assistant researcher, LEADTECH	Dec. 2015 ~ Mar. 2028 (reappointed in Mar. 2025)		o
Justin Ahn	Sustainability strategy, HR organization	(Current) CSO, Noul (Previous) CSO, slowalk (Previous) Lead auditor, British Standard Institution (Previous) Senior researcher, POSCO Research Institute	Mar. 2018 ~ Mar. 2026 (reappointed in Mar. 2024)		
SeonJee Lee	Law, Compliance	(Current) Attorney, Kim & Chang Law Firm (Current) Member, Public-Private Partnership Deliberation Committee, Ministry of Economy and Finance (Previous) Member, Regulation Interpretation Review Committee, Financial Services Commission (Previous) Member, Dispute Meditation Review Committee, Korea Exchange	Aug. 2021 ~ Mar. 2027 (reappointed in Mar. 2024)	o	
Seongsoo Jang	Medical diagnostics technology	(Current) Head, Laboratory Medicine, Asan Medical Center (Current) Associate Professor, Department of Laboratory Medicine, University of Ulsan College of Medicine, Asan Medical Center (UUCM AMC) (Current) Chairman of Board, Korean Society of Hematology (Previous) Residency in Clinical Pathology, Hanyang University Hospital	Aug. 2021 ~ Mar. 2027 (reappointed in Mar. 2024)	o	o
Jungbo Kim	Accounting, Auditing	(Current) CEO, Sejin Accounting Corp. (Previous) Auditor, Noul (Previous) Director, Sehyun Accounting Corp. (Previous) CEO, Kim Jungbo Tax & Accounting Office	Mar. 2025 ~ Mar. 2028 (appointed in Mar. 2025)	o	o

# Corporate Governance

## Our Key Actions

### Board of Directors

**Strengthening Board Expertise and Transparency Through the Establishment of the Audit Committee**

Although Noul is not yet mandated to establish an audit committee due to its current corporate size, we took a proactive step by forming the committee in March 2025 to strengthen the independence of the audit function and reinforce the expertise of the Board of Directors. Alongside this initiative, we appointed Kim Jungbo—an external director with over 20 years of experience in accounting and auditing—as both an Independent Director and an Audit Committee member. As a result, the Board is now composed of three executive directors and three independent directors.

To ensure stable business operations and responsible decision-making, the Board is chaired by our founder and CEO, David Lim. Taking into account the company’s current stage of growth, Noul continues to expand its independent oversight functions by increasing the presence of independent directors and introducing the Audit Committee. We remain committed to strengthening the independence and transparency of our board operations moving forward.

**Enhancing Pre-Meeting Briefing Procedures to Support Effective Board Decision-Making.**

To support independent and objective decision-making, Noul ensures that each director and auditor receives relevant materials and briefings in advance of Board meetings. Prior to each meeting, directors and auditors are provided with relevant materials and are individually briefed on key agenda items and current business performance, enabling informed deliberation. In 2024, a total of six Board meetings were held, with full attendance by all directors, who provided objective oversight and guidance on company management. Additionally, newly appointed C-level executives shared updates on development, sales, manufacturing, and operations with Independent Directors, while the CFO and CLO provided detailed pre-meeting briefings on key items for Board and shareholder meetings to ensure effective and timely decision-making.

Board Activity and Attendance in 2024			
Meetings Held	Decision Item	Information Item	Attendance Rate
6 meetings	5 items	5 items	100%

- Key Decision/Reporting Items for the Board in 2024**
- Report on the Operation Status of the Internal Accounting Control System to Enhance Accounting Transparency and Internal Control Reliability
  - Appointment of the CEO
  - Report on the Establishment and Announcement of a Mid-to-Long-Term Plan to Enhance Corporate Value in the Capital Market

### Protection of Shareholder Rights

**Enhancing Voting Accessibility Through the Introduction of Electronic Voting and Proxy Platforms**

To uphold shareholder rights and facilitate broader participation in voting, Noul schedules its Annual General Meeting (AGM) on a date that avoids the peak AGM period designated by the Korea Exchange(KRX), enabling more shareholders to attend. Since its founding, Noul has also included provisions in its Articles of Incorporation allowing shareholders to delegate their voting rights if they are unable to attend in person. Beginning with the March 2025 AGM, Noul adopted electronic voting and electronic proxy systems, enabling shareholders to exercise their voting rights regardless of time or location.

**Disclosure of Corporate Value-Up Plan and Improved Investor Communication**

In the second half of 2024, Noul became the first company listed under the Special Listed Technology Growth IPO program to participate in the Corporate Value-up Program led by the Financial Services Commission. Through this initiative, the company has actively pursued strategies to enhance corporate value and strengthen stakeholder engagement. In February 2025, Noul announced and disclosed a three-year corporate value up plan and held investor briefings and press conferences to transparently communicate its mid- to long-term growth strategies and execution roadmap to stakeholders. Moving forward, Noul will adopt online IR (Investor Relations) sessions using digital platforms starting in 2025 to provide regular updates on the progress of the plan—including quarterly IR sessions. Furthermore, the company aims to improve outreach individual investors by expanding IR events tailored to retail audiences, offering real-time Q&A opportunities, and working to close the information gap between institutional and individual investors.





## Internal Control System

### Enhancing Reliability of Internal Controls through the Review of Financial Reporting and Funds Management Processes

Noul designs and operates its internal accounting control system based on the conceptual framework issued by the Internal Accounting Control System Operation Committee. Each year, key control activities are selected to assess the effectiveness of the system's implementation. In 2024, Noul conducted a focused review of 37 control activities related to financial reporting and funds management processes. This assessment evaluated the accuracy and reliability of financial statements as well as the precision and efficiency of cash flow operations.

The results confirmed that financial transactions were consistently and accurately managed in accordance with the adopted accounting standards, and that fund management controls—such as monitoring of inflows and outflows and regular reporting—were effectively implemented. Additionally, 119 control activities across nine core business functions—including sales and production—were reviewed company-wide. The external auditor concluded that no deficiencies were identified under Chapter 4, “Application to Small and Medium-Sized Companies,” of the Best Practice Guidelines for Evaluating and Reporting on Internal Accounting Control Systems.

In line with the Financial Investment Services and Capital Markets Act, Noul discloses its annual, quarterly, and semi-annual business reports. In 2024, inventories—which accounts for a material portion of the financial statements—were designated as a key audit matter. An external audit by Samil PwC focused on the accounting treatment of inventory valuation and resulted in an unqualified opinion, stating that Noul's financial statements were fairly presented in all material respects in accordance with Korean International Financial Reporting Standards (K-IFRS).

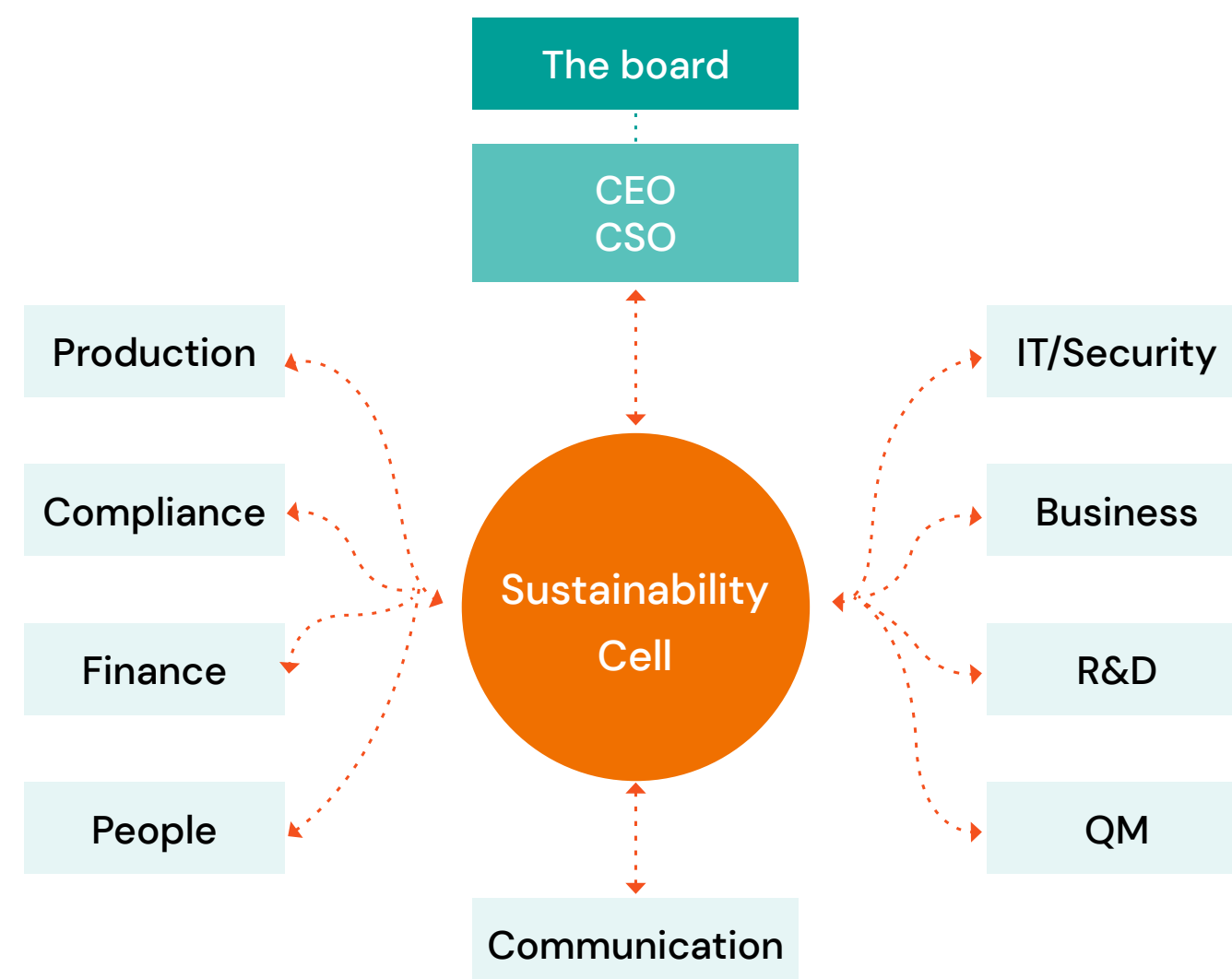




# Governance for Sustainability

## Our Approach

Noul operates under the principle that our business is managed based on a sustainability-centered philosophy, as clearly stipulated in our Articles of Incorporation. We strive to translate this principle into a company-wide management system that systematically and consistently integrates sustainability into all aspects of our business and organizational operations. The Board of Directors holds the ultimate decision-making authority in driving company-wide sustainability efforts, playing a central role in establishing sustainability-related policies, evaluating performance, and identifying pinpoint areas for improvement. Serving as a Board member, the Chief Sustainability Officer (CSO) is dedicated to leading Noul's overall sustainability operations and regularly reports key ESG and impact-related issues and outcomes to the Board.



## Our Key Actions

### Reinforcing Data-Driven Sustainability Management and Decision-Making

In accordance with our Articles of Incorporation, the Chief Sustainability Officer (CSO) is responsible for analyzing and consolidating the company's economic, social, and environmental performance, and presenting the findings to the Board of Directors for review and approval. In 2024, the CSO submitted the sustainability report summarizing our previous fiscal year's operations and social outcomes, which was formally approved by the Board. To embed sustainability perspectives into day-to-day operations, Noul holds monthly meetings attended by senior management and divisional leaders to review the implementation status of sustainability initiatives. Where needed, company-wide decisions are made through these forums to ensure alignment with our sustainability goals. Beginning in August 2024, monthly trends of key sustainability indicators—including diversity metrics—have been systematically reported to support the monitoring and management of material risks and to inform strategic decision-making.

### Expanding Internal Sustainability Practices through Education and Member-Led Projects

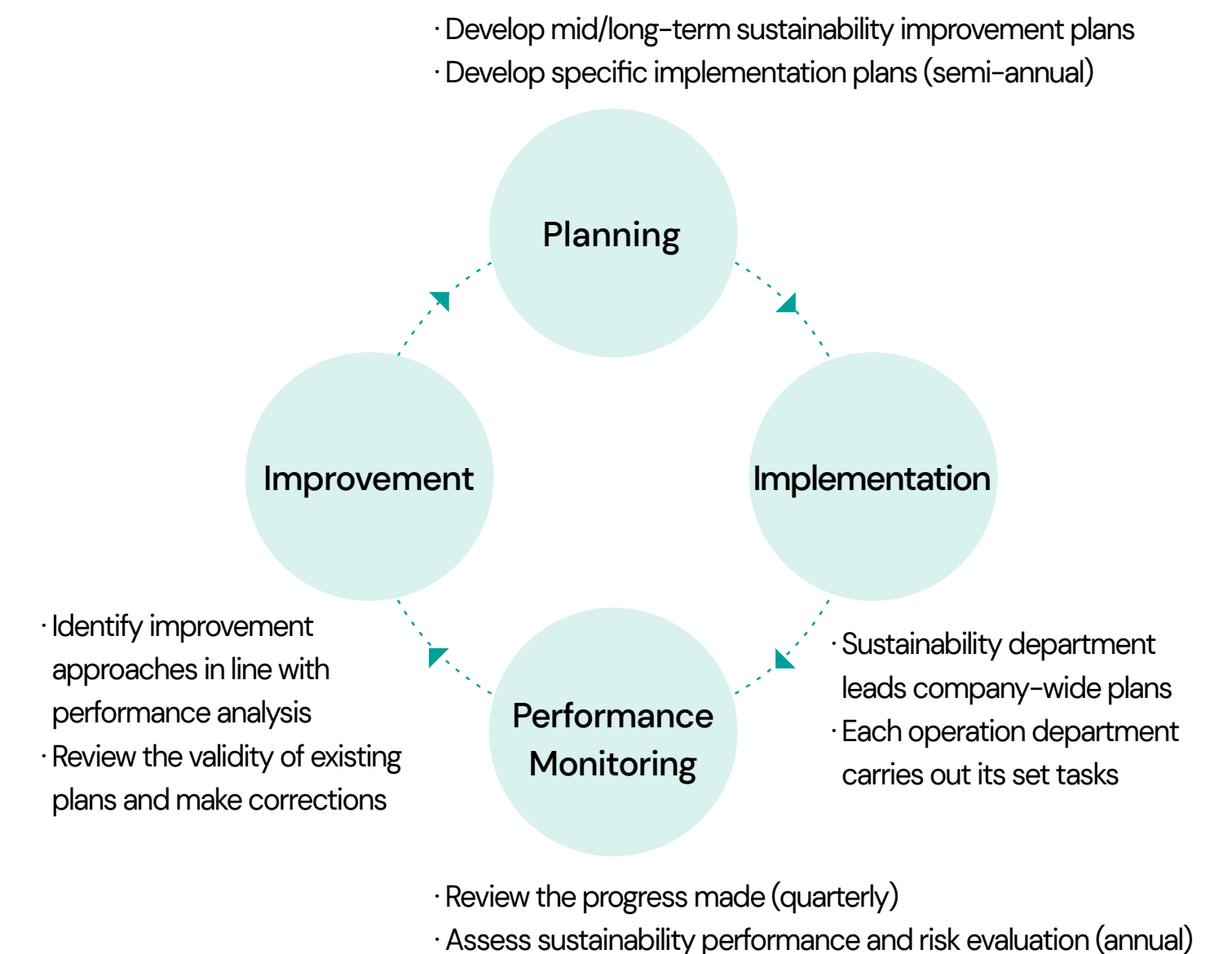
To encourage members to take the lead in practicing sustainability in their daily work and professional lives, Noul offers onboarding sessions that introduce our sustainability philosophy to new hires and regularly conducts Sustainability 101, a mandatory company-wide training program. Sustainability 101 consists of two components: a series of lectures covering the concept and case studies of sustainability, and a project-based course where members develop and implement internal sustainability initiatives.

- 2 training sessions held in 2024
- Attended by 21 members with a 100% completion rate
- 2 employee-led internal sustainability projects completed
- Improving accessibility to the company's grievance handling process, Enhancing employee mental well-being

### Establishing an Integrated System to Manage Sustainability Performance and Non-financial Risks

Noul manages and improves its sustainability performance on a regular basis based on the Plan-Do-Check-Act (PDCA) Cycle. In December 2024, we reviewed our Mid- to long-term sustainability initiatives and corresponding outcomes with relevant departments, and in February 2025, we updated the plans to better align them with our company's long-term business growth strategy, which was developed as part of our Corporate Value-up plan.

In October 2024, we also drafted an initial version of an integrated process for managing sustainability performance and risks, and carried out a company-wide risk identification effort covering eight areas, including compliance, occupational safety and health, and investor relations. We are currently in the early stages of establishing a risk management process tailored to our sustainability priorities and organizational growth stage. Moving forward, we aim to build a stepwise, integrated system that enables agile responses to changing business environments and evolving stakeholder expectations, while ensuring effective management of both sustainability performance and non-financial risks.





# Responsible and Inclusive Workplace

- Inclusive Work Environment
- Capability Development for Employees



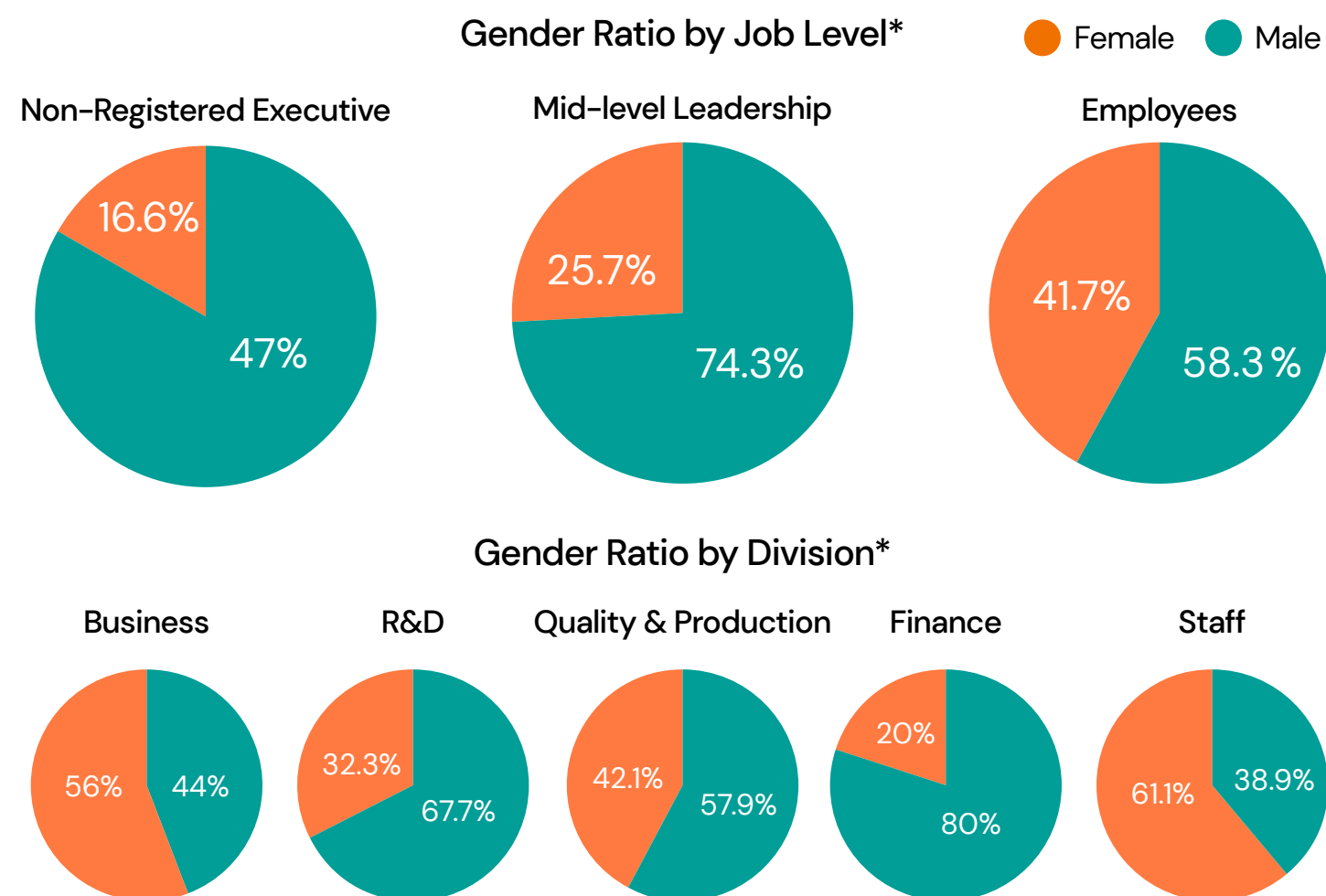


# Inclusive Work Environment

## Our Approach

Noul aims to foster a work environment where all members are given fair opportunities to realize their full potential and grow alongside the organization. As part of our company-wide mid-to-long-term sustainability implementation strategy, we have identified “building a responsible and inclusive workplace” as a key pillar. We are systematically implementing this strategy by defining priority actions to create an inclusive organizational environment and enhance individual engagement, and by establishing concrete improvement plans.

In line with our HR philosophy that emphasizes employee engagement, we are committed to ensuring that all members have the opportunity to share their voices and take an active role in shaping an inclusive work environment. In addition, we proactively identify and address high-risk factors that may affect engagement and the overall workplace experience—such as through company-wide engagement surveys and gender bias assessments—to support preemptive improvements.



\*As of December 2024

## Our Key Actions

### Diversity, Equity and Inclusion (DEI)

#### Taken Both Institutional and Cultural Steps to Embed DEI Values into our Organization

Noul is committed to fostering an inclusive workplace where all members, regardless of gender, are given fair opportunities to fully realize their capabilities. To this end, we continue to improve both institutional frameworks and organizational culture. On the institutional side, our Noul Code of Conduct, enacted in October 2024, outlines the company’s direction on diversity and inclusion and establishes basic principles that all members are expected to follow. This Code serves as a foundation for embedding DEI values into internal policies and systems. Since 2024, we have also begun regular DEI data monitoring to mitigate DEI-related risks and promote a fair work environment. Key indicators—including the gender ratio among all members and leadership roles—are reviewed by management and leadership teams.

On the cultural aspect, we conduct regular surveys on perceptions and experiences of gender-based discrimination across gender, age, employment type, and tenure. The survey conducted in November 2024 found no serious cases of sexual harassment or overt gender discrimination; however, it identified the need for company-wide training and communication guidelines to address unconscious gender-biased language in everyday conversations and work interactions. In response, on International Women’s Day 2025, we hosted a company-wide quiz event focused on identifying and rethinking expressions rooted in gender stereotypes. This initiative aimed to raise awareness of exclusionary language and promote more inclusive communication. Looking ahead, Noul plans to establish official DEI guidelines and continue organization-wide awareness efforts to foster a deeper understanding and lasting culture of diversity, equity, and inclusion.

**21** times

congratulatory events hosted at “Noul, With You”  
15 employee-led, 6 company-led

#### Laying the Groundwork for Leadership Diversity and Capability Enhancement

As of the end of 2024, women accounted for approximately 41.7% of Noul’s total workforce. However, women made up only 25.7% of mid-level leadership and 16.6% of non-executive leadership positions, indicating a relatively low representation of women in leadership roles compared to the overall workforce. Noul recognizes that this disparity is the result of multiple factors—including the direct and indirect effects of the glass ceiling prevalent in Korean society and structural limitations due to the current size of our organization—which restricts the number of leadership roles available. While we are not yet in a position to implement a systematic initiative to increase female leadership due to our current scale, we are taking a stepwise, long-term approach to strengthening women’s leadership capabilities.

For example, in March 2025, in celebration of International Women’s Day, we hosted a “Lunch Table” event exclusively for female members. The session featured a video on women in leadership, reviewing key workplace data on gender representation in leadership, sharing experiences related to leadership development, and discussing ideas for improvement. Starting in 2025, Noul plans to activate a dedicated community to support the growth of female leadership and will continue working to enhance leadership diversity and expertise as the company grows.

#### Fostering an Inclusive and Supportive Culture through “Noul, With You”

To fulfill our mandatory employment of persons with disabilities and promote the values of diversity and inclusion, Noul partners with the social venture HISBEANS to operate ‘Noul, With You’, an in-house cafe staffed by baristas with disabilities. Since June 2022, these baristas have demonstrated long-term commitment and professionalism in their roles. The cafe also serves as a communal space that fosters connection and recognition among colleagues. Through the Golden Bell event, organized both at the individual and company level, members are encouraged to celebrate personal milestones together, strengthening bonds and cultivating a culture of encouragement and mutual support across the organization.



## Quality of Employment

### Strengthening Policies and Support to Enhance Work Performance and Work-Life Balance

Noul strives to foster a work environment where each employee can fully engage in their role and contribute to the company’s growth through high performance. To that end, we offer a range of programs tailored to the employee lifecycle.

- **Flexible working hours and remote work :**  
Operated to enhance performance and individual contribution.
- **Part-time work options :**  
Support for adjusting or reducing standard working hours based on personal needs.
- **Leave programs for childcare and family care :**  
Includes reduced working hours during the childcare period, parental leave, and family care leave to support work-life balance.

In 2024, Noul enhanced its return-to-work support to help employees transition smoothly back to work after taking leave for childcare or family care, enabling stable readjustment and continued career engagement.

- **Guidance materials for leave and return procedures :**  
Improving employee understanding and preparedness by providing information on return procedures and related policies in advance
- **Pre- and post-return interviews with the HR team :**  
Offering emotional support to ease psychological stress and practical challenges during the transition

### Family-friendly business designation

(Designated in Dec. 2022)

### 1 male, 2 female employees

Number of employees who took parental leave

### Analyzing the Causes of Turnover and Focusing on Improvements for Job Stability and Employee Engagement

Over the past three years, Noul maintained an average annual turnover rate of around 9%, which is considered stable for a venture company. However, in 2024, the rate rose to 25% following a company-wide reorganization to recalibrate growth milestones and accelerate global business expansion. Analysis of the turnover increase indicated that the rapid pace of organizational growth and frequent changes in the work environment contributed to career-related concerns and decreased motivation. Additional contributing factors included increased complexity in workflows and a mismatch between individual roles and personal preferences.

While Noul views this turnover increase as a temporary trend, the company recognizes the underlying issues identified through exit interviews and analysis as potential barriers to employee engagement and operational stability. Accordingly, we have developed and are implementing a company-wide improvement plan to address these challenges. These efforts aim to enhance engagement and strengthen long-term employment stability.

#### Key Improvement Initiatives

- Strengthening internal communication and feedback channels between leadership and employees to improve focus and alignment
- Promoting work efficiency through standardized procedures, process improvements, and the adoption of collaborative tools
- Enhancing leadership capabilities and engagement through leadership training and coaching
- Increasing autonomy and decision-making authority for high-performing employees by role, to optimize their work environments

## 100%, 75%

Return and retention rates after maternity/parental leave

\*Retention rate refers to the percentage of employees who remained employed for at least 12 months after returning from parental leave.

## 0%

Percentage of employees relocated to roles unrelated to their career background





Collecting Employee Feedback to Monitor Organizational Health and Well-Being

Noul regularly conducts organization-wide surveys to assess employee satisfaction and well-being across the workplace. Engagement Surveys are carried out biannually to monitor levels of job engagement and emotional well-being. In 2024, the average score for job engagement-related questions declined slightly from 7.19 in the first half to 7.01 in the second half (on a 10-point scale), compared to the previous year. This trend is primarily attributed to frequent operational adjustments driven by rapid organizational growth and increased workload due to limited resources common in a venture environment.

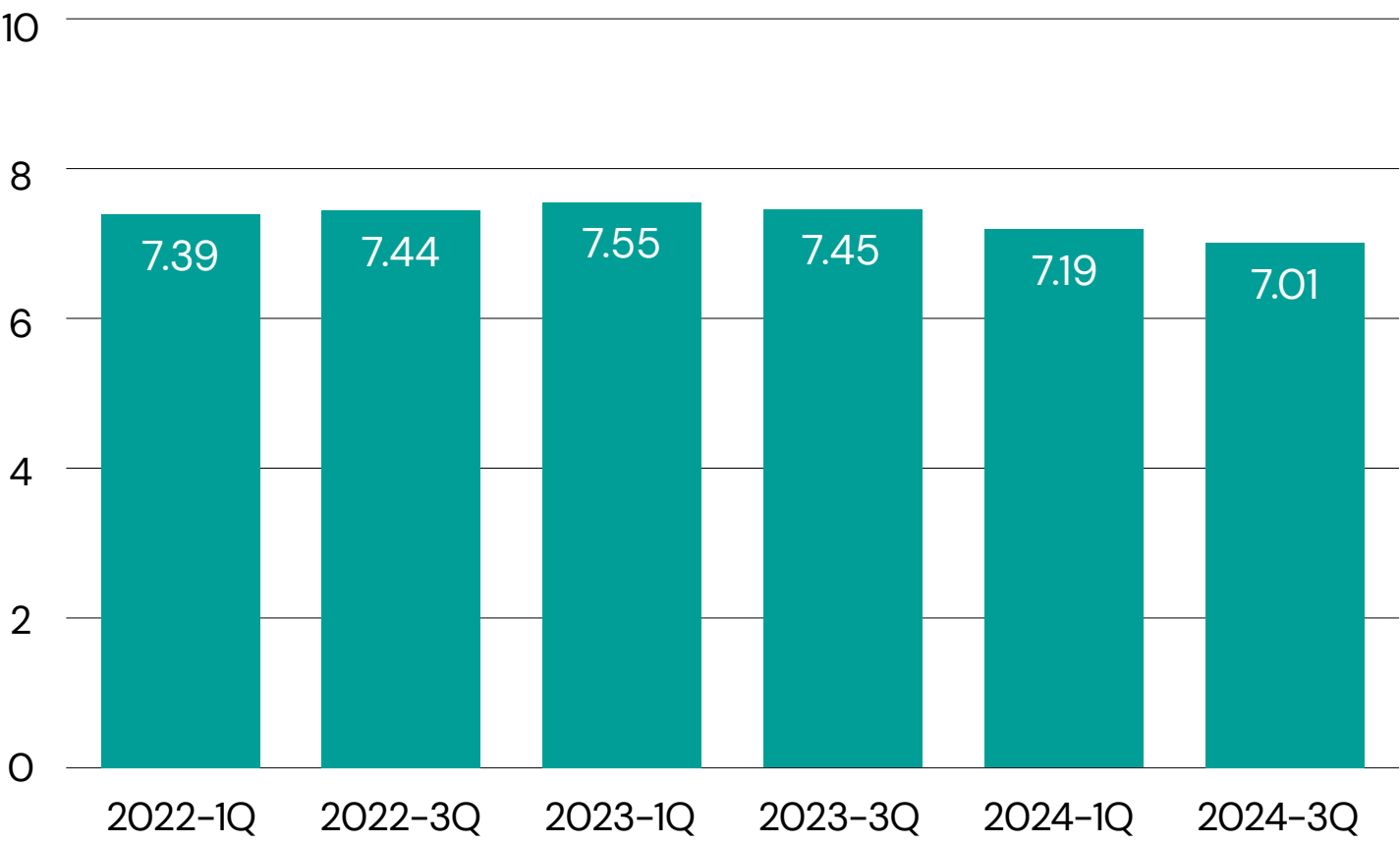
In parallel, the weekly Pulse Survey tracks whether employees find meaning and fulfillment in their work and how satisfied they are with their overall employee experience. The monthly average satisfaction score for the first half of 2025 rose by approximately 10% compared to the second half of 2024, showing an upward trend over the past year.

Noul leverages Engagement Survey results for in-depth analysis of overall organizational health, while Pulse Survey results offer real-time insights into daily work dynamics and team morale. The differing trends observed during the reporting period suggest that structural challenges to engagement, associated with fast-paced growth, coexist with positive motivational factors stemming from continuous improvements in the day-to-day work environment. Based on these insights, Noul is implementing company-wide initiatives to enhance employee engagement and is refining its internal processes to ensure that survey results are translated into meaningful organizational actions more swiftly and effectively.

Key Improvement Initiatives

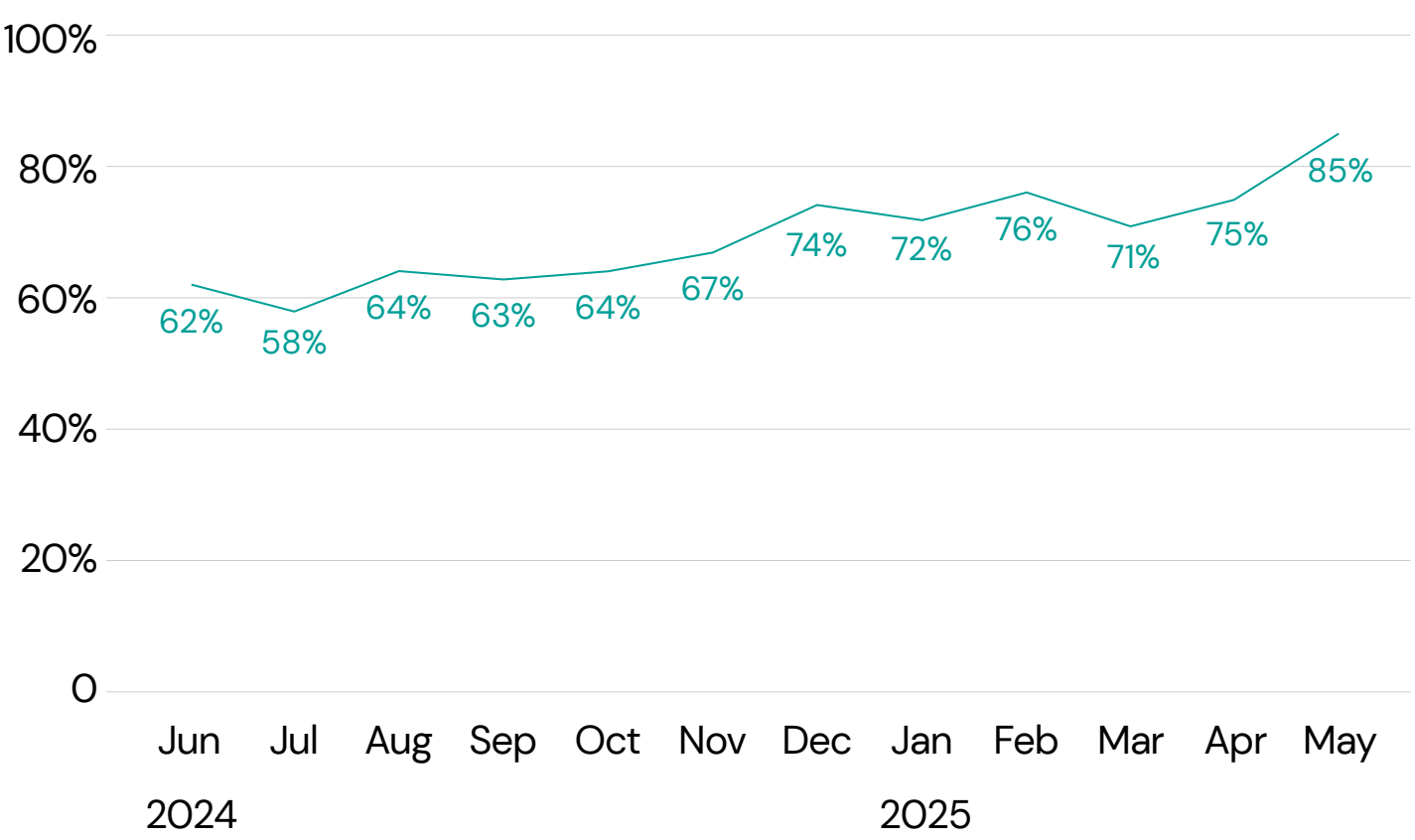
- Aligning Engagement Survey procedures more closely with company-wide OKR operations
- Customizing survey items by period to capture employee experience across multiple dimensions, such as engagement, well-being, and organizational culture
- Improving the format of Town Hall meetings to foster effective communication and engagement
- Introducing a recurring peer recognition program (Monthly Award) to promote a culture of appreciation

Average Score for Question 12 of the Engagement Survey (0–10 point scale)



The Q12 average refers to the mean score of responses to the 12 questions developed by Gallup (Gallup Q12), which measure employee engagement and overall satisfaction with the work environment.

Average of Pulse Survey: “Sense of Value and Fulfillment in Work”



The average is calculated based on the monthly proportion of positive responses to the statement: “I feel a sense of value and fulfillment in the work I do.”

Key Results from the 2024 Engagement Survey

I’m satisfied with..

- My supervisor, or someone at work, seems to care about me as a person *8.27 points out of 10 points*
- I have a best friend at work. *7.67 points out of 10 points*

It’s regrettable that..

- At work, I have the opportunity to do what I do best every day. *6.56 points out of 10 points*
- At work, I have the opportunity to do what I do best every day. *6.35 points out of 10 points*





# Employee Capability Development

## Our Approach

At Noul, we believe that continuous learning and growth among our employees are key drivers of organizational competitiveness. Guided by this belief, we provide diverse skill-building opportunities to support all employees in becoming subject matter experts and proactively adapting to a dynamic environment.

To strengthen job competency, we regularly develop and provide curated learning content through our e-learning platform. For leadership development, we offer training, feedback, and mentoring based on Noul’s leadership competency model, which outlines the desired leadership behaviours at Noul.

Furthermore, Noul aspires to build a learning organization where learning occurs naturally through peer interaction and knowledge sharing. To support this, we operate a regular and on-demand peer feedback system designed to foster individual growth. Through ongoing interactions with colleagues and leaders, employees are encouraged to reflect on their strengths and areas for development, integrating learning into their everyday work lives.

68occasions, 40occasions

Conducted external and internal training

26.9 hours

Average training hours per employee

100%

Providing employees with regular opportunities to review their performance and capabilities

· Monthly 1:1 meetings based on CFR(Cognition, Feedback, Recognition)

· Quarterly regular feedback session

## Our Key Actions

### Systematically Building Online and Offline Learning Environments to Support Employee Capability Development

Noul provides tailored internal and external training programs to support all members in continuously developing their individual capabilities and responding flexibly to the rapidly evolving industry landscape. Our in-house training is primarily delivered through the Learning at Noul e-learning center, which enables members to access learning opportunities anytime and anywhere. In 2024, we launched 40 new courses that reflect both industry trends and employee needs. As of now, we operate a total of 71 training contents developed from 2023 to 2024.

2024 In-house Training Program

· Domain Knowledge : 15 sessions

· Leadership & Management : 14 sessions

· Fundamentals : 10 sessions

· Work Skill : 1 sessions

### Launched a Regular Training Program to Address Leadership Challenges and Reinforce Leadership Capabilities

At Noul, we recognize that strengthening the capabilities of mid-level leadership is a critical factor in ensuring organizational performance and stability in a rapidly growing environment. To support our cell leaders—those who lead team units—in systematically acquiring the roles and leadership skills necessary for organizational management, we have established a regular training program. In December 2024, we held our first leadership workshop for cell leaders. Based on a preliminary survey, the workshop focused on building a shared understanding of Noul’s leadership competency model and provided a space to share challenges encountered in fulfilling leadership responsibilities. Starting in 2025, quarterly leadership training sessions will be offered to mid-level leaders to jointly explore practical solutions to day-to-day leadership challenges and to continuously lay the foundation for leadership development.

Key factors driving satisfaction with the leadership workshop included

· Improved understanding of Noul’s leadership framework and competency model

· Recognition of individual leadership strengths and areas for improvement through self-assessment

· Acquisition of actionable leadership skills applicable to daily operations

### Operating a Feedback System Promoting Active Peer-to-Peer Exchange on Capability Development

Noul promotes capability development through peer-to-peer interaction and leadership coaching. To realize this vision, we operate both regular and ongoing feedback systems that enable members to effectively exchange strengths and areas for improvement.

#### Operation of regular feedback

Regular feedback is conducted four times a year, providing members and leadership with opportunities to reflect on their competencies and behaviors and to establish clear directions for personal and professional growth.

- 360-degree feedback

(Every December) : Comprehensive feedback, including both multiple-choice and open-ended questions provided by leaders and peers.
- 180-degree feedback

(Every June) : Open-ended feedback requested from direct leaders and at least two colleagues.
- 90-degree feedback

(Every March and September) : Customized feedback requested on chosen topics from leaders and peers.
- 360-degree Leadership Feedback

(Every December) : Feedback on leaders provided by team members.
- Feedback for executives

(Every December) : Anonymous feedback provided to executives by any employee.

#### Ongoing feedback

To embed a culture of ongoing feedback, Noul operates a Peer Feedback system that allows real-time exchange of feedback among colleagues. Members become eligible to give feedback after three months of employment, and anyone can freely share supportive messages—such as appreciation, recognition, and encouragement—with their peers.

Total 3,931 occasions

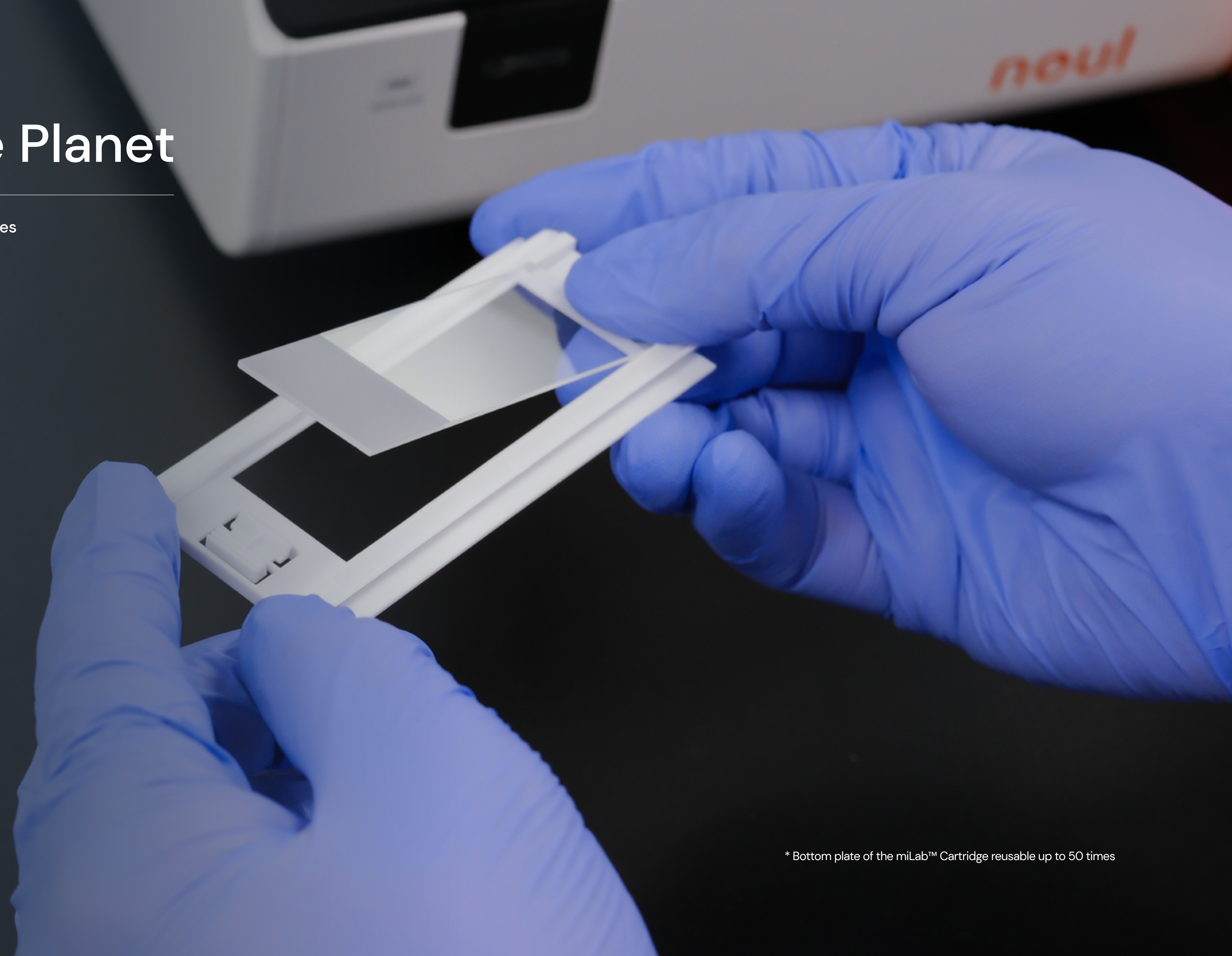
Exchanged ongoing feedback among co-workers



# Protecting the Planet

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- Green Transition of Our Products and Processes
- Environmental Awareness-raising Initiatives



\* Bottom plate of the miLab™ Cartridge reusable up to 50 times



# Green Transition of Our Products and Processes

## Our Approach

Noul has paid close attention to the environmental impact of its business activities since the early stages of its growth, driven by a strong sense of responsibility toward environmental pollution and climate change. While we are not yet equipped with the full organizational capacity to systematically implement eco-friendly transitions in our products and processes, we actively identify and carry out feasible initiatives within our current technological and financial means.

On the product side, we have established internal guidelines to reduce the environmental impact across the production and distribution phases. Based on these standards, we have identified key factors to consider in product development—such as material selection, energy efficiency, and product lifespan—and are taking steps to improve them. Throughout this process, we closely collaborate across relevant departments—including product development, manufacturing, procurement, quality, and sustainability—to develop practical solutions that reduce environmental impact while simultaneously enhancing resource and cost efficiency, as well as user convenience.

On the process side, although we currently have limited capacity to invest in eco-friendly infrastructure, we are focusing on foundational efforts, such as building robust greenhouse gas data management practices and identifying opportunities to reduce energy consumption in our operations.

## Our Key Actions

### We developed a reusable cartridge to reduce plastic waste.

miLab™ Cartridge, which applies a solid staining technique, significantly reduces sample usage—by up to 1/100 compared to conventional liquid-based staining methods—and eliminates the need for rinsing and drying, thereby generating no wastewater. However, due to the nature of in vitro diagnostic medical devices, miLab™ Cartridges must be discarded as medical waste after a single use. This leads to increased carbon emissions as the number of diagnostic tests rises.

To mitigate the environmental impact associated with cartridge disposal, Noul has explored multiple solutions and, in 2024, developed a reusable version of the miLab™ Cartridge, led by the cartridge design team. The newly designed cartridge features a detachable glass slide on the bottom plate, allowing users to replace only the glass slide while reusing the bottom plate up to 50 times.

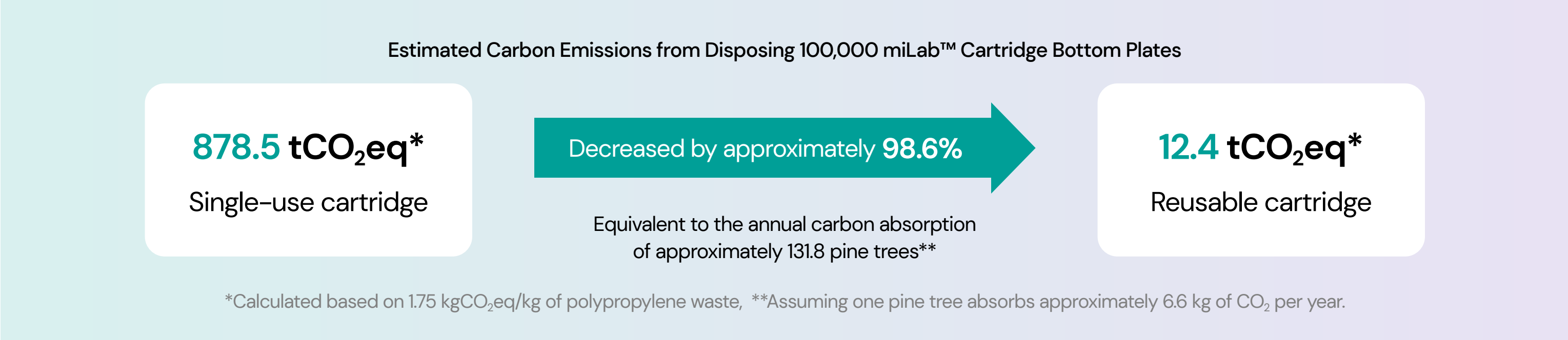
This improvement has enabled a reduction of approximately 98.6% in plastic waste per 50 diagnostic tests compared to the conventional single-use cartridge. While this reusable cartridge has not yet been commercialized due to our current focus on ensuring user convenience, we plan to introduce it gradually in alignment with user expectations and operational readiness.

### We have established internal guidelines to improve the environmental sustainability of our packaging materials and are advancing improvements based on set priorities.

Since 2021, Noul has been gradually transitioning to recyclable and low-impact materials to reduce the environmental impact of packaging. In 2024, we established internal eco-friendly packaging decision-making criteria, which comprehensively consider key environmental factors such as international regulations, recyclability, and carbon emissions. Based on these criteria, we identified packaging items requiring urgent improvement and are currently developing specific action plans.

In particular, in 2024 we prioritized improving the PE foam cushioning used for device packaging and the PS material used for cartridge packaging. Various alternatives have been reviewed not only in terms of material replacement but also in areas, such as packaging unit optimization and form factor redesign. We are also conducting ongoing tests to comprehensively assess the quality, cushioning performance, user convenience, and environmental impact of alternative materials.

While our current organizational capacity and resources remain limited for conducting in-depth environmental analyses and rapid improvements to packaging at this stage of company growth, we are pursuing a stepwise improvement plan under a mid-to-long-term strategy to steadily reduce the environmental footprint of our packaging materials.



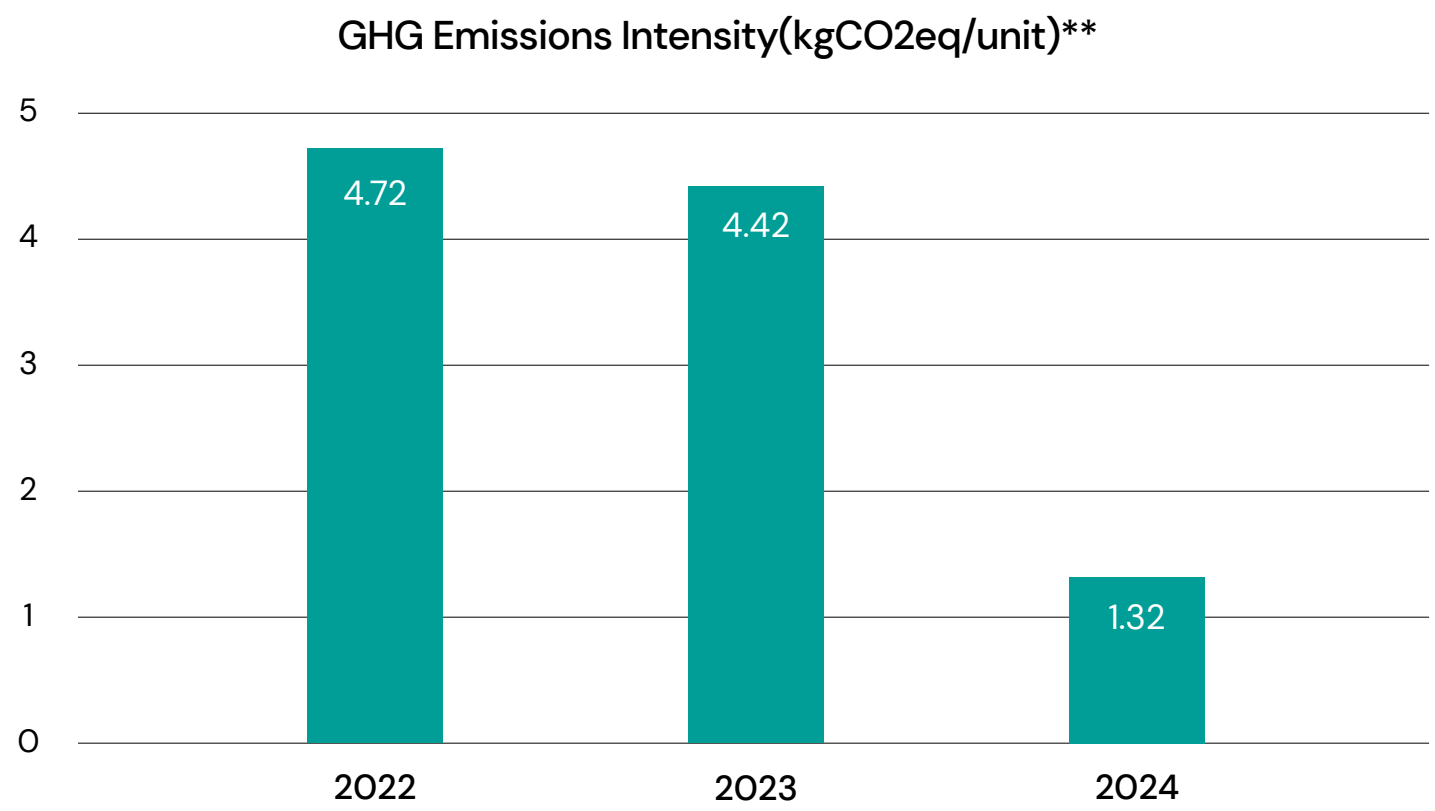
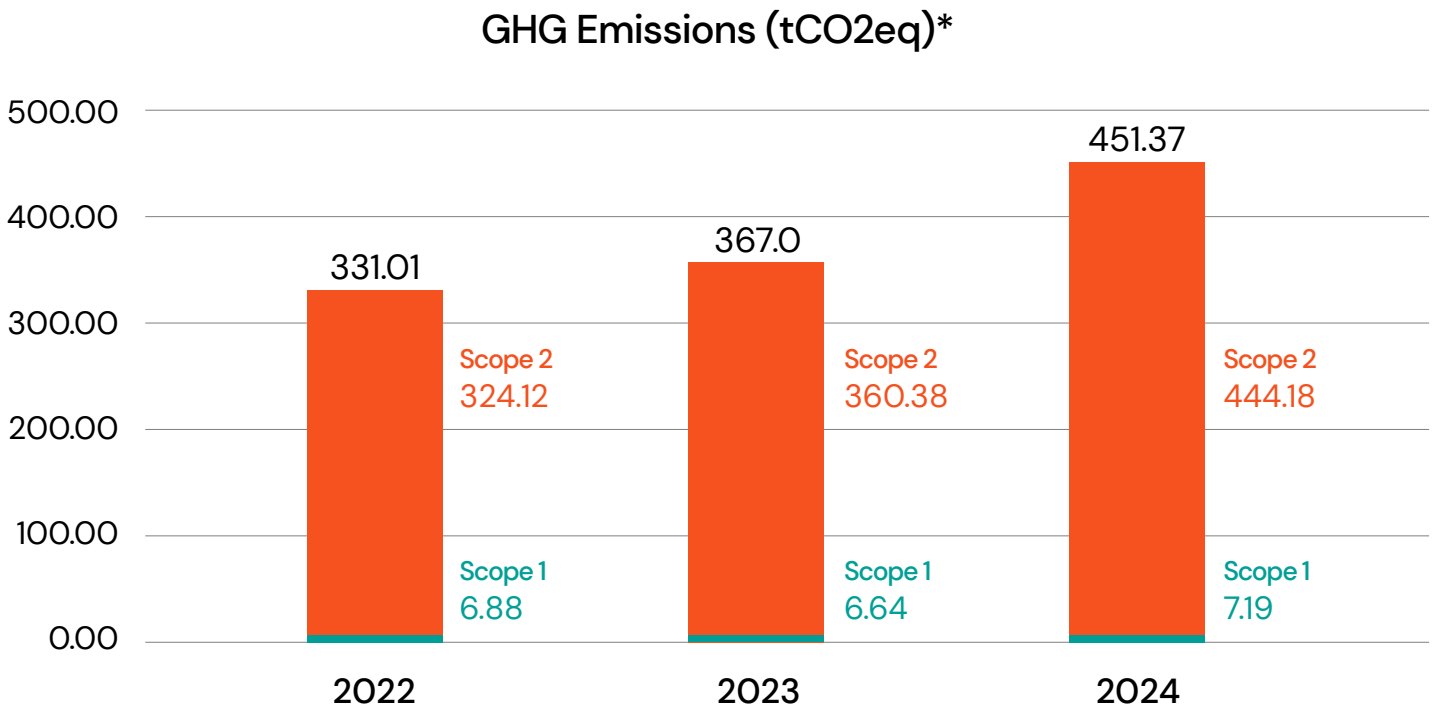


**We enhanced the greenhouse gas (GHG) inventory and strengthened data reliability through third-party verification.**

Since 2021, Noul has independently calculated its greenhouse gas (GHG) emissions based on internationally recognized protocols. We have continuously improved the accuracy and reliability of our methodologies each year. In 2024, we conducted a third-party verification of our GHG emissions to ensure more precise data. During this process, we reviewed key elements, such as organizational boundaries, emission sources, and emission factors, and subsequently updated our GHG inventory. As a result of this reassessment, our total GHG emissions for 2024 amounted to 451.37 tCO<sub>2</sub>eq, representing a 22.9% increase from 367.02 tCO<sub>2</sub>eq in 2023.

This increase is primarily attributed to a roughly 300% year-over-year rise in miLab™ Cartridge production and greater energy consumption due to office space expansion. Meanwhile, the GHG intensity per unit of miLab™ Cartridge produced in 2024 was 1.32 kgCO<sub>2</sub>eq/unit, marking a 70.1% decrease compared to the previous year. While we have yet to fully analyze the underlying factors and implications of this decline, we plan to enhance our environmental data management system and strengthen analytical capabilities over time.

As part of our GHG reduction efforts, we also conducted an energy-saving assessment across our operations in 2024. By adopting energy-efficient systems from the early design stages of our GMP production lines, we found that only minimal areas required further improvement. Going forward, we will continue to explore ways to reduce electricity consumption across all stages of the production process.



\*Carbon dioxide equivalent (CO<sub>2</sub>eq.) refers to the total greenhouse gas emissions converted into CO<sub>2</sub> terms using the global warming potential (GWP) of each gas.  
\*\*Per-unit emissions calculated based on total greenhouse gas emissions relative to the total production volume of miLab™ Cartridges.

**Noul Co., Ltd.'s GHG Emissions Measurement Data**

- **Scope of Organization**
  - All offices (research labs), manufacturing facilities, and vehicles owned by Noul Co., Ltd.
  - Address : 4, 6, 9, 10F, 338, Gwanggyojungang-ro, Yongin-si, Gyeonggido, Korea

• **Emission Source**

Scope	Calculate emissions by identified emission source
Scope 1	(mobile combustion) Corporate vehicles owned by Noul in 2024 Documentary evidence for emissions: Fuel efficiency
Scope 2	(indirect emissions) Electricity charges/ consumption(kWh) for 2023 Documentary evidence: Power bills, maintenance fee statements

- **Calculation Methodology**
  - Guidelines on GHG/Energy Target Management Operation and Others (Ministry of Environment, 2022)
  - Guidelines on the Reporting and Verification of Emissions under the GHG Emissions Trading System (Ministry of Environment, 2022)



# Environmental Awareness-raising Initiatives

## Our Approach

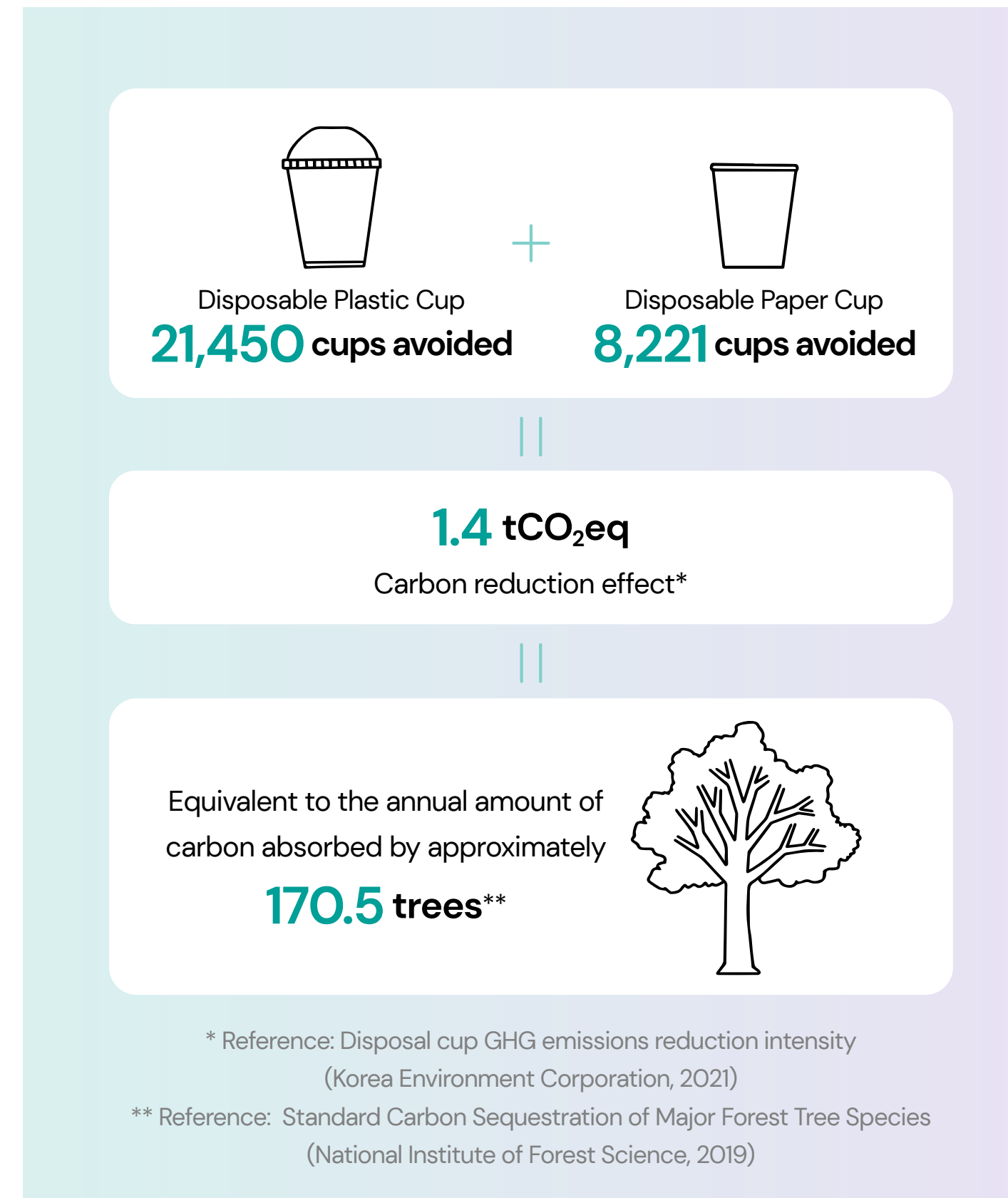
Noul recognizes that employees' awareness of environmental responsibility plays a critical role in the company's overall performance in fulfilling its environmental commitments. Accordingly, we actively implement institutional and cultural initiatives to support all members in internalizing eco-friendly and low-carbon practices in both their work and daily lives.

## Our Key Actions

**We operate company-wide environmental and low-carbon action programs driven by employee engagement.**

Noul operates various eco-friendly programs grounded in the principles of Reduce, Reuse, and Recycle (3R), enabling all members to actively contribute to environmental protection in their work and daily routines. These initiatives are continuously improved through regular assessments of their effectiveness.

- As part of the onboarding process, new employees receive a welcome kit containing a tumbler, tableware set, and bamboo toothbrush, helping to instill a sense of environmental responsibility from the start of their journey at Noul.
- At the end of the year, Noul hosts the “Noul Salon”—an event where members exchange unused items—and the “Change Outfits Booth,” where employees swap clothing and accessories they no longer wear. These events help raise awareness of resource circulation and sustainable consumption.
- To reduce the use of disposable cups in the workplace, the company has adopted a policy requiring the use of tumblers at the in-house cafe, “Noul, With You.” In 2024, this initiative helped reduce the use of 8,221 paper cups and 21,450 plastic cups.
- Since March 2024, the “Zero Carbon Playlist” program has encouraged employees to engage in various eco-friendly activities, such as turning off air conditioners, heaters, and power strips after work, properly separating waste, and turning off office lights during lunch breaks. Participants earn “Green Coins” for completing these missions, which can be redeemed for sustainable products like bamboo toothbrushes, tumblers, and solid laundry detergents. This program is designed to foster voluntary low-carbon habits in employees' daily routines.



**100 employees**

participated in the Zero Carbon Playlist program

**2.0 tCO<sub>2</sub>eq**

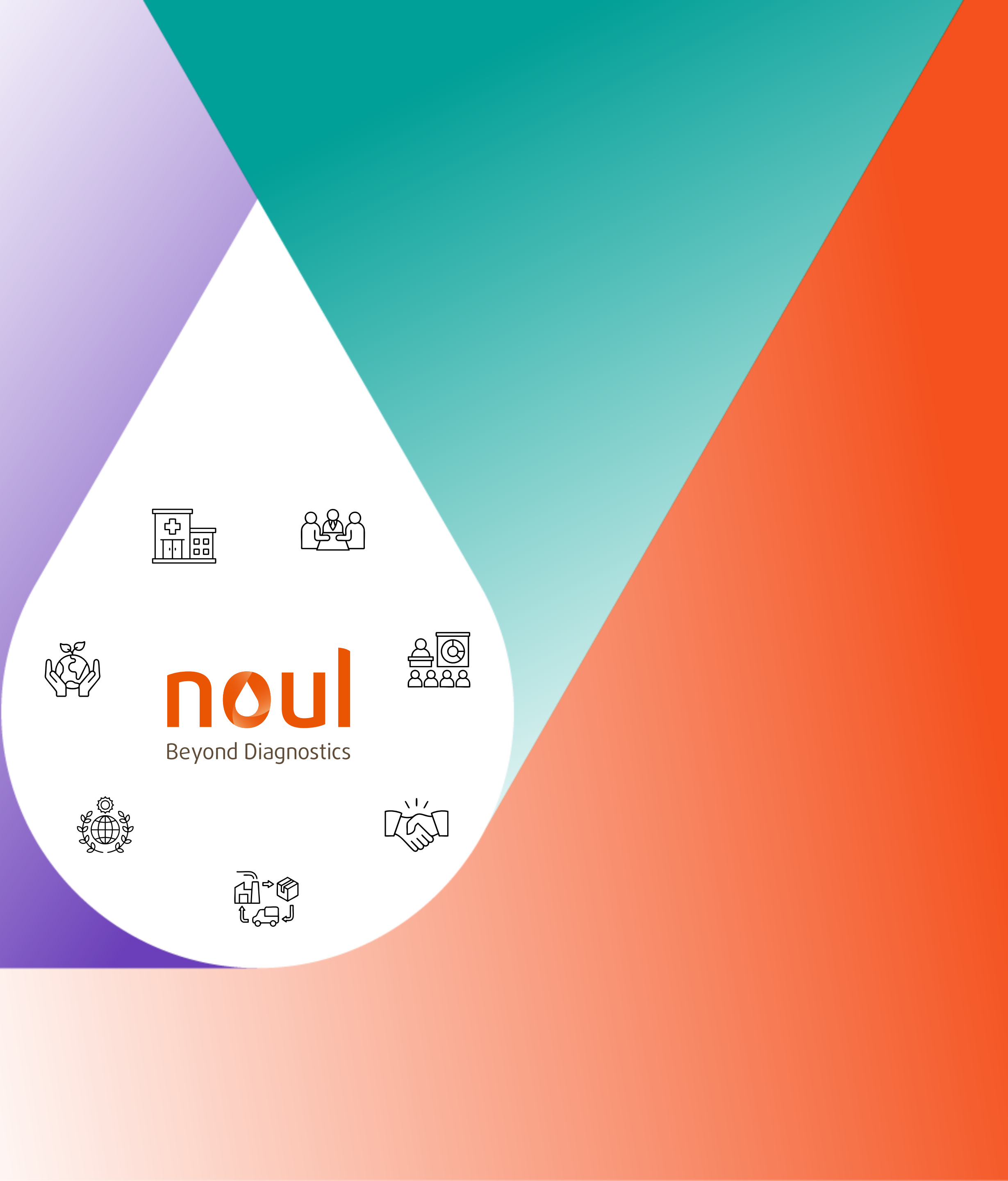
emissions reduction achieved through Zero Carbon Playlist activities





# Stakeholder Q&A

Noul continuously expands its communication channels with key stakeholders—including customers, employees, and shareholders—and regularly collects stakeholder feedback. In the “Stakeholder Q&A” section, we present eight selected topics based on the key questions and comments gathered from stakeholders between 2024 and the first half of 2025. For each topic, we have provided responses to the core questions raised. We are in the process of establishing a systematic approach to reflect stakeholder feedback in our business operations and decision-making processes. Moving forward, we will continue to explore better ways to communicate proactively with stakeholders and transparently disclose relevant information—ensuring that this process creates shared value not only to the company but also to our stakeholders.





Shareholders and Investors, Business, and R&D Partners

**Q1.** What are the key challenges Noul should address to accelerate the global market presence of miLab™, and how is the company responding to these challenges?

To accelerate the market presence of miLab™, Noul is strategically addressing high-priority challenges. Our current focus includes diversifying our sales strategy, securing robust clinical validation data, enhancing price competitiveness, and improving supply chain stability. The details of our response strategies are as follows:

**Securing Growth Drivers through Diversified Sales Strategies**

To support the continued market expansion of miLab™, Noul is not only enhancing the competitiveness of its existing products but also pursuing the launch of high-value diagnostic solutions and the diversification of markets through global partnerships. In various diagnostic areas, such as blood analysis and cervical cancer screening, we are actively engaging in strategic collaborations with global pharmaceutical companies, medical device manufacturers, and diagnostic firms to explore opportunities for joint product development, exclusive sales agreements, and OEM/ODM-based supply. We are particularly focused on expanding collaborations with global players in Europe and North America, and we are strengthening our long-term growth drivers by securing sales channels through local networks. Further details can be found in our “Noul Corporate Value-Up Plan.”

**Strengthening the Reliability of AI-based Interpretation and Expanding Clinical Validation Data**

To build trust among customers and stakeholders in the performance of miLab™, Noul is actively conducting clinical performance evaluations in collaboration with global institutions. The miLab™ CER (cervical cancer screening solution), scheduled for launch in Q2 2025, features highly accurate AI interpretation technology and has received official usage recommendations from UNITAID, demonstrating its international recognition. However, as clinical settings continue to demand rigorous validation of AI-based diagnostics, we are securing clinical data that reflects

diverse ethnicities, age groups, and pathological characteristics, while continuously verifying and advancing our AI model’s performance.

**Enhancing Price Competitiveness**

Given that the miLab™ platform is designed for diverse, decentralized healthcare environments worldwide, competitive pricing tailored to different market conditions is essential for rapid market expansion. In particular, for the malaria diagnostic solution (miLab™ MAL), maintaining affordability in price-sensitive low- and middle-income countries (LMICs) requires continuous cost reduction efforts. Noul is actively pursuing global sourcing opportunities to reduce manufacturing costs and is optimizing distribution channels and improving operational efficiency to lower logistics costs. Additionally, we are strengthening price monitoring and developing risk management strategies to respond flexibly to external factors such as raw material price fluctuations.

**Ensuring Global Supply Chain Stability**

Expanding miLab™’s global market reach requires proactive management of issues, such as supply delays and quality control challenges, arising from complex regional logistics and unstable raw material supply. To address this, Noul is building a monitoring system that spans the entire supply chain and is continuously improving quality control and logistics operations. In addition, we are actively exploring ways to ensure supply chain stability, including expanding our regional distributor network and exploring local production bases.



▶ View the “Noul Corporate Value-Up Plan”

\*miLab™ MAL : miLab™ Cartridge MAL (Malaria Testing Solution), miLab™ BCM : miLab™ Cartridge BCM (Blood Analysis Solution), miLab™ CER : miLab™ Cartridge CER (Cervical Cancer Screening Solution)

Customers, Supply Chain, Shareholders, and Investors

**Q2.** What steps is Noul taking to ensure quality stability and production capacity in line with its business expansion plans?

Noul is implementing a phased approach to enhance quality stability and production capacity in line with its business growth strategy. As of 2024, Noul has an annual production capacity of approximately 240 devices and 1 million diagnostic cartridges, with the goal of expanding capacity to over 2,000 devices and 6 million cartridges by 2027. To achieve this, the company is gradually transitioning to fully automated cartridge manufacturing processes and increasing its workforce for device production.

On the quality front, Noul is strengthening its ability to preemptively manage quality risks to build trust in global markets. It is also establishing systems and procedures to respond in real-time to equipment-related issues. Currently, the miLab™ MAL maintains a production defect rate of approximately 1%, which is within target range. Quality stability is further ensured through patrol inspections and an alarm-based monitoring program.

For new product lines, such as miLab™ BCM and CER, Noul is enhancing development procedures from the early stages to identify potential quality risks in advance. The company has also built a cross-functional collaboration system among development, quality, and manufacturing teams to ensure that quality management activities are preventive from the product planning stage. In mass production, Noul is strengthening pre-verification processes with suppliers to proactively mitigate potential quality issues.

In 2025, Noul introduced a real-time dashboard system to monitor equipment anomalies. This system allows intuitive tracking of issue types and occurrence times by equipment and supports linkage analysis between equipment problems and quality issues, further strengthening the company’s risk identification and response capabilities.



Customers, Shareholders, Investors,  
International Organizations, and Government agencies

**Q3.** What differentiates miLab™ CER from existing cervical cancer diagnostic solutions, and how is its global market potential being assessed?

miLab™ CER is the world’s only all-in-one benchtop platform that integrates staining, digital imaging, and AI-based interpretation within a single device. It offers a differentiated competitive edge in point-of-care settings by significantly enhancing accessibility and operational efficiency—featuring an initial investment cost approximately one-tenth that of conventional systems, over 50% lower testing costs, and a streamlined diagnostic workflow. By fully automating the entire process—from PAP staining to AI-powered analysis—miLab™ CER eliminates the inefficiencies of traditional multi-step manual procedures and contributes to greater workflow efficiency in clinical environments.

Building on these strengths, Noul has been actively laying the groundwork for miLab™ CER’s market entry since 2024 through participation in major global conferences and targeted promotional campaigns. Ahead of its commercial launch in 2025, the company secured its first milestone in March 2025 by signing a supply agreement with six Central American countries. Currently, Noul is focusing its market entry strategy on regions with high demand for Pap testing, including Europe, Eastern Europe, and Latin America, with the aim of integrating miLab™ CER into national screening programs to enable large-scale adoption.

Cervical cancer remains a serious global health issue, with approximately 660,000 new cases and 350,000 deaths annually. While the World Health Organization (WHO) has set a target of increasing cervical cancer screening coverage to 70% across all countries, actual screening rates vary widely—from as low as 9% to as high as 74%—and about 90% of cases occur in low- and middle-income countries. Against this backdrop, the global cervical cancer diagnostics market is expected to grow from USD 8.1 billion in 2022 to USD 13 billion by 2030, driven significantly by WHO’s policy push to expand screening programs. Noul believes that miLab™ CER is well-positioned to meet this growing global demand by enhancing access to early cervical cancer screening and making a meaningful impact on public health outcomes.

International Organizations, Government agencies,  
Business, and R&D Partners

**Q4.** What strategic approach is Noul taking to dramatically expand access to diagnostics, a goal the company has consistently emphasized?

According to Noul’s internal research, approximately 2.5 billion people worldwide lack access to basic healthcare services and disease diagnostics. Of this population, 1.8 billion reside in low- and middle-income countries (LMICs), while the remaining 700 million live in high- and upper-middle-income countries (HICs). To tackle this widespread issue of limited access to diagnostics, Noul takes a strategic and differentiated approach that reflects the distinct needs of both settings—targeting countries with underdeveloped diagnostic infrastructure as well as those where inefficient diagnostic workflows and high healthcare costs create accessibility challenges.

**High-Income Countries (HICs)**

In HICs, where demand for innovative diagnostic technology is high and market entry tends to be faster, customers expect not only high-performance solutions but also enhanced features and an advanced user experience. Noul closely reviews user feedback, identifies key factors that can maximize product value in real-world settings, and incorporates those into product development.

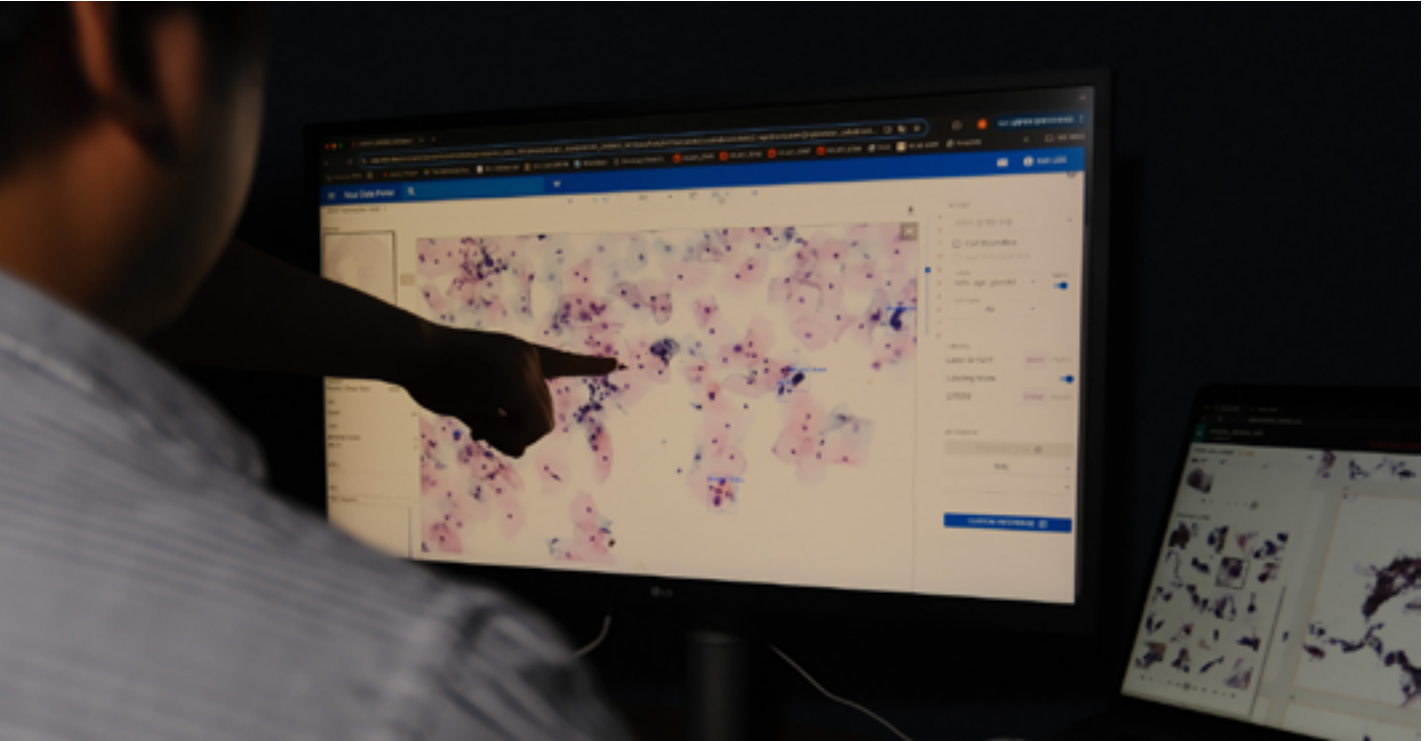
2024, Noul initiated its expansion into the diagnostic lab chain market—where main labs, satellite labs, and small-to-medium-sized clinics are organically connected—starting with a supply agreement with Limbach Group, the largest lab chain in Europe. To enter such large-scale networks, it is essential to meet high standards not only in diagnostic accuracy but also in speed and data interoperability. In response, Noul is developing technologies to enable seamless data integration and remote diagnostic support between main and satellite labs. This effort aims to create an advanced digital diagnostic environment where satellite labs in different locations can quickly receive accurate results, and main labs can analyze them to deliver optimized diagnostic outcomes.

\*miLab™ MAL : miLab™ Cartridge MAL (Malaria Testing Solution), miLab™ BCM : miLab™ Cartridge BCM (Blood Analysis Solution), miLab™ CER : miLab™ Cartridge CER (Cervical Cancer Screening Solution)

**Low- and Middle-Income Countries (LMICs)**

Leveraging validated references from HIC markets, Noul is gradually expanding the deployment of miLab™ within the public healthcare systems of LMICs. Although public procurement markets—led by national governments—pose higher entry barriers than private markets, Noul works closely with global institutions to establish scientific evidence for product performance and continuously accumulates field-based usage data to demonstrate clinical effectiveness and reliability.

Building on these efforts, Noul signed a KRW 6.5 billion supply agreement in February 2025 with the Republic of Benin in West Africa, where the company is currently undergoing product evaluation and anticipates entry into the public healthcare market based on the outcome. This was followed by additional contracts in March and April with six Central American countries, including Panama and Honduras, as well as with the Ministry of Health of Kuwait, where miLab™ was officially adopted into national screening programs—signaling the beginning of full-scale public sector expansion. In parallel, Noul is enhancing and adapting its solutions based on actual field usage, aligning product features with local healthcare conditions. Through close collaboration with national health systems, the company continues to advance its strategy to ensure that more people can access timely and high-quality diagnostic services, thereby contributing to improved healthcare accessibility on a global scale.





International Organizations, Government agencies,  
Business, and R&D Partners

Q5. How does Noul measure the impact generated by miLab™?

As a first step in systematically managing and measuring the social and environmental impact of each product, Noul is developing Impact Communication Documents for its product portfolio. These documents are based on globally recognized impact measurement and management frameworks, such as IRIS+, IMP, and Theory of Change, and are designed to articulate the impact Noul’s products generate for various stakeholders.

Objectives

- 1. To ensure that internal teams clearly understand the (potential) social value created by each product, thereby supporting integrated efforts across R&D, business activities, and impact generation.
- 2. To communicate with stakeholders in a structured way using impact indicators and to manage impact performance more effectively.

Index

- 1. The problem to be addressed
- 2. Severity and root causes of the issue
- 3. Key stakeholders involved
- 4. Noul’s proposed solution
- 5. Value and impact generated by miLab™
- 6. Impact measurement indicators for miLab™

Noul is currently in the stage of building its global business foundation, and as such, accurate impact measurement remains challenging until tangible business outcomes are realized. Nonetheless, to develop internal capabilities for future impact management systems, Noul is utilizing the number of diagnostic cartridges sold in low- and middle-income countries as a proxy indicator representing the number of diagnostic services delivered to patients. This serves as an interim method to estimate and manage impact.

In addition, Noul was selected in 2024 to participate in the Social Progress Credits(SPC) program, led by the Center for Social value Enhancement Studies (CSES). Through this program, the company has been conducting annual assessments of its social and environmental impact based on the following criteria:

- **Social impact** : The social value is estimated by comparing the prices of miLab™ devices and cartridges supplied to low- and middle-income countries with those of conventional products offering similar utility in the market.
- **Environmental impact** : The environmental value is calculated by monetizing the reductions in water usage and liquid waste generation achieved through miLab™’s solid staining technology, in comparison to traditional manual diagnostic methods.

Furthermore, Noul is conducting a cost-effectiveness study in collaboration with global research institutions, targeting healthcare facilities using miLab™. This study assesses resource savings, operational efficiency, and potential facility-wide impacts. The results will serve to enhance the effectiveness of future impact measurement standards for miLab™.

Shareholders, Investors, Employees,  
International Organizations, and Government agencies

Q6. What key initiatives are being implemented at the board or executive level to enhance decision-making efficiency and governance soundness?

**[Strengthening the Leadership Structure]** In 2024, Noul appointed new Chief Officers for Business (CBO), Finance (CFO), and Development (CDO) to improve decision-making efficiency across each division and reinforce accountable management. This updated leadership structure is designed to enhance functional expertise and independent execution capacity, while also increasing transparency and consistency in managerial decision-making.

- TH Kim, Chief Business Officer (CBO), is a seasoned expert in global health and international finance. He concurrently serves as the Head of Noul Europe and leads the company’s global expansion strategy and public business operations.
- Mark Lee, Chief Financial Officer (CFO), oversees financial planning, accounting, fund management, and internal controls, leveraging his background in international development cooperation and financial strategy to ensure Noul’s fiscal soundness.
- Eugene Kim, Chief Development Officer (CDO), leads the overall technology development of the miLab™ platform—including hardware, software, and AI—based on his engineering expertise to drive product innovation and technological competitiveness.

**[Establishment of the Audit Committee]** Although not mandated by law due to its size, Noul established an Audit Committee in March 2025 to strengthen financial integrity and internal control. The committee comprises two Outside Directors and one Inside Director, with Jungbo Kim, a financial and audit expert with over 20 years of experience, appointed as Chair. Moving forward, the Audit Committee will conduct quarterly meetings to review financial statements and both internal and external audit results. It will also work to identify key risks proactively and develop remedial measures. Through continuous monitoring, the committee aims to assess the effectiveness of internal controls and legal compliance, implementing corrective actions when necessary to enhance the company’s audit function and risk management system.

**[Revision of the Board Operation Guidelines]** To reinforce a board-centered decision-making system, Noul is working to enhance the effectiveness of its Board Operation Guidelines. In 2024, the company benchmarked peer companies and relevant legal frameworks to identify areas for improvement. Based on this review, Noul developed revisions that strengthen provisions related to board independence, expertise, and diversity. The revised version also ensures consistency with the Articles of Incorporation and clarifies the board’s roles and authorities while introducing mechanisms to support transparent and efficient governance. The amended guidelines are slated for final Board approval in 2025, after which Noul plans to systematically refine its board procedures to further improve transparency and accountability in governance.



Environment and Customers

Q7. What efforts is Noul making in terms of resource circulation and waste reduction?

To address resource circulation and waste reduction—key global sustainability issues—Noul is promoting a transition to eco-friendly product packaging. As part of this initiative, we have established an Eco-Friendly Packaging Decision-Making Criteria, which comprehensively considers international regulatory trends, recyclability, and carbon emissions generated during disposal. Based on these criteria, we are progressively replacing existing packaging materials. Noul’s Eco-Friendly Packaging Decision-Making Criteria focus on the following three factors :

① International Regulations

We proactively exclude materials that are subject to strict international regulations and prioritize the use of paper-based materials, which are considered low-risk in terms of regulatory exposure.

② Recyclability

In cases where an immediate switch to paper is not feasible, we opt for highly recyclable plastic materials. We are also gradually phasing out the use of non-recyclables, such as foam materials.

③ Carbon Emissions

We take into account the material type, weight, size, and shipping units to redesign packaging in a way that minimizes carbon emissions during transportation and disposal.

Following these three criteria, we are currently focusing on replacing the LDPE-based foam guards used in device packaging and the PS-based cartridge trays and covers used in diagnostic cartridge packaging.

Overview of Key Packaging Materials

Category	Item	Material
Device Packaging	Device Shipping Box	FSC MIX Paper
	Foam guard	Low-density polyethylene (LDPE)
Cartridge Packaging	Cartridge Shipping Box	FSC MIX Paper
	Cartridge Set Box	FSC MIX Paper
	Cartridge Tray & Cover	Polystyrene (PS)

While Noul considers pulp mold as a preferred alternative material, its actual adoption remains challenging due to the need for a minimum annual sales volume and quality validation aligned with the specific characteristics of in-vitro diagnostic medical devices. As a result, we are taking a phased approach to introducing more environmentally friendly materials.

Currently, we are conducting stability tests on a newly designed corrugated cardboard cushioning structure to replace the existing foam guards used in device packaging. For cartridge packaging, where an immediate shift to paper-based materials is limited by specific usage conditions, we are pursuing a transition to mono-material Polyethylene terephthalate (PET), which is more easily recyclable. In addition, we are optimizing packaging units to reduce carbon emissions and waste generated during transportation. While our current stage of business growth limits the application of a full Life Cycle Assessment (LCA)–based quantitative environmental impact analysis, Noul remains committed to minimizing the environmental footprint of its product packaging to the greatest extent possible.





# Appendix

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# Mid-to long-term Sustainability Initiatives

2025 Revision

In order to enhance company-wide alignment and execution, Noul revised its mid-to-long-term sustainability improvement plan—initially established in 2023—to better align with the company’s mid-to-long-term business growth objectives announced in February 2025.

	2023~2025	2026~2027	2028~2029
Sustainability Implementation	Set-up Lay the policy/system/cultural foundation	Speed-up Bolster execution and facilitate communication	Level-up Advance the system and establish a sound reputation
Key Actions	<ul style="list-style-type: none"><li>· Social &amp; Governance : Establish policies and regulations</li><li>· Environmental : Lay the basis for data management</li><li>· Make improvements in the 1st phase based on priorities</li></ul>	<ul style="list-style-type: none"><li>· Social &amp; Governance : Secure an implementation system and organizational capacity, further reach out to stakeholders</li><li>· Environmental : Establish the policy and management system</li><li>· Make improvements in the 2nd phase based on priorities</li></ul>	<ul style="list-style-type: none"><li>· Establish an integrated goal and performance management system</li><li>· Internalize global ESG standards at the departmental and company-wide levels</li></ul>
Compliance, Ethics, and Risk Management	<ul style="list-style-type: none"><li>· Establish an integrated regulatory non-compliance management process and operate compliance awareness building programs</li><li>· Lay the basis for the health and safety management system</li><li>· Improve the effectiveness of the internal control system</li><li>· Develop ethics/anti-corruption policies and stipulate ethics standards</li><li>· Establish a human rights/sustainability risk management process</li><li>· Establish and implement a CS process</li><li>· Establish information security policies/regulations/systems</li></ul>	<ul style="list-style-type: none"><li>· Establish a compliance risk management system</li><li>· Systematize the company-wide health and safety management system and operate safety culture dissemination programs</li><li>· Strengthen the capacity and expertise of the internal control organization</li><li>· Conduct human rights impact assessment and establish a human rights management policy</li><li>· Establishment of a company-wide customer service (CS) management system</li><li>· Pursuit of international standard information security certification</li></ul>	<ul style="list-style-type: none"><li>· Upgrade the compliance management system on par with international standards</li><li>· Advance the internal control system</li><li>· Establish a health and safety management system on par with international standards</li><li>· Enhancement of information security systems and implementation of voluntary information security disclosures</li></ul>
Sound & Sustainable Governance	<ul style="list-style-type: none"><li>· Amend the Board operational regulations in reflection of our commitment to improving the independence, expertise, and diversity of the Board’s composition and operation</li><li>· Develop goals and programs to strengthen the Board’s independence, expertise, and diversity</li></ul>	<ul style="list-style-type: none"><li>· Systematize the remuneration policy and remuneration calculation process for Board members</li><li>· Bolster the process for regular reporting and discussion of sustainability agendas within the Board</li><li>· Establish a stakeholder reporting and engagement process</li></ul>	<ul style="list-style-type: none"><li>· Strengthening regular reporting and discussion processes on sustainability matters within the Board of Directors</li><li>· Systematize the stakeholder reporting and engagement process</li></ul>
Responsible and Inclusive Workplace	<ul style="list-style-type: none"><li>· Establish our DEI (Diversity, Equity, Inclusion) guideline and its operational direction</li><li>· Develop content for employee capacity-building</li></ul>	<ul style="list-style-type: none"><li>· Implement institutional/cultural improvement programs to promote DEI</li><li>· Develop and implement female leadership capacity-building programs</li><li>· Strengthen leadership training for employees</li><li>· Establish supply chain assessment criteria and processes from the sustainability viewpoint</li></ul>	<ul style="list-style-type: none"><li>· Establish a company-wide DEI goal and performance management process</li><li>· Establishment of sustainability-based supply chain evaluation criteria and processes</li></ul>
Protecting The Planet	<ul style="list-style-type: none"><li>· Improve our GHG emissions (Scope 1 &amp; 2) measurement methodology and systematize pollutant discharge data management</li><li>· Gradually improve the percentage of recyclable packaging materials</li></ul>	<ul style="list-style-type: none"><li>· Establish our environmental management policy</li><li>· Establish our environmental management policy</li><li>· Identification of Scope 3 greenhouse gas (GHG) emission categories and pilot calculation of emissions</li><li>· Gradual improvement in the proportion of recycled materials used in packaging</li></ul>	<ul style="list-style-type: none"><li>· Pursue international environmental management system certification (ISO 14001)</li><li>· Establishment and implementation of a plan to reduce greenhouse gas emissions (Scope 1&amp;2)</li><li>· Fully shift to renewable energy for business operations</li></ul>
Improvement In Access To Healthcare	<ul style="list-style-type: none"><li>· Establish an impact framework</li></ul>	<ul style="list-style-type: none"><li>· Develop an impact measurement and management system</li></ul>	<ul style="list-style-type: none"><li>· Develop and implement projects to disseminate impact business cases</li></ul>



# Sustainable Development Goals (SDGs)

As a responsible corporate citizen, Noul develops diagnostic solutions that enhance access to healthcare while conducting its business with integrity. In doing so, we contribute to the achievement of the UN Sustainable Development Goals (UN SDGs), which serve as key milestones in our sustainability journey. The SDGs guide our ongoing efforts to measure and manage the social and environmental impact of our operations. These insights help us reduce negative impacts on stakeholders while continuously amplifying positive outcomes.

Level of Impact				
	<div><div></div><div>DIRECT POSITIVE</div></div>	<div><div></div><div>INDIRECT POSITIVE</div></div>	<div><div></div><div>POTENTIAL NEGATIVE</div></div>	<div><div></div><div>DIRECT NEGATIVE</div></div>

\*Indicating the level of impact on the SDGs was informed by the Sustainable Development Goals section of Nudie Jeans’ sustainability report 2021.

<div><div>1NO POVERTY</div><div></div></div>	<div>1.5 Build Resilience to Environmental, Economic and Social Disasters</div> <div>+ Leverage miLab™ to help the resilience of the poor and those in vulnerable situations to respond to disasters caused by infectious diseases</div> <div>+ Leverage miLab™ to increase resilience to disasters and infectious diseases caused by disasters</div>
<div><div>3GOOD HEALTH AND WELL-BEING</div><div></div></div>	<div>3.2 Newborn and child mortality</div> <div>3.3 Communicable diseases</div> <div>3.4 Noncommunicable diseases and mental health</div> <div>3.8 Achieve universal health coverage</div> <div>+ miLab™ MALvenables quick and accurate malaria diagnostic testing to help eradicate malaria</div> <div>+ miLab™ CER provides improved access to automated testing to help in the early detection of cervical cancer</div> <div>+ miLab™ BCM provides improved access to general blood tests</div>
<div><div>4QUALITY EDUCATION</div><div></div></div>	<div>4.4 Relevant skills for decent work</div> <div>4.7 Education for sustainable development and global citizenship</div> <div>+ Provide employees with capacity building programs</div> <div>+ Provide all employees with mandatory sustainability training programs</div> <div>+ Provided company-wide training to improve perceptions on disability and to raise awareness on gender sensitivity</div> <div>+ Hosted an internal seminar on International Women’s Day to raise awareness on gender equity</div>

<div><div>5GENDER EQUALITY</div><div></div></div>	<div>5.1 End all forms of discrimination against all women</div> <div>5.5 Ensure women’s participation and equal opportunities for leadership</div> <div>5.6 Ensure universal access to sexual and reproductive health</div> <div>+ Through miLab™ CER, we help expand access to cervical cancer screening, thereby advancing women’s access to essential health services</div> <div>+ Stipulate policies to promote gender equality and women’s rights</div> <div>+ Endeavor to establish systems and a culture at all levels to promote gender equality</div> <div>+ Employee training to embed respect for human rights</div> <div>+ Establish a non-discrimination policy to ensure gender is not factored in recruitment and promotion</div> <div>+ Monitor the ratio of women in leadership positions</div>
<div><div>6CLEAN WATER AND SANITATION</div><div></div></div>	<div>6.3 Better water quality</div> <div>6.4 More Efficient water use</div> <div>+ Develop eco-friendly NGSI (Next Generation Staining and Immunostaining) technology to reduce the consumption of staining reagents required for diagnostic testing by 1/100 compared to liquid staining as well as the generation of wastewater to zero in the staining process</div> <div>- Need for systemic management of water pollutant discharge and water consumption</div>
<div><div>7AFFORDABLE AND CLEAN ENERGY</div><div></div></div>	<div>7.3 Improve energy efficiency</div> <div>+ Endeavor to improve the efficiency of energy use at manufacturing facility</div> <div>- Need to reduce energy consumption and transition to renewable energy</div>

<div><div>8DECENT WORK AND ECONOMIC GROWTH</div><div></div></div>	<div>8.5 Full Employment and decent work with equal pay</div> <div>8.7 End modern slavery, trafficking and child labour</div> <div>8.8 Protect labour rights</div> <div>+ Abide by the affirmative action to employ people with disabilities</div> <div>+ Certified as a Great Employer by Gyeonggi-do</div> <div>+ Stipulate human rights promotion policy</div> <div>+ Endeavor to establish systems and culture at all levels to uphold human rights</div> <div>+ Operate a dedicated channel to submit grievances and public interest disclosures</div> <div>- Need to manage supply chain sustainability due to potential adverse impact concerning child labor and workers’ rights protection due to the lack of supply chain sustainability management</div>
<div><div>9INDUSTRY, INNOVATION AND INFRASTRUCTURE</div><div></div></div>	<div>9.5 Enhance research and upgrade industrial technologies</div> <div>+ Invest in R&amp;D on next-generation technology</div>
<div><div>10REDUCED INEQUALITIES</div><div></div></div>	<div>10.2 Promote universal social, economic and political inclusion</div> <div>10.3 Ensure equal opportunities and end discrimination</div> <div>10.4 Adopt fiscal and social policies that promotes equality</div> <div>+ Pursue non-discrimination and non-exclusion in our HR policy and process</div> <div>+ Match intern pay with the living wage threshold of Gyeonggi-do, provide equal welfare and benefits to both interns and full-time employees</div>
<div><div>12RESPONSIBLE CONSUMPTION AND PRODUCTION</div><div></div></div>	<div>12.1 Implement sustainable consumption and production framework</div> <div>12.4 Responsible management of chemical and waste</div> <div>12.5 Substantially reduce waste generation</div> <div>12.6 Sustainable practices and sustainability reporting</div> <div>+ Work to reduce waste generated by product/ packaging unit and increase recycling and reuse</div> <div>+ Manage chemicals and hazardous waste</div> <div>+ Opt for tumblers in the workplace and provide waste sorting and recycling guides</div> <div>+ Regularly report sustainability implementation plans and improvement results internally and externally</div> <div>- Need to increase the use of recyclable materials for products and packaging</div> <div>- Need to manage supply chain sustainability for potential adverse impact in the environmental sector</div>

<div><div>13CLIMATE ACTION</div><div></div></div>	<div>13.2 Integrate climate change measures into policies and planning</div> <div>13.3 Build knowledge and capacity to meet climate change</div> <div>+ GHG emissions measurement and management (Scope 1 &amp; 2)</div> <div>+ Reduce power consumption in the workplace to mitigate CO2 emissions</div> <div>+ Develop and implement mid/long-term sustainability improvement plans for climate change adaptation</div> <div>+ Provide employees with climate change adaptation training</div> <div>- Need to establish goals and implementation strategies to reduce GHG emissions</div> <div>- Need to define and calculate Scope 3 emissions</div>
<div><div>15LIFE ON LAND</div><div></div></div>	<div>15.2 End deforestation and restore degraded forests</div> <div>+ Introduce FSC-certified paper for miLab™ packaging step by step</div> <div>+ Introduced a paperless QMS for over 90% of operations requiring QMS implementation to reduce paper consumption</div>
<div><div>16PEACE, JUSTICE AND STRONG INSTITUTIONS</div><div></div></div>	<div>16.5 Substantially reduce corruption and bribery</div> <div>+ Provide compliance and ethics training</div> <div>+ Operate a compliance-related whistleblowing channel to report corruptive practices and others</div> <div>+ Adopted monitoring procedures for the provision of economic benefits and strengthened compliance risk management+ Established the Code of Conduct and provided training for all employees</div> <div>- Need to bolster the compliance system continuously due to the potential occurrence of corruption</div>
<div><div>17PARTNERSHIPS FOR THE GOALS</div><div></div></div>	<div>17.16 Enhance the global partnership</div> <div>17.17 Encourage effective partnerships</div> <div>+ Established public partnerships in Cameroon, Ghana, Nigeria, Malawi, and other African regions</div> <div>+ Bolstered global partnerships to eradicate malaria as a member of the Swiss Malaria Group, a Swiss-based public-private-industry-academia network</div> <div>+ Strengthened partnerships with institutions and companies in the cancer diagnosis and treatment sector as a member of CancerX, an initiative launched by the US government to fight cancer</div> <div>+ Cooperate with public/private international healthcare partners for research &amp; development and market entry</div>



# Noul Sustainability Fact Sheet

Economic Performance Summary of consolidated financial results (Unit : KRW 1,000K)			
Item	Term 10	Term 9	Term 8
GAAP	K-IFRS	K-IFRS	K-IFRS
	31-Dec-24	31-Dec-23	31-Dec-22
[Current assets]	28,279	25,164	14,073
· Trade receivables	352	1,199	399
· Cash and cash equivalents	251	6,612	2,043
· Short-term financial assets	20,684	13,000	8,414
· Inventories	4,159	3,478	2,666
· Other current assets	2,833	874	552
[Non-current assets]	9,530	30,413	11,778
· Property, plant, and equipment	8,742	9,639	10,969
· Intangible assets	121	170	256
· Other non-current assets	667	20,603	553
Total assets	37,809	55,577	25,851
[Current liabilities]	8,580	4,154	6,462
· Trade payables	128	75	21
· Short-term borrowings	5,944	1,944	4,344
· Other current payables	2,508	2,135	2,097
[Non-current liabilities]	9,061	8,434	7,994
Total liabilities	17,641	12,588	14,456
[Equity attributable to shareholders of the parent company]	20,168	42,989	11,396
· Share Capital	18,474	18,474	5,727
· Capital surplus	85,945	85,945	50,966
· Elements of other stockholder’s equity	1,417	1,168	702
· Other comprehensive income/loss accumulated amount	26	-2	5
· Retained earnings	-85,694	-62,596	-46,004
[Non-controlling interests]	-	-	-
Total equity	20,168	42,989	11,396
Valuation method for investments in subsidiaries, associates, and joint ventures	Cost method	Cost method	Cost method
Category	Jan-Dec 2024	Jan-Dec 2023	Jan-Dec 2022
Number of consolidated entities	1	1	1
Revenue	1,601	2,734	542
Operating income (loss)	-22,795	-16,139	-15,632
Consolidated profit (loss)	-22,469	-16,321	-13,680
Total comprehensive income (loss)	-23,070	-16,599	-13,773
Basic earnings (loss) per share (unit: KRW)	-608	-609	-621
Diluted earnings (loss) per share (unit: KRW)	-608	-609	-621

## Compliance and Ethics Performance

Category	Subcategory	2024	Unit
Environmental non-compliance	Penalties and non-monetary sanctions imposed for environmental non-compliance	0	Cases
Governance non-compliance	Penalties and non-monetary sanctions imposed for governance non-compliance	0	Cases
Social non-compliance	Penalties and non-monetary sanctions imposed for social non-compliance	0	Cases
Compliance and ethical non-compliance	Violation of compliance and ethics including corruptive practices at work, power harassment, sexual harassment, or bullying	1	Cases
	Number of compliance and ethics violations with corrective action completed	1	Cases
Corruption	Total incidences of corruption	0	Cases
Grievance reporting	Grievances raised due to workplace bullying, sexual harassment or other grievances	1	Cases
	Number of grievance cases with action completed	1	Cases

\*During the reporting period, there were no cases of legal or regulatory violations resulting in criminal penalties such as fines or imprisonment, nor any non-monetary sanctions. However, an administrative fine of KRW 250,000 was imposed due to a delayed registration update. In response, we reviewed and improved our internal processes to prevent recurrence.

## Social Performance

### Training

구분	2024		2023		2022	
	Persons (completion rate)	Hours	Persons (completion rate)	Hours	Persons (completion rate)	Hours
Prevention of sexual harassment (diversity)	135 (100%)	135 (1 hours/person)	137 (100%)	205 (1.5 hours/person)	119 (100%)	238 (2 hours/person)
Improvement in perceptions on disability	135 (100%)	135 (1 hours/person)	137 (100%)	205 (1.5 hours/person)	118 (100%)	118 (1 hour/person)
Personal data privacy	138 (100%)	138 (1 hour/person)	136 (100%)	136 (1 hour/person)	119 (100%)	142.8 (1.2 hours/person)



Employment Status

Employment <sup>1</sup>	Category		2024		2023		2022	
			Number of Persons	Percentage	Number of Persons	Percentage	Number of Persons	Percentage
	Total employees (y-o-y increase)		138 (3.7%) 141 when registered executives are included		133 (14%) 136 when registered executives are included		116 (15%) 119 when registered executives are included	
	By employment terms	Full-time	122	88%	120	90%	106	89%
		Contract	16	12%	13	10%	10	8%
	By type of work	Manufacturing	9	7%	9	7%	9	8%
		Office	67	49%	54	40%	51	43%
		R&D	62	45%	70	53%	56	47%
	By gender	Female	52	38%	46	53%	40	34%
		Male	86	62%	87	65%	76	64%
Other		0	0%	0	0%	0	0%	
By leadership level	Female	10	24%	9	26%	7	30%	
	Male	31	76%	25	74%	16	70%	
	Other	0	0%	0	0%	0	0%	
By age group	Youth (under 34)	45	33%	44	33%	40	34%	
	34~50	87	63%	84	63%	69	60%	
	Over 50	6	4%	5	4%	7	6%	
New Hires and Turnover	New Hires <sup>2</sup>	Total new hires	40		32		34	
		New hires(Female)	20	50%	16	50%	8	24%
		New hires(Male)	20	50%	16	50%	26	76%
		Youth (under 34)	18	45%	20	63%	15	44%
		34~50	21	50%	12	41%	17	50%
		Over 50	1	3%	0	0%	2	6%
	Turnover <sup>3</sup>	Total turnover	40	28.4%	16	12.6%	29	25%
		Full-time	35	25%	12	9%	10	9%
		Contract	5	4%	4	3%	19	16%
		Turnover(Female)	17	43%	11	69%	17	59%
		Turnover(Male)	23	58%	5	31%	12	41%
		Under 34	15	38%	10	63%	22	76%
		34~50	24	58%	4	25%	7	24%
		Over 50	1	3%	2	13%	0	0%

<sup>1</sup>The number of employees is based on the headcount of active employees as of December 31, 2024.  
<sup>2</sup>The number of new hires refers to employees who joined the company during 2024 and were still employed as of December 31, 2024.  
<sup>3</sup>Turnover rate is calculated as follows : (Number of employees who left the company during the year) / ((Total number of employees at the end of the current year + Total number of employees at the end of the previous year) / 2) \* 100  
<sup>4</sup>In 2024, Noul began systematically documenting even minor incidents through incident reports, resulting in a slight increase in the Total Recordable Incident Rate (TRIR) compared to 2023.

Safety

Category		2024	2023	2022	· Lost time injuries (LTI): Number of work-related injuries or illnesses that result in the loss of one full day of work or more · Lost time injury frequency rates (LTIFR) : (Number of LTIs/total hours worked) × 1,000,000 · Total recordable injury frequency rates (TRIFR) : (Total number of recordable injuries/total hours worked) × 1,000,000 · Fatalities per 10,000 workers : (Number of fatalities/number of workers covered by workers’ compensation insurance) × 10,000 · Calculation method of injury rates : [Number of injuries (work-related injuries + work-related illnesses) / number of workers covered by workers’ compensation insurance] × 100
Lost time injuries (LTI)		0	0	0	
Lost time injury frequency rates (LTIFR)		0	0	0	
Total recordable injury frequency rates (TRIFR) <sup>4</sup>		23.6	3.4	0	
Fatalities per 10,000 workers (‰)		0	0	0	
Occupational Injury Rate	Total	0	0	0	
	Work-related injuries	0	0	0	
	Work-related illnesses	0	0	0	
Category	Type of Training	Target	Persons (completion rate)	Hours (per person)	
Occupational health and safety training	Mandatory Training for Occupational Health and Safety Managers	Health and Safety Managers	1 (100%)	6 (6 hours/person)	
	Occupational Safety Manager Training	Safety Managers	1 (100%)	34 (34 hours/person)	
	Regular supervisor training	Supervisors	5 (100%)	80 (16 hours/person)	
	Regular training	All members	133 (100%)	1,596 (12 hours/person)	
	Special training	Employees Requiring Special Training (for Short-term or Intermittent Tasks)	6 (100%)	24 (2 hours/person)	
	Training for new hires	New hires	42 (100%)	336 (8 hours/person)	
LMO safety training	Training for Biological Safety Manager	Biological Safety Manager	1 (100%)	8 (8 hours/person)	
	Training for Biological Safety Officer	Biological Safety Officer	1 (100%)	8 (8 hours/person)	
	Training for Principal Investigator	Principal Investigator	1 (100%)	2 (2 hours/person)	
	Training for Laboratory Personnel / Training for Research Personnel	Research Personnel	5 (100%)	10 (2 hours/person)	
Water Environment Conservation Act	Training for Water Environment Engineers	Environmental Engineer	1 (100%)	4 (4 hours/person)	
Noise and Vibration Control Act	Training for Noise and Vibration Control Engineers	Environmental Engineer	1 (100%)	4 (4 hours/person)	



Maternity Leave and Parental Leave

Category	2024	2023	2022
Employees who took maternity/ paternity leave	O(male) O(female) Persons	5(male) 1(female) Persons	2(male) 3(female) Persons
Employees who took parental leave	1(male) 2(female) Persons	1(male) 3(female) Persons	1(male) 2(female) Persons

· Family-friendly business designation

Environmental Performance

Category	Subcategory	2024	2023	2022	Unit
GHG <sup>1</sup>	Total GHG emissions	451.365	367.019	331.005	tCO <sub>2</sub> eq
	Direct (Scope 1)	7.190	6.638	6.881	
	Indirect (Scope 2)	444.175	360.380	324.124	
	GHG Emissions Intensity (based on miLab™ cartridge production volume)	4.42	4.72	5.53	kgCO <sub>2</sub> eq/unit
Energy	Total energy consumption	7.884	7.590	6.830	TJ
	Direct (Scope 1)	0.107	0.098	0.102	
	Indirect (Scope 2)	7.777	7.492	6.728	
	Energy Intensity (based on miLab™ cartridge production volume)	97.6	91.4	23.2	KJ/unit
Water <sup>2</sup>	Water intake	579	665	531	Ton
Waste	Chemical waste discharge	3,008.00	1,892.50	3,004.60	Kg
	Pathological waste	543.00	502.50	1,023.00	
	General medical waste	2,465.00	1,385.00	1,970.50	
	Sharps waste	0.00	5.00	11.10	
Environmental training		21	128	12	Persons
		252	1050	144	Hours

<sup>1</sup> The three-year GHG emissions data disclosed in the 2023–2024 report has been revised in this report due to changes in the methodology for calculating shared electricity consumption within the company’s building.

<sup>2</sup> The 2024 water intake figure reported in the 2023–2024 report has been recalculated in this report due to an error in the estimation of shared water use within the company’s building.

## 온실가스 배출량 검증의견서

노을㈜

**서문**  
(재)한국품질재단은 노을(주)의 2023년 Scope 1, 2 온실가스 배출량(이하 ‘온실가스 배출량’이라 함)에 대한 검증을 수행하였습니다.

**검증 범위**  
2023년 기준 노을(주)와의 협의에 따라 국내사업장 온실가스 배출시설을 대상으로 하였습니다.  
\* 국내사업장 : 본사

**검증 기준**  
[온실가스 배출권거래제의 배출량 보고 및 인중에 관한 지침 1)], [2006 IPCC Guidelines for National Greenhouse Gas Inventories], [ISO14064-1]를 기준으로 하였습니다.  
1) 환경부고시 제2023-221호

**보증 수준**  
검증은 ISO14064-3에 규정된 절차에 따라 계획 및 수행되었고, 검증의 보증 수준은 합리적 보증 수준을 만족하도록 수행 되었습니다. 또한 검증 전 과정에 대한 절차가 효과적 수행되었는지 내부심의를 통해 확인하였습니다.

**검증 한계**  
검증은 기준 및 방법 등을 적용하는 과정에서 발생될 수 있는 고유의 한계를 내포하고 있습니다.

**검증 결론**  
온실가스 배출량 보고서에 수록되어 있는 온실가스 배출량 데이터에 대해 아래와 같은 결론을 제시합니다.

1) 온실가스 배출량은 검증기준에 따라 적절하게 산정되었습니다.

2) 온실가스 배출량 산정에 사용된 데이터와 정보는 적절하고 합리적이며, 검증의견에 영향을 줄 수 있는 중대한 오류 및 누락은 발견되지 않았습니다. 온실가스 배출량에 대한 중요성평가결과 합의된 5% 기준 미만을 만족하고 있습니다.

3) 따라서 다음의 2023년 온실가스 배출량에 대해 "적정" 의견을 제시합니다.

[단위 : tCO <sub>2</sub> eq]			
구 분	Scope 1	Scope 2	총계
본사	6.638	360.380	367

\* 온실가스 배출권거래제 배출량 보고 및 인중 지침에 따르면, 총 배출량은 사업장단위 소수점 절사값이므로 Scope 1, 2 배출량 합과 총 배출량값이 일부 상이할 수 있음.

2024년 8월 7일

Ji Young Song

CEO Ji-Young Song  
Korean Foundation for Quality

kfqKorean Foundation for Quality

www.kfq.or.kr  
서울시 금천구 가산디지털1로 168, 13F

The above Verification Opinion Statement is a third-party verification of Noul’s 2023 greenhouse gas (GHG) emissions for Scope 1 and Scope 2”



GRI Index

● Full disclosure ◐ Limited disclosure ○ Not disclosed

Category	Disclosure number	Disclosure title	Disclosure Level	Page	Notes
GRI 2: General Disclosures 2021	2-1	Organizational details	●	20, 54	
	2-2	Entities included in the organization’s sustainability reporting	●	54	
	2-3	Reporting period, frequency and contact point	●	54	
	2-4	Restatements of information	●	52	
	2-5	External assurance	○	-	This report has not obtained third-party assurance
	2-6	Activities, value chain and other business relationships	◐	6, 7, 20	Limited disclosure due to insufficient information
	2-7	Employees	●	51	
	2-8	Workers who are not employees	○	-	Disclosure in preparation
	2-9	Governance structure and composition	●	29, 32	
	2-10	Nomination and selection of the highest governance body	○	-	Not reported due to incomplete data
	2-11	Chair of the highest governance body	●	30	
	2-12	Role of the highest governance body in overseeing the management of impacts	◐	32	Limited disclosure due to insufficient information
	2-13	Delegation of responsibility for managing impacts	●	32	
	2-14	Role of the highest governance body in sustainability reporting	●	32	
	2-15	Conflicts of interest	◐	-	Annual Report p.174
	2-16	Communication of critical concerns	●	30	
	2-17	Collective knowledge of the highest governance body	○	-	Not reported due to incomplete data
	2-18	Evaluation of the performance of the highest governance body	○	-	Not reported due to incomplete data
	2-19	Remuneration policies	○	-	Not reported due to incomplete data
	2-20	Process to determine remuneration	○	-	Not reported due to incomplete data
	2-21	Annual total compensation ratio	○	-	Not reported due to incomplete data
	2-22	Statement on sustainable development strategy	●	4	
	2-23	Policy commitments	◐	22, 24	Limited disclosure due to insufficient information
	2-24	Embedding policy commitments	●	22, 24	
	2-25	Processes to remediate negative impacts	○	-	Not reported due to incomplete data
	2-26	Mechanisms for seeking advice and raising concerns	○	-	Not reported due to incomplete data
	2-27	Compliance with laws and regulations	●	50	
	2-28	Membership associations	●	20	
	2-29	Approach to stakeholder engagement	●	15	
	2-30	Collective bargaining agreements	○	-	Not reported due to incomplete data
GRI 3: Universal Standards	3-1	Process to determine material topics	●	15	
	3-2	List of material topics	●	15	
	3-3	Management of material topics	●	18, 19, 22, 23, 26, 27, 31, 32, 37, 39	

Category	Disclosure number	Disclosure title	Disclosure Level	Page	Notes
Economy	201-1	Direct economic value generated and distributed	◐	50	Limited disclosure due to insufficient information
	205-2	Communication and training about anti-corruption policies and procedures	◐	22	Limited disclosure due to insufficient information
	205-3	Confirmed incidents of corruption and actions taken	●	50	
	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	●	50	
Environment	302-1	Energy consumption within the organization	◐	52	Limited disclosure due to insufficient information
	302-3	Energy intensity	◐	52	Limited disclosure due to insufficient information
	303-3	Water withdrawal	◐	52	Limited disclosure due to insufficient information
	305-1	Direct (Scope 1) GHG emissions	●	52	
	305-2	Energy indirect (Scope 2) GHG emissions	●	52	
	305-4	GHG emissions intensity	◐	52	Limited disclosure due to insufficient information
Social	306-3	Waste generated	◐	52	Limited disclosure due to insufficient information
	401-1	New employee hires and employee turnover	●	51	
	401-3	Parental leave	●	35, 52	Annual Report p.177
	403-1	Occupational health and safety management system	●	26	
	403-2	Hazard identification, risk assessment, and incident investigation	●	26	
	403-3	Occupational health services	●	26	
	403-4	Worker participation, consultation, and communication on occupational health and safety	●	26	
	403-5	Worker training on occupational health and safety	●	26	
	403-6	Promotion of worker health	●	26	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	●	26	
	403-8	Workers covered by an occupational health and safety management system	●	26	
	403-9	Work-related injuries	●	26, 51	
	403-10	Work-related ill health	●	26, 51	
	404-1	Average hours of training per year per employee	◐	37	Limited disclosure due to insufficient information
	404-3	Percentage of employees receiving regular performance and career development reviews	●	37	
	405-1	Diversity of governance bodies and employees	●	29, 34, 51	
	405-2	Ratio of basic salary and remuneration of women to men	●	24	
	406-1	Incidents of discrimination and corrective actions taken	●	24	
	416-1	Assessment of the health and safety impacts of product and service categories	●	27	
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	●	27, 50	
	417-2	Incidents of non-compliance concerning product and service information and labeling	●	50	
	417-3	Incidents of non-compliance concerning marketing communications	●	50	
	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	●	50	



# About This Report

## Purpose

As we drive our growth in line with our management philosophy of sustainability, we publish sustainability reports to periodically review our corporate activities and achievements from the economic, social, and environmental aspects and to disclose the results to stakeholders. Our annual sustainability reports help us identify our sustainability accomplishments and necessary improvements at all levels and transparently communicate them with wide-ranging stakeholders to elevate our corporate value and stakeholder trust over the long haul.

## Reporting Principle

This report aligns with the Global Reporting Initiative (GRI) Standards: Core Option, and reflects the indicators of the UN Sustainable Development Goals (SDGs)

## Reporting Boundary

All domestic operations and the subsidiary in Switzerland(consolidated) Financial data: Prepared in accordance with K-IFRS on a consolidated basis

## Reporting Period and Cycle

Jan. 2024 ~ Dec. 2024 (including a portion of the performance data generated in the first half of 2025)  
Annual (first report published in 2020)

## Report Publication on the Web

<https://noul.com/sustainability>

## Publishing Month and Lead Team

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