



Noul Sustainability Report 2021

Beyond Diagnostics

noul



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A Message from Management

It is with great pride we present our second sustainability report to our stakeholders who share in our mission and whose support is instrumental in making it a reality.

It has been a full six years since we founded Noul under our mission: 'We explore global challenges that threaten human health and life'. We started with just four members, and have more than 120 employees presently, growing at an average of over 50% each year. We expanded our office space from a mere 33 m² to over 1,653m² which houses a lab equipped with a full suite of equipment and an automated GMP-compliant manufacturing facility. Our aggregated investments amount to USD 32.5 million on a cumulative basis including seed, Series A, and Series B and pre-IPO rounds. We became certified as a venture company and were named a "Global ICT Future Unicorn". We also successfully cleared technology assessments and pre-IPO reviews in 2021.

While naturally proud of our growth trajectory, such progress pales in comparison to our accomplishments in reaching meaningful milestones in technology advancement and product development. Our malaria diagnostics evolved from its proof-of-concept phase in our early startup days into the world's first-ever commercial product which enables full automation from sample preparation to AI analysis. More than 40 bio, SW/AI, and platform convergence technologies that were developed along the way brought us closer to our delivery of 'decentralized diagnostics' and 'diagnostics solutions as a platform'. As we continue to broaden our product portfolio with the BCM (Blood Cell Morphology) solutions launched in 2021 and the cervical cancer test solutions currently under development, we will surely position ourselves as a diagnostics platform provider leading the digital diagnostics and telehealth sectors.

The year 2021 was truly significant as both management and our team witnessed the marked strides made as we successfully completed one chapter of our growth journey that we initiated as a deep-tech startup. Looking back, we do realize we couldn't have fueled such success without the unwavering confidence and support of our stakeholders.

Despite the uncertainties of being a startup, our team gave it their all, both in terms of their expertise and enthusiasm. The efforts of our investors with their practical assistance and advice were truly unsparing as they stood behind our corporate mission and business potential. Our customers and partners were also willing to share their knowledge and feedback on the effectiveness and maturity of our products. We are truly indebted to our stakeholders – your distinct support for our technology, products and organizational growth are our greatest asset and strongest growth driver. We couldn't have done it without you and our gratitude certainly runs deep.

Uncertain business conditions, and the opportunities they bring

The current business world is mired with unprecedented uncertainties and laden with a myriad of social and economic risks. The COVID-19 pandemic that plagued us for over two years has drastically dampened our economic activities and thrown a wrench into the way we live and how our social system operates. The forecasted double-whammy of inflation and economic downturn will further exacerbate difficulties in the financial and real economy sectors. As a startup that has just entered its full-fledged growth phase, we certainly can feel the heightened sense of urgency and crisis.

We are confident, however, that Noul is forging ahead towards opportunity through this ever-changing post-pandemic reality. Along with elevated awareness concerning public health, on-site diagnostics and telehealth are more important to society than ever. The advancement of AI and IT that will facilitate such a transformation in the healthcare system is all fully aligned with our blueprint for decentralized diagnostics – something we had envisioned even before the pandemic. Improved access to healthcare brought by innovative diagnostics parallels the approach taken by global healthcare organizations to attain the UN Sustainable Development Goal 3: 'Health and Well-being'.

Meanwhile, we are keenly aware that translating such opportunities into actual outcomes and becoming an unrivaled industry leader is no easy feat. For this reason, we initiated the development of a systemic phase-specific growth strategy since the second half of 2021 to reinforce our position in our core business areas. This strategy will guide our efforts to complete the key product line for our miLab™ platform in the Set-up phase while developing high value-added and innovative cartridges and expanding on/offline remote diagnostic services in the Scale-up phase, and will allow us access to broader business territories of B2C healthcare solutions and the development of a global diagnostic platform in the Global Platform phase. Our 2022 goal is to define major milestones from the research, product development, business and operational aspects in alignment with this growth strategy.

Mid/long-term foundation for solid growth and exceptional performance, our mission and sustainability

Since day one, Noul’s organizational operation has always been guided by two overarching principles. The first is to create blended value through the integration of our business model with the impact model. The second is to embed our sustainability philosophy into our daily business system. While our stakeholders frequently comment on the unique purpose and value-driven identity of Noul, both our management and team believe that our goals are in fact not that outlandish at all. There will soon come a day when we all fully embrace the concept that redefines corporate purpose as one that assumes responsibility to its stakeholders, irrespective of industry or locale, as evidenced in the Davos Manifesto 2020 of the World Economic Forum, the Statement on the Purpose of a Corporation from the Business Roundtable, and the EU’s Corporate Sustainability Reporting Directive (CSRD).

Even though we are still a startup in its growth phase and thus cannot showcase much yet in terms of sustainability accomplishments, we are committed to building our strategy and system in line with our growth lifecycle. Likewise, we will improve in the areas of labor & human rights, environment & climate change, and health & safety through employee engagement. Eventually, our efforts, both big and small, will begin to stack up and the thread of sustainability will weave itself through the fabric of our entire organization. We are confident that such endeavors will truly sharpen our competitive edge, innovate our technology and processes, and maximize our organizational capability over the mid- to long-term.

Following our listing on KOSDAQ in March 2022, we reaffirmed our 2030 aspiration on all levels: we will grow into a global provider of products and services that impact one billion human lives across the world. Now that we have achieved the structural integration of our business and impact models, this goal embodies our commitment to establishing a reliable sales structure and rock-solid profitability. Since our foundation, we have not given much notice to our competitors or industry leaders. Rather, we have fixed our gaze on our unique mission and dream. We will continue to promote our own aspirations and blaze a new trail to improve access to healthcare through innovative diagnostics as a ‘Pathfinder of Decentralized Diagnostics’.

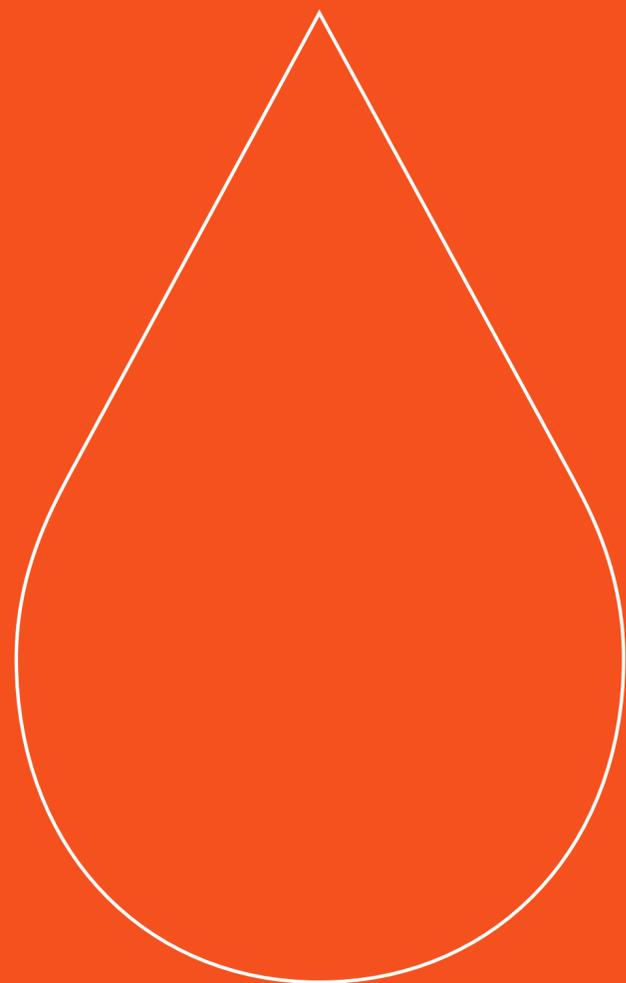
Thank you.



Chief Sustainability Officer
Justin Ahn

Chief Executive Officer
David Lim

Part. I



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Our Mission

Our WHY

“ We explore global challenges that threaten human health and life, discover novel potential solutions, and realize those possibilities. ”

Our Vision

Noul Ambition 2030

“ We will evolve into a global healthcare company through world-class products and services that impact the lives of a billion people around the world. ”

01

Noul is the only decentralized diagnostic testing platform company in the world.

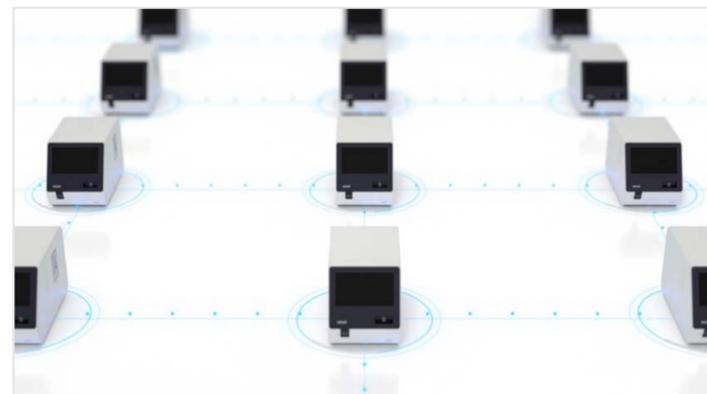
Since our inception in 2015, we have remained focused on developing innovative products that deliver accurate, hospital-grade diagnostic testing even to local clinics lacking full lab infrastructure. The sum of our endeavors has allowed us to create miLab™, the world's first and only diagnostic testing platform which fully automates the entire process – from sample preparation to embedded AI-based analysis. miLab™ is blazing a new trail in the field of decentralized diagnostic testing, finding its applications into a wide array of diagnostic tests, including but not limited to malaria diagnostics, blood analysis and cancer screening.



02

Noul leverages future-driven convergence technology to pioneer telehealth and accelerate the digitalization of diagnostic testing.

We have developed over 40 AI, bio, and platform component technologies to enable telehealth and the digitalization of diagnostic testing. Our innovative technologies which have been integrated and used on the miLab™ platform – NGS solid-based staining, (the world's first and Noul's proprietary technology), embedded AI optimized for decentralized diagnostic testing products, and platform technologies with micro-level precision – are expected to expedite the digital innovation of diagnostic testing. This is truly revolutionary as manual labor had been the modus operandi for the past century, along with the fact that test results can be applied remotely in real-time. In harnessing our original convergence technology, we create a new paradigm in telehealth, a rapidly expanding sector in the wake of COVID-19.



03

Noul improves healthcare access in such essential diagnostic tests as blood testing and cancer screening, creating business value in the process.

Our business model and growth roadmap are aligned with our aspiration to dramatically improve healthcare access in many global regions lacking adequate healthcare infrastructure. Our miLab™ platform focuses on diagnostic testing which falls into the jurisdiction of blood and tissue analyses performed via microscopic examinations, and holds immense market growth potential while providing an opportunity to improve healthcare access. In 2020, we completed the development of our blood diagnostics solutions for malaria, one of the three major infectious diseases in the world, and developed our blood morphological analysis solutions in 2021. We plan to extend the scope of our testing solutions annually to include screenings such as those on cervical cancer, and cover cancer and other essential diagnostic tests under our platform over the mid- to long-term. In so doing, we will evolve into a global company that creates a positive impact on both business and society.



Our core business area is directly aligned with the UN Sustainable Development Goal 3 'Good Health and Well-being'. Our goal for healthcare access directly

contributes to attaining the SDGs Target 3.3, and our goal for precision cancer diagnostics also contributes to reaching the SDGs Target 3.4.

*The UN Sustainable Development Goals (SDGs) set out 17 goals for the international community to achieve by 2030 to advance sustainable development insofar as ending global poverty, advancing health and a creating a higher quality of life, promoting inclusive growth, and responding to climate change.

Company name

Noul Co., Ltd

Main products and services

AI-based digital diagnostics platform, miLab™

- miLab™ MAL (Malaria) : Blood testing solution for Malaria
- miLab™ BCM (Blood Cell Morphology) : Morphology-based blood analysis solution

Headquarters and manufacturing facility

9/10F, Building B, 338, Gwanggyojungang-ro, Suji-gu, Yongin-si, Gyeonggi-do, Korea

Global network

Noul GmbH (Basel, Switzerland) – Regional base for collaboration and marketing with international organizations and global pharmaceutical companies

Noul Tropical Infectious Diseases Center (Mzuzu, Malawi) – Research center focused on febrile diseases and antibiotic resistance

Business area

Healthcare | Global in-vitro diagnostics and tele-diagnostics

Sales

USD 1.3 million

Capital

USD 4.2 million

R&D expenses

USD 5.1 million

Investments

Pre-IPO (Jul. 2021): USD 11.0 million

IPO (Mar. 2022): USD 13 million

Product sales

41 miLab™ devices | 9,820 miLab™ cartridges

104 persons

*Current exchange rate(1,185.50 won/USD) was applied to balance sheet components, and average exchange rate(1,144.42 won/USD) was applied to income statement components.

miLab™ Diagnostics Platform

Noul's miLab™ Diagnostics Platform enables decentralized, on-site diagnostics. This platform delivers unsurpassed diagnostic convenience all while maintaining the accuracy of microscopic testing which is considered the gold standard for diagnostic testing. miLab™ automatically performs the microscopic test process from sample preparation to imaging and embedded AI analytics, and produces precise analysis results within just 15 minutes. miLab™ is powered by the amalgamation of innovative, cutting-edge computer vision, AI, bio, HW and the SW technologies currently available today.



Minimizing the need for diagnostic labs, large equipment, and professional staff

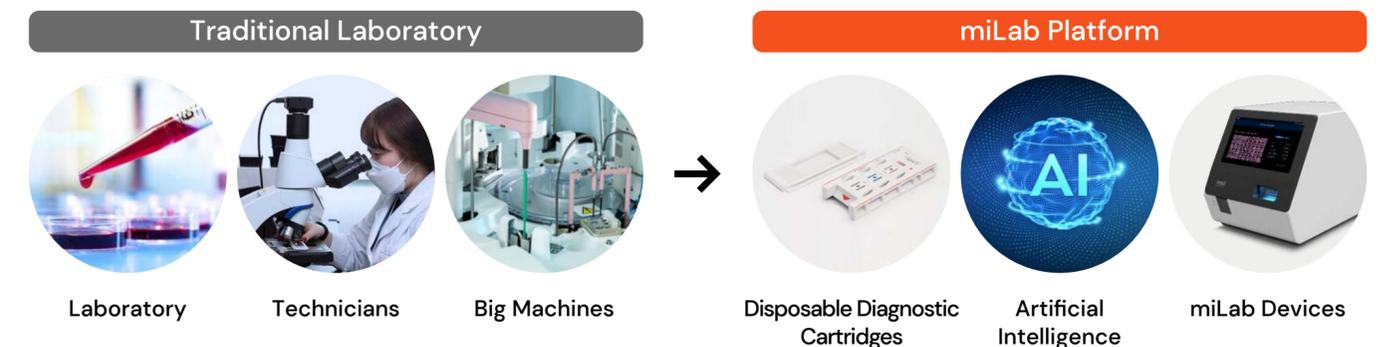
With miLab™, the conventional diagnostic lab is replaced with 'disposable diagnostic cartridges', professionals with 'Artificial Intelligence', and large equipment with 'miLab™ devices' to enable diagnostic testing even in medically-underserved surroundings. Simply by replacing disposable diagnostic cartridges on a single device, miLab™ is made scalable to a wide array of microscopic diagnostic areas, including but not limited to blood analysis, malaria diagnosis, and cervical cancer screening.

Prompt and accurate execution of complex diagnostic testing

miLab™ is faster and more accurate than the microscopic tests performed by professionals. Such tests require the manual execution of a highly complicated process, from sample preparation and smear to fixation, staining and analysis. miLab™ fully automates all such procedures and is more than twice as fast as conventional methods. The trained AI algorithms of miLab™ also greatly mitigate human error, and save on testing resources such as reagents.

Improved diagnostic efficiency through tele-diagnostics

The test results for the blood cells miLab™ analyzes are stored in digital image format, and can be used as basic data for telehealth. Healthcare professionals can remotely access their patient's miLab™ test results through its software program. This makes disease monitoring and diagnostics more efficient while providing patients with time and cost savings as there is no need for in-person visits to a clinic.



Core Technologies

NGSI solid-based staining: Innovative, environmentally- friendly staining method

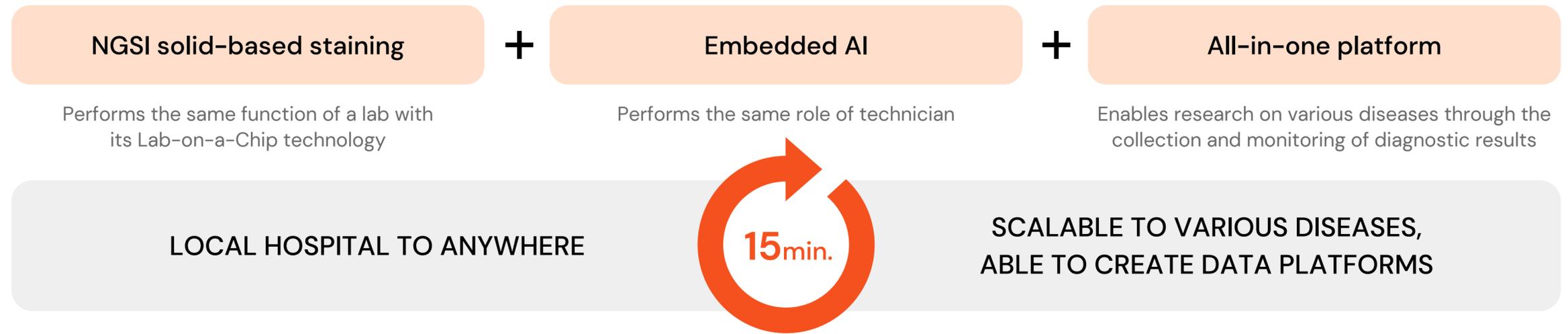
NGSI (Next Generation Staining & immunostaining), one of the core technologies applied to our miLab™ Diagnostics Platform, is our proprietary technology that uses solid-based staining instead of the conventional liquid-based one that labs all over the world have been using for over a century. This drastically cuts down on the amount of specimen needed by up to 1/100, and eliminates the need for cleaning or drying, thus generating zero wastewater in the process.

Embedded AI: Lightweight AI optimized for diagnostic testing

The Artificial Intelligence (AI) embedded in miLab™ operates independently within the embedded system. On the back of unrivaled segmentation, detection, and classification technology, its algorithm capacity is reduced by 1/1000 and its execution time by over 1/3 compared to existing open-source alternatives. miLab™ is capable of performing both staining and analysis to deliver commercial blood and tissue AI testing solutions.

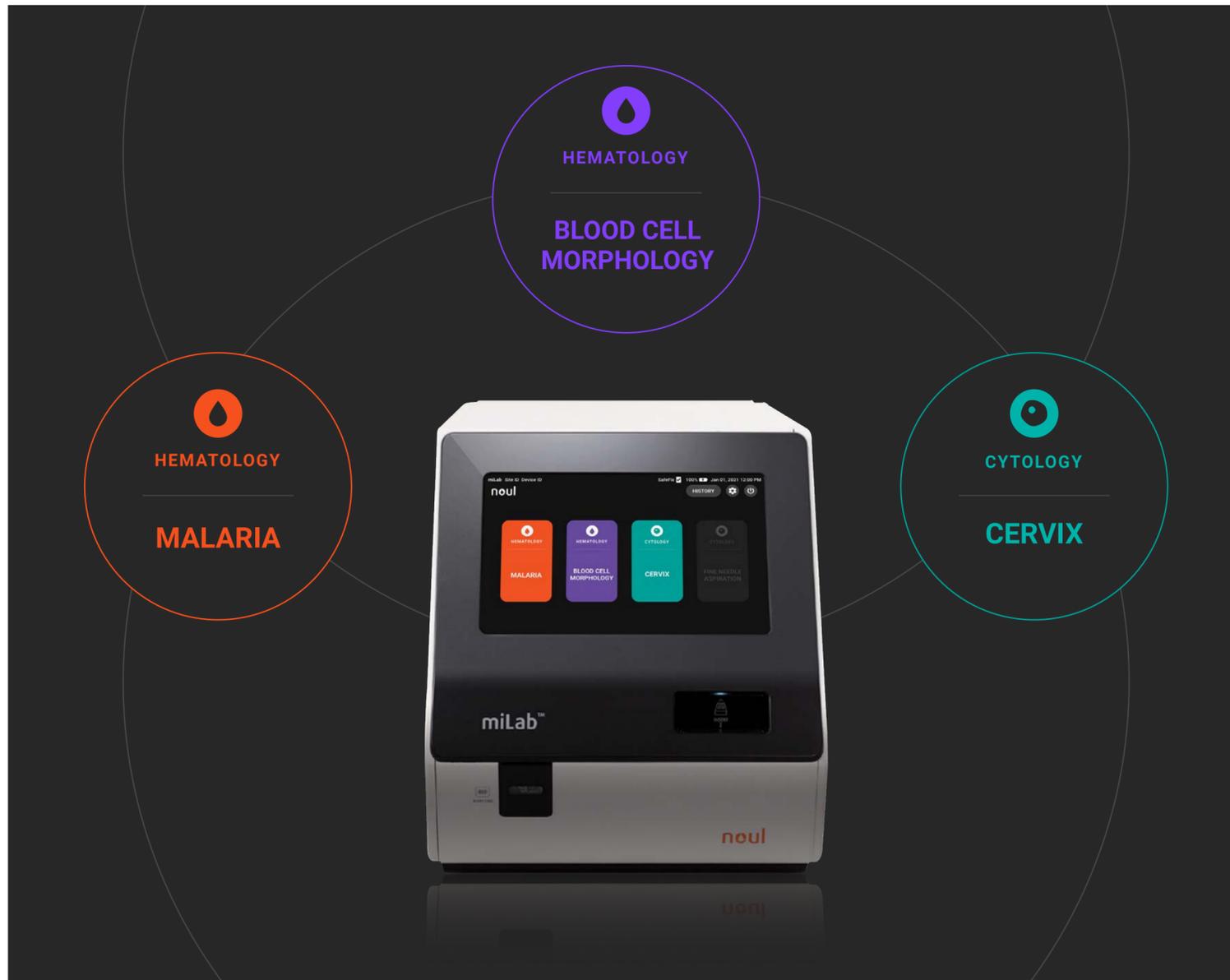
All-in-one Platform: Convergence technology enabling decentralization and digitalization

miLab™ represents our all-in-one platform that performs sample preparation, imaging, and AI analysis at the same time with its fully-automated, compact, AI-embedded digital imaging system. Its data solutions support simple and easy browser access to miLab™ even from overseas or remote locations to analyze testing results.



Product Portfolio

Noul's miLab™ platform consists of miLab™ MAL for malaria analysis and miLab™ BCM for blood analysis, and work is underway to develop miLab™ CER for cervical cancer screening. We will continue to advance our next-generation diagnostic testing line-up based on our current blood analysis solutions, and will broaden our product portfolio to include cancer diagnostics and precision cancer diagnostics over the mid- to long-term.



miLab™ MAL

miLab™ MAL is our blood testing solution for malaria, of which there are over 200 million cases worldwide. Its AI algorithm is capable of detecting two plasmodium species (including their stage) of Plasmodium falciparum (P.f) and Plasmodium vivax (P.v) out of five. Furthermore, this solution shows all infected red blood cells in image form to assist healthcare professionals in distinguishing all five species. Over 200,000 red blood cells are tested in each testing round to improve the accuracy and speed in generating test results.

miLab™ BCM

miLab™ BCM is our morphology-based blood analysis solution. The WBC 5-part differential count and CBC (Complete Blood Count) estimation are the major parameters for any blood testing. Each year, between 13 to 20 billion CBC tests are performed around the world for basic blood tests, and are usually only done at hospitals or at central labs. Furthermore, flagged test results require additional microscopic testing, which only adds to heavier workloads. miLab™ BCM enables basic blood analysis even in medically-underserved locations. Presently, our solution supports the WBC 5-part differential count, and will also add CBC estimation to its coverage.

miLab™ CER (under development)

miLab™ CER is our cell staining and analysis solution for cervical cancer screening. Cervical cancer, the fourth most common cancer in women, is diagnosed through a PAP test. miLab™ CER automates the conventional PAP test with cartridges and software to dramatically streamline the complicated process and lengthy test time, facilitating the detection of abnormal cells through cell analysis.

miLab Dx Platform

for Next-generation Diagnostic Testing

miLab Rx Platform

for Precision Medicine

Malaria & fever diagnosis	BCM	Cancer diagnostics	Cancer profiling	Precision cancer diagnostics
 <p>miLab Dx (spanning Malaria & fever diagnosis, BCM, Cancer diagnostics)</p> <p>miLab Rx (spanning Cancer profiling, Precision cancer diagnostics)</p>				
<p>Malaria (2020)</p> <p>Fever diagnosis (2023)</p>	<p>Blood analysis (2021)</p> <p>Blood cancer, septicemia (2024)</p>	<p>Cervical cancer (2022)</p> <p>Breast cancer (2023)</p> <p>Thyroid cancer (2023)</p>	<p>Cancer profiling (2024)</p>	<p>Precision diagnostics for breast cancer (2025)</p> <p>Precision diagnostics for lung cancer (2025)</p>
 <p>miLab Viewer (spanning all columns)</p>				

Economic & ESG Highlights

Economy

USD 11.0 million

Noul received Series C/Pre-IPO investments
(USD 32.5 million on a cumulative basis)

IPO in the KOSDAQ market

Rated A, A in technology assessments
Cleared the pre-IPO reviews in December 2021
Listed in the KOSDAQ market in March 2022

USD 8.4 million

Selected as a member of the R&D project to develop new cancer profiling platforms

USD 73.0 million

Cumulative contract value as of 2021
(main markets across Africa, Latin America, and Europe)

Innovative pilot product designated by the Public Procurement Service

Completed delivery to 18 sites including the Korea Disease Control and Prevention Agency and various domestic medical institutions

5-fold growth

Growth in sales in 2021 against 2020
(USD 1.3 million in 2021 sales)

Launching miLab™ BCM Cartridge

Created a diagnostics platform that enables cross-diagnostics between MAL and BCM on a single device

Environment

**22 persons,
330 hours in total**

Participants in in-house advanced sustainability training and training hours

Completed by 75% of top management

4 cases

Environmentally-friendly projects led by employees

Initiated the shift to FSC-certified paper for miLab™ packaging

**286.04 tCO2eq
5.86 TJ**

Combined Scope 1 & 2 emissions generated by Noul, pilot measurement of Noul's energy consumption

Society

Introducing OKR

Introduced a company-wide Objectives and Key Results (OKR) system

11 cases

Eliminating health & safety hazards/risk factors, and establishing/amending the occupational health and safety organizational chart

85.1%

My supervisor and colleagues treat me with respect
(Culture of mutual respect)

2021 Engagement Survey results

Survey period: Apr. ~ Sep. 2021
Respondent: 54 employees

2,136 times (20 times/person)

Occasions of real-time feedback provided among colleagues with the introduction of a real-time feedback program

Motivate employees and facilitate a corporate culture of recognition and encouragement

74.1%

"I am surrounded by colleagues who are committed to excellence in their work."
(2021 Employee engagement)

Certified as a Great Employer by Gyeonggi-do

First certified in 2019 and again in 2021

Governance

Appointed 2 outside directors

Strengthened the Board's autonomy in resolutions

0% → 16.6%

Appointed a female outside director to ensure diversity

Part. II

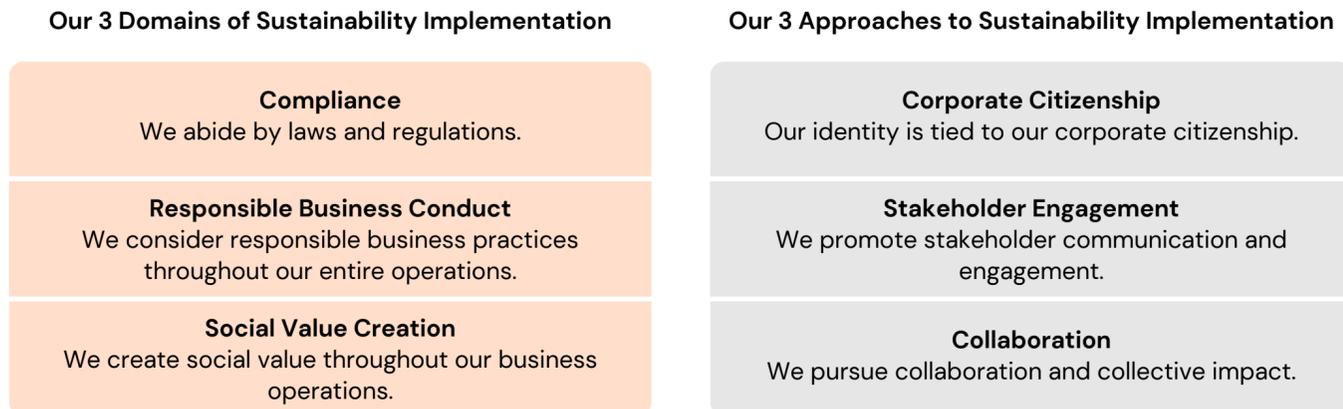
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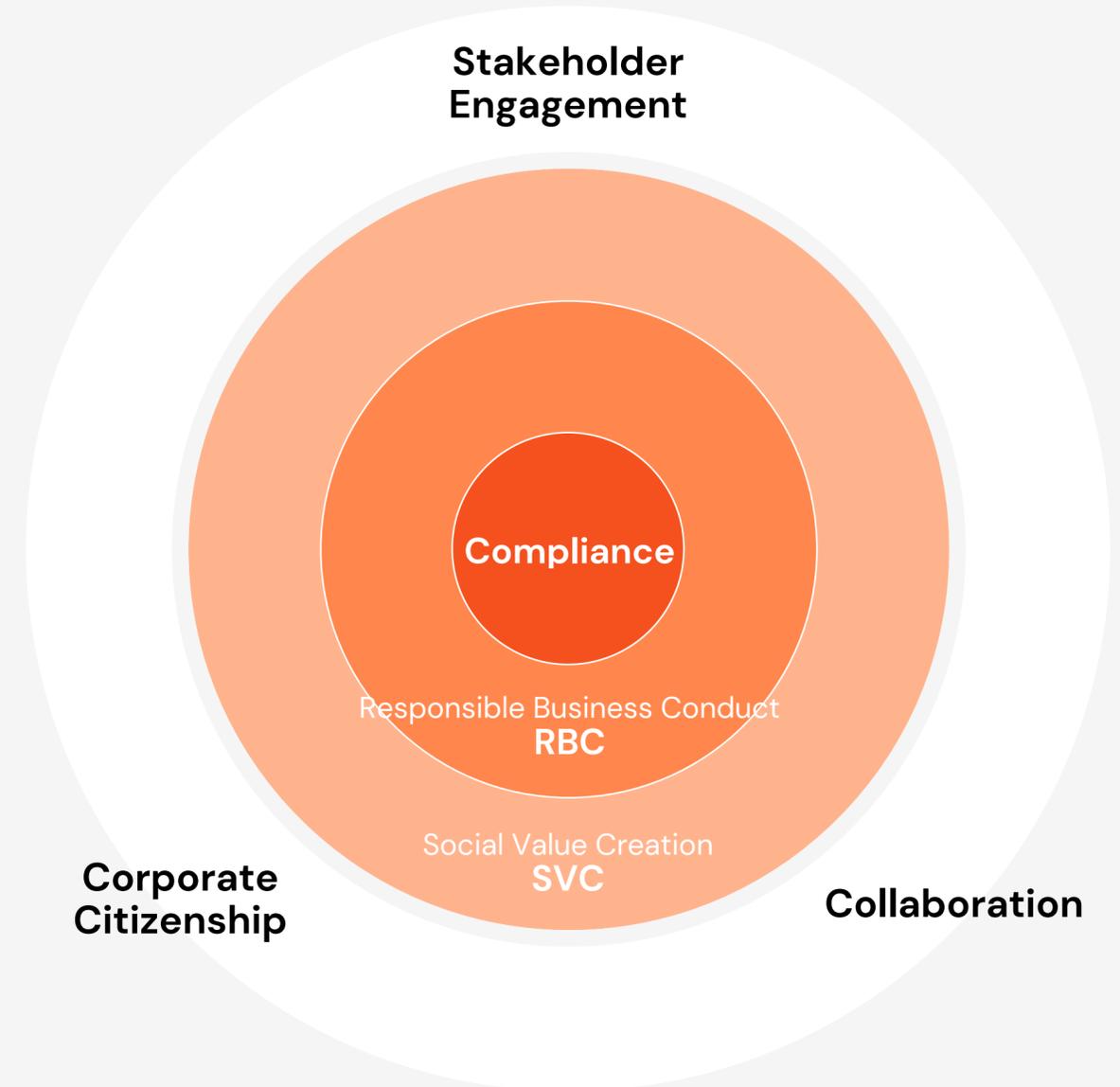
Noul Sustainability Circle

As specified in our Articles of Incorporation, 'our sustainability philosophy forms the foundation of our organizational management' and our overarching mid/long-term approach is to build sustainability across our entire business and organizational operation at the management system level, making steady and needed improvements each year. In December 2020, we established the Noul Sustainability Circle as our company-wide sustainability implementation system to take a more strategic and systemic approach to our sustainability efforts.

The Noul Sustainability Circle is composed of three implementation domains and three approaches. The three domains are Compliance, Responsible Business Conduct (RBC) and Social Value Creation (SVC) from the viewpoint of regulatory binding force, management risk, and stakeholder expectation, and present our priorities and strategic directions for our sustainability implementation. The three approaches highlight the values and principles we aim to live by in advancing sustainability, and include Corporate Citizenship, Stakeholder Engagement, and Collaboration.



In 2021, we focused on taking stock of our organizational status in each of the implementation domains and disseminating awareness among employees in line with the Noul Sustainability Circle. From 2022 onwards, we aim to develop and implement improvement plans on major issues along the value chain in consideration of our growth phase and pace, while we continue to raise awareness among employees.



Noul Sustainability Circle

Governance for Sustainability

Our work to advance sustainability at Noul is driven by the sustainability principles and directions stipulated in our Articles of Incorporation. Our sustainability perspective, which is elaborated upon in the Articles of Incorporation, contains the following.

- **Contribute to the sustainable development of the planet**
- **Create social value through our business conduct**
- **Strike a balance between the creation of economic value and the fulfillment of social and environmental responsibility**
- **Pursue long-term perspectives when it comes to corporate value**
- **Ensure growth and development hand-in-hand with our diverse stakeholders**
- **Embed the sustainability philosophy into our operations**
- **Regularly measure and manage social performance**

We have not yet generated full-scale sales, and have just entered into the growth phase as a diagnostic platform startup. At this point, we remain focused on building an institutional groundwork by creating a sustainability-driven decision-making system and improving organizational awareness on sustainability.

When it comes to making decisions, we take recent trends into account, which underscores the proactive role and responsibility of the Board of Directors in advancing sustainability. Soon after we started doing business, we appointed a Chief Sustainability Officer (CSO) to head our company-wide sustainability operations: the CSO, as a member of senior management and the Board of Directors, is mandated to fulfill his/her responsibility to ensure that sustainability viewpoints are always considered in making management decisions at all levels. The CSO manages Noul's sustainability issues including ones of an economic, environmental or social nature, and directly reports relevant issues to the Board as needed. This ensures that we make sustainability-driven business decisions that can range

anywhere from product development and business planning to organizational culture and public communications in a systemic and impactful manner. Over the mid- to long-term, we will continue to bolster the role of the Board to embed sustainability into our operations along our growth lifecycle, spanning from setting management goals/strategies and managing ESG risks to creating a sustainable corporate culture.

To raise awareness on sustainability at all levels, we developed and implemented the six-week internal sustainability training program entitled 'Sustainability 101' to encourage our entire team to consider sustainability in fulfilling their role. Initiated since the second half of 2021, this program was first attended by our CEO and Chief Scientific Officer – David Lim and Steve Lee – to reaffirm our company-wide commitment to sustainability management. In the second half of 2021, we also independently developed our sustainability self-assessment checklist as a tool to improve our sustainability capabilities in a more systemic and strategic way. We then completed our first sustainability self-assessment in February 2022 through engagement and collaboration with the sustainability department and relevant departments. The self-assessment results will be factored in the development of our short/mid/long-term sustainability improvement plans.

When it comes to managing and reporting sustainability performance, we verify the social performance we generate from our business operations during the concerned year. We ensure they are implemented in alignment with our business purpose, value and strategy following annual settlements pursuant to our Articles of Incorporation, and then summarize and report performance outcomes to the Board. The CSO is directly responsible for the entire process of illustrating Noul's economic, social, and environmental activities and achievements in the form of sustainability reports and for reviewing and approving such reports from the Board. In March 2021, we published our first sustainability report, which was reviewed and approved by the Board.



'Sustainability 101' Program

Sustainability Performance Management

To flexibly respond to changing internal/external business conditions while consistently advancing sustainability as our management philosophy, we developed a checklist which covers sustainability performance metrics and conducted a self-assessment accordingly between the second half of 2021 and February 2022. We selected and reviewed the K-ESG Guidelines, the Korea Corporate Governance Service’s best practices and other domestic and international ESG guides and indicators as well as global indicators associated with sustainability/ESG/ impacts including the GRI Standards and the Stakeholder Capitalism Metrics of the World Economic Forum. This work allowed us to create the sustainability checklist which consisted of 77 items across 23 areas for each of the seven stakeholder groups in alignment with the Noul Sustainability Circle, our sustainability implementation system.

Categories and Major Indicators aligned with the NSC

Noul Sustainability Circle (NSC)		Indicator Description
Implementation Approach	Corporate citizenship identity	1 indicator on purpose-driven management commitment
	Communication and engagement with stakeholders	2 indicators on stakeholder issues and communication
	Pursuit of collaboration and collective impact	(to be developed)
Implementation Domain	Compliance with laws and regulations	6 indicators on regulatory non-compliance
	Responsible Business Conduct	24 indicators on shareholders
		19 indicators on employees
		6 indicators on customers/consumers
		3 indicators on supply chains
		1 indicator on communities
	15 indicators on the environment	
Social Value Creation through business conduct	(to be developed)	

Since our foundation, there has not been an explicit demand for ESG on the part of our external stakeholders and investors, and we are not subject to external ESG assessments given the size of our sales or organization. Still yet, we would like to push ahead in meeting the ESG standards that have become the norm in the global business community, so that we can advance sustainability based on our management purpose and philosophy. As we are evolving at an extraordinary pace in developing products and growing our organization as a diagnostic platform company, we believe it is in the best interest of both Noul and its stakeholders over the mid- to long-term that we take preemptive action in managing our sustainability goals and achievements, if just even at a basic level. It is from this vantage that we reflected the ESG expectations made of global businesses into our checklist as comprehensively as possible.

In January 2022, we used the 77-item checklist to perform sustainability self-assessments. These assessments were conducted across the board, with the sustainability department taking the lead and 12 departments participating: compliance, HR, finance & accounting, health & safety, quality system, sales/marketing, IT/security, procurement, manufacturing, and development.

The first sustainability self-assessments revealed that our progress against the sustainability goals on the checklist was 25% in 2021. While our progress was in the medium range (34~66%) when it came to employees and customers/consumers, our activities and achievements were on the low side (0~33%) in terms of regulatory authorities, supply chains, communities, and the environment, and there were particular areas where neither an internal organization nor capabilities had been established yet to support systemic implementation. The main insights we gained from analyzing the assessment results were that our efforts made since our inception to implement and embed sustainability were largely influenced by company-wide priorities at specific time points, department-level capabilities and understanding, and the internal/external conditions surrounding us.

Progress Made on Sustainability

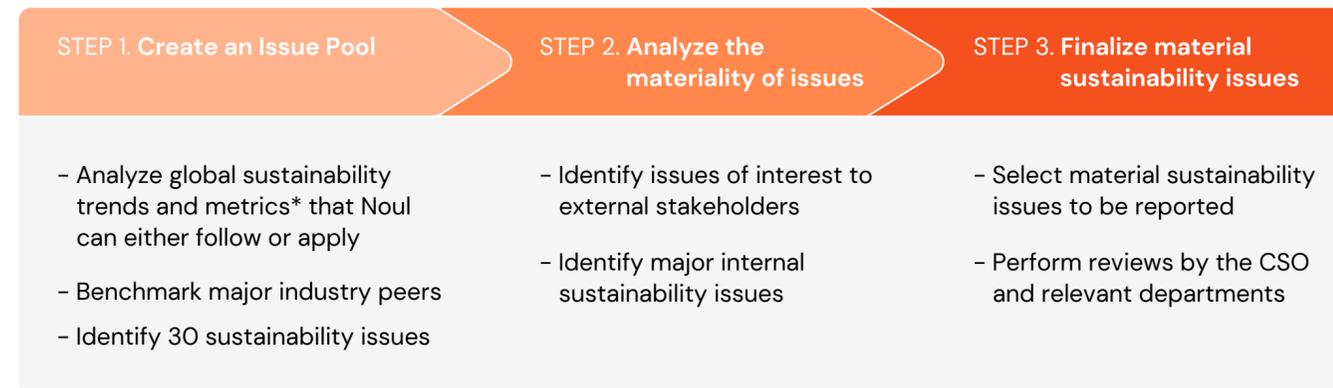
55 indicators	11 indicators	11 indicators
Low (0~33%)	Medium (34~66%)	High (67~100%)

We take the assessment results as the starting point of our sustainability journey and will regularly assess our sustainability status to further our sustainability capabilities and achievements proactively and systematically in line with our business growth. We will also transparently disclose our self-assessment results and improvements we have made to our stakeholders.

Identification of Material issues

Overall, we are moving forward to systematically identify sustainability issues material to our company and reflect such issues in making business decisions while transparently reporting our activities and achievements on material issues to stakeholders. As we are a diagnostic platform start-up still in its growth phase, we have not yet established a well-organized, company-wide materiality assessment process. Since our major stakeholders, namely investors and customers, have not officially commented on or requested for sustainability, it won't be until we mass-produce products and advance into the global markets in earnest that we can properly identify stakeholder expectations and our sustainability impact in actuality. Our present focus is more on internal research and analysis while referring to international standards on sustainability reporting in identifying and managing our material sustainability issues.

In 2021, we created an Issue Pool in line with global sustainability trends and industry-specific materiality metrics, and identified issues that interest our external stakeholders based on their impact. Internally, we reviewed self-assessment results based on our independently-developed sustainability performance indicators to identify major sustainability issues from the business impact perspective. Finally, we comprehensively reviewed internal/external issues to select our material sustainability issues.



*The analysis of global trends and metrics conducted to create an issue pool primarily covered the UNGC 10 principles, the WEF Global Risk Horizon, the GRI Standards, and media research. Healthcare and medical device sector issues and their materiality were reviewed with a focus on the MSCI Industry Materiality Map and the SASB Materiality Finder.

As a result of our independent analyses and internal reviews, a total of seven material issues were finalized, including one in the governance area, four in the social area, and two in the environmental area. Each of these material issues are outlined in the Our Focus section of this report, along with our major activities and achievements as well as future plans.

Material Issues Identified in 2021

Area	Issue	Our Activity	Report Section
Governance	Sound governance	Improve the expertise and diversity of the Board of Directors, strengthen internal controls	Governance
Social	Product quality and safety	Improve the quality system, strengthen risk management	Quality Improvement
	Protection and labor /human rights	Establish a grievance handling process	Human and Labor Rights
	Employee capacity building	Introduce a performance management system, bolster the feedback program	Capacity Building
	Healthcare access	Sign contracts with sales partners in key locations, chosen as a research project in the cancer diagnostics area	Market Entry and R&D
Environmental	GHG emissions management	Measure GHG emissions, switch to eco-friendly packaging	Environment and Climate Change
	Environmentally-friendly products and processes		

Part. III

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We chose nine reporting topics from the two perspectives of material issues relevant to our stakeholders and growth milestones we need to attain as a startup. For each of these issues, we present our approach, activities and achievements, and future plans.



Growth Milestone

Meaningful outcomes we pursue in our development into a mission-driven venture business



Material Issue

Issues identified through the materiality assessment process

IPO on KOSDAQ

Earning credibility in our technology, business feasibility and management capability through technology special listing

In the course of 2021, Noul received pre-IPO investments, cleared technology assessments, and requested and gained approval for pre-IPO screening to finally become listed on the KOSDAQ market in March 2022. Along each step of the way, rigorous due diligence and evaluations were made on our technology, business feasibility, management ability and our overall organizational capability. In the end, we reached each milestone within the set limit, which again served to secure stakeholder confidence in our exceptional technology and growth potential.

Attracting pre-IPO investments to establish financial soundness

Following the Series B investments completed in 2020, we received pre-IPO investments valued at approximately USD 11.0 million from the four organizations of DAYLI Partners, Smilegate Investment, Albatross Investment, and Premier Partners. All four of them are our existing investors and expedited their investment due to their confidence in our mid/long-term growth potential, which enabled us to place greater focus on our core business operations. These pre-IPO investments also improved our financial structure and helped to ensure our financial soundness and manage IPO-related risks. By completing this round of pre-IPO investments, our cumulative investments, since our foundation, amounted to USD 32.5 million.

In May 2021, we were rated A for our 'next-generation convergence-driven in-vitro diagnostics technology' and 'precision medicine platform technology' by Ecredible and NICE dun & bradstreet respectively, to pass technology assessments. A-ratings are only granted to companies whose level of technology is advanced enough to protect them from fluctuations in the business landscape. This was a significant achievement as it highly recognized our technology and growth potential and enabled us to meet pre-requirements for special technology track listing.

Approved for pre-IPO screening

Noul submitted its application for pre-IPO screening to the Korea Exchange on August 26, 2021 and underwent IPO screening for four months before finally gaining approval in pre-IPO screening on December 23, 2021. The IPO screening validated that our company is able to 1) operate as a lasting entity following its IPO (business continuity), 2) ensure transparency in corporate governance, internal control, and transactions entered into related parties (management transparency), 3) substantially maintain business conduct in consideration of relationships among equity owners and change in equity ownership (management stability), and 4) extend proper protection to investors. This process demonstrated that we established the fundamentals required for listed companies to grant us approval in pre-IPO screening. In particular, this constituted a rare case where a venture

business which pursues its distinctive social mission and sustainability philosophy is also recognized for all of its technology, growth potential, and management competency on par with listed companies. As such, being approved for pre-IPO screening was a meaningful achievement in our growth roadmap and an opportunity to once again realize our responsibility to our stakeholders.

Listed on the KOSDAQ market in March 2022

After being approved for pre-IPO screening, we diligently made the necessary preparations to submit our securities registration statement and host IR events for institutional investors to ultimately float our stock on the KOSDAQ market in March 2022. We issued 1.5 million new shares at KRW 10,000 (Approx. USD 8.4) per share to raise nearly USD 12.5 billion in funds (excluding issuance costs). The IPO enabled us to secure much-needed investment and operational funds to establish a system to fuel our full-fledged growth into a global business and prepare our future portfolio.

The funds raised through pre-IPO investments and our listing on the KOSDAQ will go towards R&D to upgrade our miLab™ Dx and launch our miLab™ Rx on the market, expanding our GMP-compliant manufacturing facility to secure production capacity, recruiting talent and bolstering training, and facilitating marketing campaigns.

Such funds will also go towards R&D to implement our product roadmap, expanding our GMP-compliant manufacturing facility to secure production capacity, recruiting talent and strengthening organizational capacity, and to global sales and marketing activities. We will also consider our listing as an opportunity to reach out to our shareholders and stakeholders more effectively to eliminate information asymmetries and help improve transparency in the capital market. By creating and effectively operating an independent and professional Board of Directors, Noul will position itself as a responsible business that assumes a balanced approach to all stakeholder interests.



Acceleration of Market Entry



Kicking off meaningful sales in the domestic/international markets and expanding global business

We released our malaria diagnostics solution miLab™ MAL in 2021 and initiated full-scale sales in Korea and overseas. We then developed miLab™ BCM, capable of performing blood cell morphology analyses, and showcased our miLab™ line-up as a platform that enables multiple diagnoses on a single device at global exhibitions. Going forward, we will pursue meaningful sales expansion through global sales/marketing activities and accelerate our advancement into the global market.

Releasing miLab™ MAL for malaria diagnostics and surveillance for major markets

In August 2021, we signed exclusive supply and sales contracts with our partners in Nigeria and the Democratic Republic of the Congo. Supplying our malaria diagnostics platform to Nigeria, which bears the burden for the world's highest number of malaria cases, and working to implement our miLab™ platform in the Democratic Republic of the Congo which comes only second after Nigeria in malaria cases, we established a mid/long-term growth momentum in the African market. Leveraging our existing network of partners to expand our miLab™ sales across the entire West African region which accounts for 49% of the global malaria incidence, we will fully initiate our advancement into the global malaria market.

To support the effective implementation of Korea's infectious disease surveillance project, we have been teaming up with the Public Procurement Office to undertake a project on domestic malaria diagnostics since 2020 and our miLab™ platform was registered by the Office as an innovative pilot product in the process. In 2021, we marketed our miLab™ platform through the Office to a total of 18 domestic sites, including the Korea Disease Control and Prevention Agency (KDCA) headquarters and its 13 associated public health centers and hospitals, the Korea Association of Health Promotion, and Yonsei University. In partnership with these organizations, we also implemented a project to verify miLab™'s applicability into parasitic infections and general blood cell analyses, and expect this project to contribute to building a monitoring and surveillance system for malaria which has yet to be eradicated in Korea.

In June 2021, we signed an exclusive sales contract with a dealer that owns a domestic diagnostic devices distribution network, and are working to further expand our sales accounts in addition to distributing our miLab™ platform mainly in the public market through the Public Procurement Office or the KDCA. Furthermore, we closed miLab™ sales deals with KOICA's overseas branches and other organizations in need of malaria research and local diagnostics capabilities and supplied our products accordingly.

Launching miLab™ BCM and attending marketing exhibitions

In November 2021, we attended MEDICA, one of the world's largest medical technology trade fairs, hosted in

Dusseldorf, Germany, to showcase miLab™ BCM, the second product on our miLab™ platform. miLab™ BCM, our blood morphology analysis perform, harnesses the power of AI to analyze the 5 types of white blood cells and their counts in digital image form. Potential partners from more than 200 locations around the world stopped by our booth to discuss the applications of miLab™ MAL and miLab™ BCM.

We followed up on such discussions through working with these partners to explore further business opportunities. Work is currently underway to conduct credible validation tests with a malaria research institute in Spain, and an exclusive supply contract was signed with our Spanish partner to cover both Spain and Portugal. Another ongoing validation test is with our Romanian partner for our new offering miLab™ BCM, and an MOU has been signed to also cover the Greek market. From Spain and Romania, we will tap into the European market for our miLab™ platform, and are engaging in business communications with potential partners in Europe, Asia, Africa, and Central & Latin America.

We entered into a sales contract with the Seoul National University Industry-Academic Cooperation Foundation for joint research on Immunohistochemical Staining (IHC) through our miLab™ platform, and shipments have been made accordingly.

In 2021, when we first advanced into the market full-scale, our cumulative contract value amounted to a total of USD 73.0 million, and major markets spanned West Africa including Nigeria, Democratic Republic of the Congo, Western Europe (including Spain and Portugal), and Eastern Europe (including Romania and Greece). As we have established our sales/marketing organization and bolstered our organizational capabilities since the second half of 2021, we will implement more strategic and systemic sales and marketing operations for market entry and accelerate our advancement across global markets in so doing.

2022 Plans

Our 2022 plan is to successfully complete the validation tests being performed across various nations and move onto product sales while working to advance into other countries. We will also review possible improvements on our current miLab™ platform through market feedback to continuously upgrade our offerings. The following outlines our major plans for 2022 to expand global sales and market opportunities.

- Explore and implement responses to the planned transition of CE marking into the IVDR (In-Vitro Diagnostic Regulation) from May 2022
- Develop mid/long-term country-specific tailor made sales strategies to improve healthcare access
- Attend Arabhealth and MedMab and secure a strategic sales network in the Middle East, the Commonwealth Independent States (CIS) region and Asia
- Attend world-renowned medical conferences (ISLH*, AACC**, etc.) to publicize our products and secure market cooperation opportunities

*International Society for Laboratory Hematology

**American Association for Clinical Chemistry

Research & Development

Selected as a member of a large-scale cancer diagnostics research project and undertaking next-generation research in earnest

To broaden the application of our owned technology and develop new technology specific from the viewpoint of healthcare access, we move ahead in conducting R&D on next-generation diagnostic testing and precision medicine. We have sped up our development of new technology to expand the scope of our miLab™ platform – from malaria and BCM diagnosis to a range of tests, including cervical cancer which presents severe healthcare equity issues. Meanwhile, we are making bold investments in R&D and clinical operations to improve access for those in need from resource-strained Low-Income Countries (LIC) and Low-to-Middle Income Countries (LMIC)

Chosen as a member of the government-led research project to develop new cancer profiling platforms

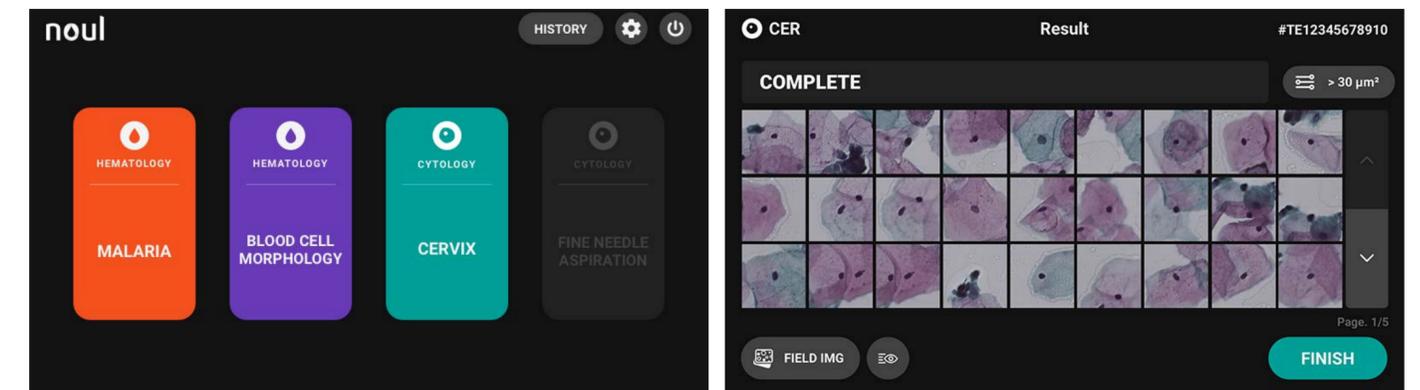
Building upon our successful track record in R&D projects, we were chosen to implement a USD 8.4 million research project to develop new cancer profiling platforms led by the Ministry of Trade, Industry and Energy in December 2021. In undertaking this project, we started exploring next-generation cancer profiling and precision diagnostics platforms through pushing the current boundary of available analysis further. This particular international joint technology development project is joined by world-renowned partners with top-notch technology in their respective field – Boston Children’s Hospital, Seoul National University, Yonsei University, and Seoul Asan Medical Center.

- **Project name: International joint R&D technology development project by the Ministry of Trade, Industry and Energy**
- **Research period: Dec. 1, 2021 ~ Nov. 30, 2024**
 - Phase 1: Development of Nanobody-enhanced Chiral Nanoparticle Assay for Hyperplexed and Spatially Resolved, Quantitative Cancer Profiling
 - Phase 2: Development of High-sensitivity hypercolor-polarization imaging technology for cancer profiling

In participating in this three-year development project, we will develop promising technology and deliver products for precision medicine.

Developing miLab™ CER for cervical cancer screening, the third product in the miLab™ CER portfolio

We have been developing the third product in the miLab™ portfolio, miLab™ CER, since the second half of 2021. As a cytology testing device designed for cervical cancer screening, miLab™ CER combines the conventional Papanicolaou (PAP) cell stain with NGSI, Noul’s proprietary solid-based stain technology. Our miLab™ device automates cell staining and supports imaging and analytics to assist users with the identification of major cells and rapid analyses.



Between the second half of 2021 and the first half of 2022, we engaged in R&D prototyping on solid-based PAP staining, the core technology to be applied to our products, as well as on cell morphology analysis. From May 2022 when this prototyping is completed, we will initiate development for full-fledged commercialization and mass production transfer.

While cervical cancer is the fourth most common cancer among women with more than 400,000 cases occurring globally, it can also be prevented with vaccines. The WHO set a goal to increase the ratio of women screened with a high-performance test to 70% in the next five years. Despite the efforts of individual countries in implementing their own cervical cancer prevention programs, there is still a shortage of accurate and highly accessible diagnostic tools. In developing miLab™ CER, Noul aims to improve accessibility to the cytology tests that are most commonly used for cervical cancer diagnostics and expand cervical cancer screening in the LICs and LMICs in the future.

*WHO Cancer Today: [GLOBOCAN 2020](#)

**WHO: [Global strategy to accelerate the elimination of cervical cancer as a public health problem.](#)

R&D Outcomes on miLab™ CER

	Pain Points that Undermine Accessibility	R&D Outcomes on miLab™ CER	Expected Benefits
Stain	The complexity of the PAP stain process makes it difficult to perform onsite diagnostics in the absence of lab facilities and professionals.	First-ever solid-based PAP stain enabled by NGSi technology <ul style="list-style-type: none"> Minimize reagent requirements: 7 reagents → 1 cartridge Dramatically streamline the stain process: 30 steps → 5 steps Reduce the turnaround time: 30 minutes → 7 minutes and 40 seconds 	Minimize dependence on large-sized lab infrastructure and professionals to enable on-site PAP staining
		High consistency when compared to the gold standard stain: 88~96%	
Readout	Expertise is required in terms of the time it takes to analyze cells and the complexity of the analysis.	Assist diagnostics through cell analysis (nucleus size, etc.)	Improve analytical efficiency through cell analysis

Noul's solid stain technology featured in the ACS journal

In April 2021, a paper introducing Noul's innovative solid-based stain technology (NGSI) was featured in the ACS Appl. Mater. Interfaces, the journal of the American Chemical Society. Titled 'Hydrogel-Based Stamping Technology for Solution-Free Blood Cell Staining', this paper illustrated our NGSI technology as an easy-to-use, reproducible, and reasonable blood cell stain technique which eliminates the need for separate staining reagents.

*Jae-Hyeok Choi, et al. Hydrogel-Based Stamping Technology for Solution-Free Blood Cell Staining, ACS Appl. Mater. Interfaces, 2021

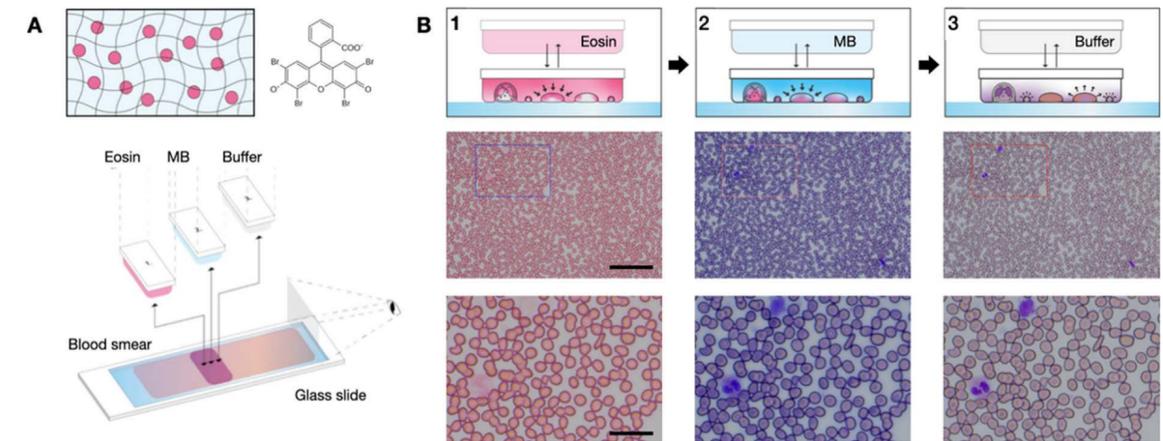
Summary of the paper*

Limitations with the conventional blood smear: Microscopic examinations using blood smears have remained a widely-adopted standard screening procedure in hematology for over a century. Performing accurate microscopic analyses on the blood smear essentially requires experienced and skilled technicians, along with appropriate lab equipment and quality water and reagents. This can severely bottleneck the process in low-and middle-income countries (LMIC) which lack such resources, and undermine the quality of blood smears and the accuracy of microscopic tests.

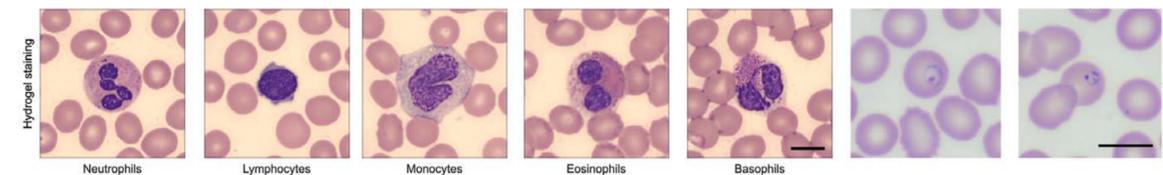
Hydrogel-based stamping: Noul has developed hydrogel staining with an aim to improve the accuracy of blood analyses conducted in LMICs. Three types of hydrogel patches containing dye reagents (eosin, methylene blue/oxidized methylene blue, Azure B and buffer) are sequentially stamped into the blood smears to stain blood cells. Essentially, when dye-containing hydrogels make contact with blood cells, the dyes are transferred to the cells for staining.

Advantages of Hydrogel staining: Hydrogel staining takes no more than four minutes to generate a high-quality, easily reproducible blood smear sample. It reduces testing and manufacturing costs, all while reducing biological waste, and ultimately provides highly accurate diagnostics within the reach of LMICs, which are often inadequate in resources.

[Figure] Schematic of the 3-Step Hydrogel Stamping for Blood Staining



[Figure] White Blood Cells and Red Blood Cells Stained with Hydrogel-based Stamping (Scale bar : 10µm)



2022 Plans

We will engage in preemptive R&D activities to ensure the credibility of our released products while compiling evidence for our future portfolio.

- Develop hydrogels which enable staining for diverse types of tissues and cells, including IHC and FNA
- Publish papers in peer-reviewed journals to establish the credibility of our miLab™ platform
- Secure local R&D partnerships to develop cancer diagnostic products that meet the needs of LMICs



Corporate Governance



Laying the groundwork to promote the expertise and diversity of the Board and establish sound governance

We believe that establishing transparent decision-making and internal control systems is the key to proving the legitimacy of our operations to our stakeholders. As such, we aim to identify governance requirements and stakeholder expectations to build sound governance gradually and consistently.

Board activities and operational regulations

We operate the Board of Directors in accordance with our Board operational regulations, the Articles of Incorporation, and applicable laws. The Board makes decisions regarding matters stipulated by laws and/or the Articles of Incorporation, agenda delegated by the General Meeting of Shareholders, and important issues concerning Noul’s basic policy and business execution, while overseeing the work of directors and top management.

As of December 2021, our Board consisted of four inside directors and two outside directors, and was chaired by our CEO David Lim. As an innovative startup and venture company, the Board chairmanship has been assumed by our founder and CEO to expedite and drive our decision-making process. CEO Lim contributes his expertise as a venture capitalist and extensive experience as a diagnostics platform business investor to deeply understand our overall business operations and fuel the growth of Noul. In addition to securing much-needed financial resources since our inception, he led the way in making significant achievements, from developing core solutions to tapping into new markets and planning new business ideas. He has been also actively sharing the details of such achievements with investors and other stakeholders. While we intend to maintain the current structure in the short-term given our status as a growing startup, the overall business conditions and the trust that our investors extend in us, we plan to continuously improve our governance to operate an independent and transparent Board all while staying enterprising as a startup over the mid-to long-term.

We hold regular Board meetings every quarter to deliberate and decide on important management issues, and the Board meets on an ad-hoc basis as needed. In 2021, a total of 11 Board meetings were held to deliberate on 15 agenda items, including granting stock options, appointing a transfer agent, and approving the issuance of new shares for the KOSDAQ listing.

Appointing outside directors to elevate management expertise and independence and ensuring diversity

We appointed two outside directors for their sector-specific expertise in providing us with objective and

Governance

professional oversight and advice to improve the expertise and independence of our business operations and protect the rights and interest of investors. Outside directors were nominated by the Board in consideration of the following criteria, and were appointed by the decision made by the General Meeting of Shareholders. Our outside directors satisfy relevant legal qualifications, are neutral and have no special interest in Noul.

- Expertise and diversity of the Board (specialty, gender)
- Independence of Board operations (ratio of outside directors)
- Likelihood of undermining corporate value or the rights and interests of stakeholders
- Absence of conflicts of interest (transaction relationships, controlling interests, related parties, etc.)
- Compliance with legal requirements (Article 382, Article 542-8 of the Commercial Act)

Outside Directors Appointed

Name	Expertise	Career
Seon Jee Lee, Outside Director	Law/ compliance	(Current) Lawyer, Kim & Chang (Current) Member, Dispute Mediation Committee, Korea Exchange (Current) Member, Law Interpretation Review Committee, Financial Services Commission (Current) Member, Public-Private Partnerships Deliberation Committee, Ministry of Economy and Finance
Seongsoo Jang, Outside Director	Medical diagnostics	(Current) Professor, Department of Laboratory Medicine, Asan Medical Center, University of Ulsan, College of Medicine (Current) President, The Korean BioChip Society (Current) President, The Korean Society of Hematology

Seon Jee Lee has over 20 years of experience in the field of law, and is renowned for her extensive experience and expertise in the areas of structured finance, trust, fin-tech, financial regulations, compliance and regulatory affairs. She brings her exceptional capabilities in assisting to minimize legal risks on major business issues while systematically advancing compliance management through her objective advice. Her appointment was also made in consideration of the diversity of our Board, which previously had no female members.

Seongsoo Jang is an expert in hematology diagnostics, and has long engaged in research to explore accurate and speedy diagnoses of blood diseases and their appropriate treatments. Leveraging his abundant clinical

experience and expertise on diagnostic equipment used in actual clinical settings, he is involved in Noul's major business and R&D decision-making.

Developing and strengthening internal/external controls

While we bear no obligation to introduce internal accounting controls pursuant to Article 8 (1) of the Act On External Audit Of Stock Companies, we preemptively established our internal accounting control system in 2020 and have gradually aligned this system to improve its operational effectiveness and feasibility. In 2021, we reviewed our policies and procedures required for the design, operation, assessment and reporting of our internal accounting control system. Our intent was to prevent any errors that could possibly create any distortions on financial statements to be prepared and disclosed following our listing and to ensure the system is operated in a reasonable and effective manner.

Auditing Board operations through a professional auditor

At the end of 2020, we appointed Wonjang Koh as our professional and independent auditor. As a Certified Public Accountant, he previously served as the CFO at Smilegate Group. He has faithfully attended all Board meetings since his appointment and performed objective audits on the work of our directors. He also properly presented his expert opinion on our accounting and financial operations through the Board to supplement Noul's financial capabilities.

Conducting external audits through a designated auditor

As part of our efforts for the KOSDAQ listing, we continued to apply for designated audits to the Financial Supervisory Service in 2021 following 2020 to ensure the transparency of our accounting operations and the credibility of our financial statement preparations. Deloitte Anjin served as our designated auditor, and we received an 'unqualified opinion' for two years. Our decision to undergo more stringent audit procedures than we would if we had gone with the auditor of our own choosing enabled us to elevate our standards on accounting transparency and financial credibility.

2022 Plans

To bolster sound governance and compliance, we will focus on the following plans in 2022.

- Assess the operational status against the internal accounting control system and report the results to the Board
- Strengthen the role of outside directors through the proactive reporting of business conditions and improve the operational effectiveness of the Board
- Establish a disclosure implementation system as a listed company
- Reinforce company-wide training to raise employees' compliance awareness

Product Quality & Safety



Establishing a quality system to manufacture safe and reliable products

The in-vitro diagnostic medical devices we produce are required to satisfy safety and performance accuracy requirements, and thus are subject to quality standards that are more stringent than those applied to general products. Our response is to develop and implement a roadmap to establish our quality system and follow up with phased and continuous improvements over the mid-to long-term. Our quality system aims to meet the quality standards presented by wide-ranging stakeholders in the market all while complying with domestic/international laws and regulations governing in-vitro diagnostic medical devices as well as international quality management system standards.

Operating and continuously improving the quality management system

Noul designs and manufactures highly reliable and safe medical diagnostic platform devices in accordance with ISO 13485 : 2016, the international quality management system standard, and in-vitro diagnostic medical device manufacturing and quality management standards. Since we developed our quality manuals in conformity with ISO 13485 requirements in 2017, we have received annual internal/external audits to monitor the effective operation of our quality management system and have made sustained improvements accordingly. Our quality manuals were amended in 2021, and were established by verifying the minimum quality management system requirements presented by regulatory authorities in reflection of domestic/international laws and regulations. The progress made in attaining our internal quality goals identified through these quality manuals, is monitored each year in alignment with our company-wide performance management system OKR.

- Quality assessment and due diligence (2021): 2 external audits and 1 internal audit conducted (14 teams, 97 items)



Quality Manual Documentation Hierarchy for Sustainability Management

Training in preparation for approvals

In 2021, we provided a total of 1,360 hours of training to employees from R&D, manufacturing, and quality functions on the topics of design and risk management in relation to the CE IVDR and FDA approvals. Participants were educated on the entire lifecycle of design development under the IVDR framework and relevant documentation practices to help build our internal preparedness for necessary certifications and approvals.

IVDR design management and validation training

- Period: Oct. 2021
- Target and training hours: 25 R&D staff members, 400 hours
- Purpose: Effectively establish a quality system across the entire development process, and successfully meet quality system requirements in preparation for the IVDR
- Detail: Understand the entire lifecycle of design development in conformity with the Regulation 2017/746 (IVDR), and engage in exercises for design input, review, printout, and validity confirmation documentation

IVDR Risk Management Training

- Period: Jan. and Feb. 2022
- Target and training hours: 40 employees from R&D, manufacturing, and quality functions, 960 hours
- Purpose: Develop competency to prepare risk management documents required for FDA & IVDR approvals and build an effective quality system
- Detail: Understand risk management in accordance with ISO 14971:2019 and practice risk management documentation

2022 Plans

We will implement the following plans for 2022 to establish our quality system while making phased and sustained improvements

- Take the risk-based approach to product development and process management
- Develop and advance a quality system for reliable and continuous manufacturing
- Conduct training on quality systems and processes

System and Culture for Human & Labor Rights



Establishing systems and a corporate culture that respect human rights and embrace diversity

With the belief that conducting business with respect for human rights of our team and stakeholders is the very first step to fulfill our social responsibility, we have stipulated our commitment to respecting human rights in our HR regulations. In addition to providing employee training to embed practices of respecting human rights into our day-to-day routines, we are working on our company-wide systems and culture to embrace diversity and prohibit discrimination to promote human rights.

Creating and operating a grievance mechanism

We operate a grievance mechanism that was created to constantly monitor and appropriately act on any discriminatory or unjustified treatment and/or unreasonable practices that could occur in the workplace, including workplace or sexual harassment. Specifically, we stringently abide by our principles of Zero Tolerance and Protection of and Care for the Victim in addressing workplace and sexual harassment among other employee grievances. By adhering to a zero-tolerance stance, we intend to ensure that even seemingly trivial issues are addressed, and hold those responsible accountable with appropriate consequences. Our grievance hotline (speakup@noul.kr) and four grievance counselors are made available for our team to report any difficulties or grievances in addition to workplace and sexual harassment and to work together to find solutions.

Grievance Submitted and Handled in 2021

Grievance Reported	Handling Status	Handling Rate
1 report	Handling completed	100%

Our effort to go beyond discrimination and exclusion towards inclusiveness and equity

Ever since our foundation, we have ensured our hourly part time workers and interns wages exceeding the minimum wage to protect their livelihood in substantial terms. In particular, our interns receive pay pursuant to the living wage stipulated by Gyeonggi-do where we operate, and are provided with equal benefits with their full-time counterparts, apart from our welfare programs designed to promote long-term employment. Going forward, we will continue to keep our wage level above the legal minimum threshold, and will design our systems and policies to prevent discrimination on the grounds of type of employment and others in accessing the opportunities and benefits that we provide.

We operate our pay system on reasonable criteria, including the nature of the job assigned and the experience and competency of individual members. Gender plays no factor when it comes to employee wages. We are committed to creating an equitable business environment where no one is discriminated against on the grounds of gender or other non-work-related factor, and this is something we have implemented across all our HR processes and systems, including in recruitment, assignment, promotion, and wage determination.

Our efforts to increase sensitivity to human rights

While we work to develop policies and systems to ensure diversity internally, we also create a culture for our team that promotes open discussions on diversity and other relevant topics. One such initiative is our celebration of International Women’s Day each year across the company. In 2021, our top management directly produced a congratulatory video to mark the day and express our company-wide commitment to a culture of gender equality. In 2022, roses were presented in commemoration of International Women’s Day, films on gender equality were screened, and an open seminar was hosted for our team members to exchange their ideas on the efforts and actions needed to pursue organizational diversity and inclusion. The open seminar was attended by our CEO and he stated his commitment to expanding leadership opportunities for women.

We conduct legally mandatory training each year on the prevention of sexual harassment in the workplace and on improving perceptions regarding disability. To ensure such training provides a meaningful opportunity to explore and discuss human rights issues in the workplace, we arrange interactive activities and invite field experts to participate in the training. By improving the effectiveness of training as such, we mitigate both discrimination and exclusion and ensure all our team members substantially improve their sensitivity when it comes to gender issues and human rights for people with disabilities.

In the second half of 2021, we reviewed our basic-level human rights issues through sustainability self-assessments, and the review outcomes are integrated into developing policies and implementing improvement plans to advance human rights management at all levels. We plan to perform annual human rights issue reviews either through sustainability self-assessments or separate plans, and will develop appropriate responses to the major issues and risks identified so that we continue to improve.

2022 Plans

‘Human rights’ and ‘diversity & inclusion’ are values we take seriously as a corporate citizen. Our priority for 2022 will be to take the following actions to embed these values more systematically into our policies and systems.

- Improve our grievance mechanism to increase its effectiveness
- Provide company-wide training on human rights and diversity & inclusion
- Identify improvement issues from the viewpoint of labor and human rights, and perform ongoing improvements and monitoring



Member Capacity Enhancement

Pursuing a self-reinforcing growth cycle between Noul and its members through capacity building and work engagement

Talent recruitment and capacity building are highly relevant to any bio/healthcare company. As we aspire to lead the way in the global decentralized diagnostic testing industry, these skills provide the essential key to our success. Since day one, we have explored a wide array of opportunities while making unsparing investments to hire exceptional talent and create an engaging work environment.

Introducing OKR for the shared growth of Noul and its members

We have initiated OKR (Objectives and Key Results) since April 2021 to closely align our organization from department-level work all the way to our corporate mission and to encourage our team to take the initiative with their individual purposes and priorities. In particular, our focus is on embedding CRF (Conversation, Feedback, and Recognition) into our operations to establish a self-reinforcing cycle of our members' individual growth leading to our corporate growth. This follows the entire process of setting, operating and reviewing OKR, rather than on simply setting goals or conducting performance assessments.

OKR was introduced in a phased-in manner: the 'learning' phase covers traditional "book study" and expert mentoring, the 'application' phase allows for a pilot company-wide application, and the 'integration' phase is designed for the integrated operation of a company-wide performance and organizational management system. Our aim in this structure was to balance out the top-down and bottom-up approaches with all our members fully understanding OKR. This process led us to complete the pilot operation of OKR in the first half of 2021 just as planned, and we will pursue the optimization of OKR operations from 2022 onwards in reflection of our distinctive conditions and organizational characteristics.

Regular/ad-hoc feedback and bonus programs for the mutual growth and motivation of our members

We have been operating our annual 360-degree feedback program since early days for any employee who has been with the company for at least four months. First and foremost, this feedback program aims to help our members reflect on their competencies and attitudes through the lens of their coworkers and develop their excellence as integral parts of a team, rather than merely as individuals rating their own performance. Given the nature of this program, feedback items probe beyond employee competency, and in fact, a significant portion of these items are related to cultivating the right mindset and attitude needed to truly live by our corporate mission and values.

In 2021, we initiated annual 180-degree feedback while maintaining the 360-degree feedback program to improve the effectiveness of such initiatives. Under the 180-degree feedback program, employees hand pick the

coworkers who will provide feedback on the items the company designated. This facilitates employees to become more open mind in accepting both positive and corrective feedback. This new 180-degree program has received positive reviews by a majority of our team, and will be instituted as a regular annual program from 2022 onwards.

The Peer Feedback and Bonus program was created as a real-time feedback program and has been operating since 2021. Feedback was introduced to facilitate positive real-time communication among members and to supplement our existing annual feedback program. Any Noul employee who has been with the company for at least three months is welcome to voice their positive feedback, such as gratitude, recognition, and encouragement during work hours in real time. This feedback could be presented along with virtual Noul coins, which, after one year, employees can redeem as a cash-equivalent bonus. This Peer Feedback and Bonus program serves to motivate team members in their daily work life in a fun and interesting way while simultaneously reinforcing positive behaviors.

Improving the engaging work environment through Engagement Surveys

Our annual Engagement Surveys serve to collect members' feedback on their individual engagement, contentment, and overall organizational operation. In 2021, the survey was performed twice in Q1 and Q3, and such results are outlined below.

Key Results of Engagement Surveys in 2021

I'm satisfied with..	It's regrettable that..
<ul style="list-style-type: none"> The culture that respects all members The support the company has provided so I can effectively operate The commitment of my colleagues to work responsibly The interest in and open dialog for growth and development 	<ul style="list-style-type: none"> Recognition and compliments on performed work is lacking. There are communication and collaboration inefficiencies between departments. Support for systemic career growth is inefficient.

As to 'lack of equipment and tools for work execution', which had been pinpointed as an area in need of improvement, we addressed this issue with immediate action and this improved members' satisfaction with the physical work environment accordingly.

Capacity Building

Survey results reveal, however, that there are still necessary improvements in terms of ‘cross-departmental communication’ or ‘opportunities made available for members’ learning and growth’. Our rapid growth inevitably results in a number of issues, and we are working to reinforce our internal capabilities in areas where insufficiencies exist. We will give precedence to issues such as internal communication and learning and growth opportunities that require planning and effort over an extended period of time. These issues will be prioritized in our OKR and will be monitored to pursue substantial improvements.

Institutional supplementation for the work-life harmony of our members

We operate fully flexible schedules so that our members can self-select when and where to start and finish their work in consideration of their own work requirements and conditions. This freedom of choice ensures that our team members, as highly autonomous and responsible individuals, work when and where they can perform at their best. On our part, we proactively invest in collaborative tools and work environment improvements, along with institutional support spanning remote work guides and communication guides, to support such work practices more efficiently. Through integrating flexible work arrangements into our corporate operations, we create a culture more apt to generate exceptional work performance, exceeding the mere practice of providing benefits.

In December 2021, we introduced an attendance management program to more effectively assist our members in striking the work-life harmony. In so doing, we will analyze the underlying reasons behind excessive work and unequal division of labor that could inevitably crop into the culture of growing startups. We will systematically monitor our work practices to fully abide by applicable laws and regulations within the boundary of our limited resources and help our team members build sustainable daily schedules. Going forward, we will continue to supplement our policies and mechanisms to maintain and further develop our work practices, along with a culture driven by the autonomy and sense of responsibility of each team member.

Active job creation and job quality monitoring

In 2021, our total workforce amounted to 104 persons, up by over 40% from the previous year. A number of talented individuals were recruited, including R&D personnel required for the commercialization of our innovative technology, as well as quality-related experts to further boost the safety and reliability of the medical devices we produce. We also hired business administration personnel who will be responsible for designing and operating systems and institutions aligned with our growth cycle to keep pace with our rapid organizational growth.

Meanwhile, our total turnover amounted to 30% as of the end of 2021. When voluntary resignations were counted separately, this figure dropped to 9%, with the remaining representing employment contract terminations. Presently, we engage in project-based research, experimentation or temporary production response work which are confined to a specific period of time. For this reason, we offer short-term part-time work, internships or

contract work as the need arises, which is reflected in the high resignation rates from contract terminations. As our product development and manufacturing stabilizes over the long haul, we plan to reduce our reliance on short-term employment to provide quality jobs that help ensure more stable employment.

2022 Plans

We are deeply committed to prohibiting discrimination on the grounds of gender, age, nationality, race, or disability in recruitment and/or other general organizational operations. In 2022, we will build on this cultural foundation to respect human rights to 1) pursue the qualitative growth and diversity of employment, 2) create a work environment where members find meaning and pleasure in their work, and 3) help members chart out their career path for the mutual growth of the organization and its members. We will primarily focus on the following:

- Recruit members with disabilities and abide by the regulatory requirements to employ people with disabilities
- Make institutional and operational improvements to prevent and manage excessive workloads
- Plan and implement employee engagement programs to create pleasant and rewarding work experience
- Support members’ career vision and growth
- Implement training programs to strengthen leadership skills



Action on the Environment and Climate Change



Initiating our activity to independently measure GHG emissions and pursue the green transition

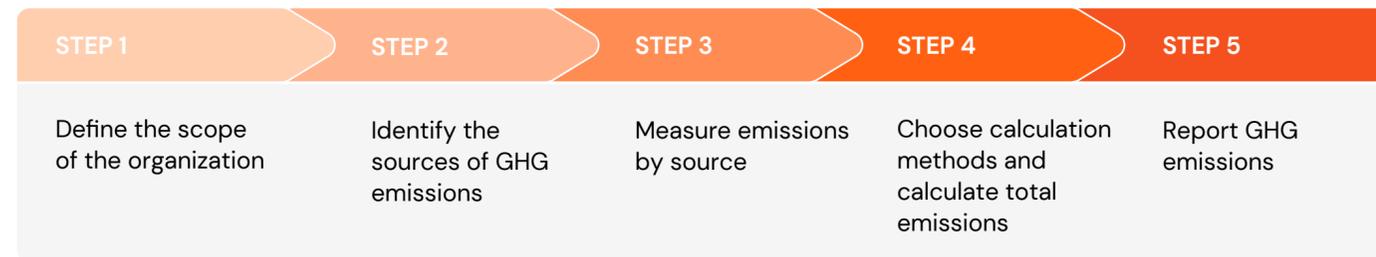
We believe that no company, irrespective of industry or size, can be free from the responsibility of grappling with climate change and environmental issues. While we have not yet reached the mass-production phase, we aim to respond to climate change genuinely and pursue the green transition. We will honor both the macro perspective for the protection of the earth’s ecosystem and the micro perspective of mitigating management risks for the shifting global capital market and the regulatory paradigm.

Conducting pilot measurements for both Scope 1 and Scope 2 emissions

The year 2021 was largely characterized by continued global warming and abnormal weather events, the 26th UN Climate Change Conference, and corporate efforts to reduce carbon emissions in line with global carbon emissions regulations. Noul widely shared such trends in the international community with all its members and explored diverse projects to deepen our understanding on climate change and environmental challenges to help shape a brighter future.

One case in point is our first-ever attempt to calculate our GHG emissions, led by members who attended our advanced sustainability training titled ‘Sustainability 101’. This process followed the international GHG emissions measurement protocol.

GHG Emissions Calculation Process

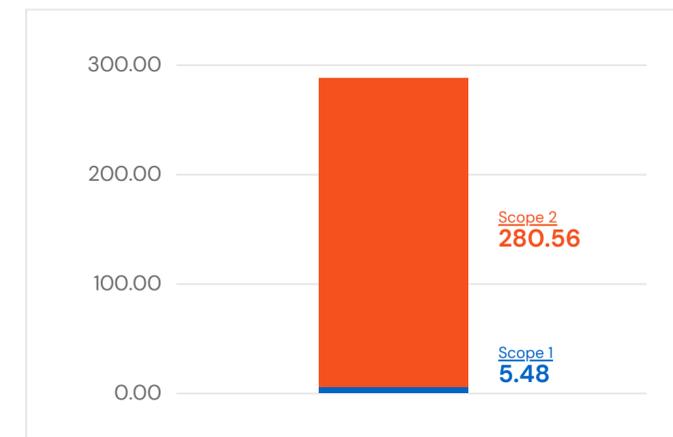


Our GHG emissions calculations made in 2021 revealed that indirect Scope 2 emissions generated from electricity use accounted for a whopping 98% of our total GHG emissions. The breakdown of Scope 2 emissions shows that GHG emissions from manufacturing facilities and office operations accounted for 67% and 33% respectively, with the former relatively larger in its share of total emissions. As it became evident that electricity consumption took the lion’s share of our total GHG emissions, we have been working to improve the efficiency of our power use and reduce our power consumption through power-saving campaigns while mitigating our use of electricity by increasing the process efficiency of our manufacturing facilities.

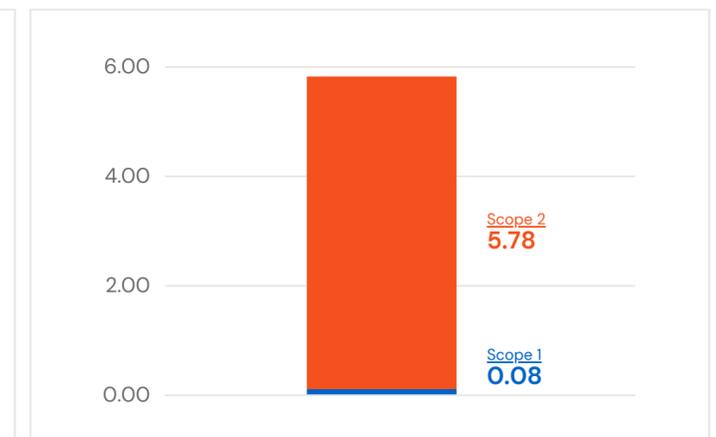
Noul’s GHG Emissions

Noul Co., Ltd.	GHG Emissions (tCO2eq)*	Energy Consumption (TJ)**
Scope 1	5.48	0.08
Scope 2	280.56	5.78
Total	286.04	5.86

GHG Emissions (tCO2eq)*



Energy Consumption (TJ)**



While the measurement of our GHG emissions was not subject to independent verification for its process or results and has not established external credibility, it is still meaningful in that 1) members themselves initiated it to respond to the severity of climate change, 2) it followed the international standard protocol to choose the GHG emissions calculation method appropriate for Noul and make calculations accordingly, and 3) results were shared across the board to develop internal understanding on GHG measurement and monitoring and to build broader consensus on the issue of climate change. Looking ahead, we will regularly monitor our GHG emissions, and develop procedures to establish the objective reliability of our measurement outcomes in the mid-to long-term.

*Carbon dioxide equivalent(CO2eq.) GHG emissions are converted into the representative GHG of carbon dioxide, and are calculated by multiplying the emissions by the associated GWP (Global Warming Potential)

**Tera Joule: A unit of energy in the International System of Units

Noul's GHG emissions Measurement Data

- Scope of Organization
 - Offices (research facilities), manufacturing facilities, and vehicles in their entirety owned by Noul Co., Ltd.
 - Address: 9/10F, Building B, 338, Gwanggyojungang-ro, Suji-gu, Yongin-si, Gyeonggi-do, Korea

- Emission Source

Scope	Emissions Specified by Source
Scope 1	(Mobile combustion) Corporate vehicles owned by Noul in 2021 - Documentary evidence for emissions: Fuel efficiency
Scope 2	(Indirect emissions) Electricity bills and consumption (kWh) in 2021 - Documentary evidence for emissions: Power bills

- Calculation Method/Tool
 - Guidelines on GHG/Energy Target Management Operation and Others (Ministry of Environment, 2016)
 - Voluntary GHG Inventory Development Guidelines and Calculation Tools for SMEs (Ministry of Environment, 2016)
 - Used the base emissions factor specified in the IPCC National Inventory Guideline 2006

Introducing FSC-certified packaging to mitigate environmental impact

Since the second half of 2021, we have introduced packaging certified by the FSC (Forest Stewardship Council), a global eco-friendly timber initiative, for our products. As part of our efforts to mitigate the environmental footprint of our packaging, we have begun shifting over to recycled or eco-friendly materials for packaging which has an insignificant impact on the performance, safety or process of our miLab™ medical devices.

The FSC certification displayed on the carton of our miLab™ products was initiated to promote sustainable forest management, and is recognized as one of the most environmentally/socially credible standards in the timber/pulp raw materials market. Given our product development phase and business size, it was no easy task to achieve FSC certification due to the minimum order volume, price and expiration date. Still yet, we continued to explore qualified suppliers and negotiate transaction terms to successfully find an appropriate partner.

In 2021, we switched entirely over to FSC-certified paper for our device cartons, and embraced eco-conscious design details, which included streamlined box designs and ink color choices. Such eco-friendly considerations will be applied to other packaging materials, including cartridge boxes, as soon as their validation is completed in 2022. For other sorts of miLab™ packaging such as PE foam, tape, and covers, we will search for suppliers of eco-friendly materials who meet the set conditions and make improvements by 2024.

Phased-in Eco-conscious Improvement Plans for miLab™ Packaging (2022-2024)

	2022	2023	2024
miLab™ and cartridge packaging boxes			
		PE foam (buffer)	
			Total packaging

Opening Sustainability 101 as mandatory sustainability training for members

We initiated Sustainability 101 as our mandatory advanced training for all our members to weave our sustainability philosophy into the fabric of our organization and business operations. This training consists of 1) training on the concept, trends and cases of sustainability, 2) team-based innovative project undertakings, 3) expert lectures and consulting to apply sustainability to our day-to-day work and overall work life and identify substantial improvements. Members who attend the training take a leading role in implementing a wide range of participatory projects to create sustainable spaces in the workplace, review eco-friendly materials, and measure GHG emissions from the workplace.

Sustainability 101 Training Outcomes

- Participants and training hours: **22 members of Noul, 330 hours in total**
- 1st and 2nd training project outcomes
 - Publicizing the need for GHG emissions measurement and measure Noul's GHG emissions (team name: It's time to know)
 - Reorganizing the No Plastic Zone Jungle (Team name: Relax and Re:Generation)
 - Proposing mental health plans for sustainable Noul (Team name: Defenders)
 - Proposing sustainable menus for the health of all (Team name: Sustainable Diets)
 - Analyzing Noul products for their environmental impact (Team name: Eco-friendly miLab 101)
 - Making Noul healthier (Team name: Waste neutralization)

The project team which led the reorganization of the No Plastic Zone Jungle, an office space that had not been used effectively, transformed this “Jungle” into a space that promoted closer ties among members, healthier communication, and physical/mental well-being. This space took on a new face as a ‘healing’ space for members when COVID-19 made it less feasible to hold workshops or large-scale meetings, and is evolving into an environment that embodies Noul’s identity by operating diverse small sustainability-themed meetings, offering books, and operating the No Plastic Zone.

Another project team designed to resolve plastic waste generated from food deliveries engaged in the following activities: 1) discussed ideas to reduce food delivery waste, 2) internally monitored waste, 3) distributed spoons to help reduce plastic waste. The team which completed the following round of training and launched the internal campaign ‘Making Noul healthier’ continued this project to ensure continuity and so that the members adopted lasting habits.

2022 Plans

In 2022, we will elaborate on the status of our environmental sustainability while taking the following actions to render our company-wide activities that we launched in 2021 for climate change response and environmental issues more systemic.

- Regularly measure and monitor GHG emissions
- Develop plans to reduce the environmental impact of miLab™ packaging, including FSC certification
- Implement sustainability improvement projects based on member engagement through Sustainability 101 training
- Set the policy course of our environmental management
- Launch member-led, eco-friendly campaigns to reduce energy consumption and waste generation

Health & Safety Capacity Building



Initiating systemic activities to bolster our company-wide health and safety capabilities

In the course of 2021, our business scaled up dramatically and we became subject to various provisions under the Occupational Safety and Health Act and the ‘Serious Accidents Punishment Act’ which took effect in January 2022. This served as a clarion call to make more systemic efforts in establishing responsible health and safety practices, let alone regulatory compliance. Our top priority will be to bolster our system and organizational capacity in the mid-to long-term to create a safer and healthier workplace in line with our business growth.

Developing health and safety policies and creating an implementation system

We operate our company-wide health and safety policy developed to embody our health and safety goal and commitment. Our health and safety policy is based on our mission and sustainability philosophy, and includes the five management guidelines to establish a health and safety management system across the board and implement health and safety activities.

5 Guidelines for Health and Safety Management

- The CEO considers it top priority to protect the lives of members and create a safe work environment.
- The CEO provides sufficient human and physical resources to establish a health and safety management system and eliminate and control risk factors in the workplace.
- We set health and safety goals, and develop and implement specific action plans to achieve these goals.
- We stringently abide by health and safety laws and standards to create a safety-driven culture and reinforce trust and cooperation with stakeholders.
- We raise the safety awareness of our team through continuous training and promotional work, and ensure each member faithfully fulfills their responsibility and obligation for health and safety operations.

To implement our health and safety policy, we set annual goals and specific action plans and take action accordingly. We also make necessary improvements in a way that brings actual benefits to working-level departments through cross-functional collaboration.

In 2021, we created and amended our occupational health and safety organization chart, and defined respective roles and responsibilities to establish an internal health and safety implementation system. Safety and health managers were appointed for professional health and safety operations, and safety management supervisors

Health and Safety

were appointed by sector to strengthen the execution of our health and safety activities to support member management and supervision, training, and risk identification and improvement. In the unfortunate event of a safety incident, response is prompt and in alignment with the local fire station and emergency center in Suji where we operate, along with the emergency room at Seoul National University Bundang Hospital.

Health and safety risk assessment

As the increasingly diversified, complex and advanced industries give rise to the diversity of occupational injuries along with the Serious Accidents Punishment Act taking effect, Noul also considers the safety of its members as its utmost priority. We perform annual risk assessments in conformity with the risk assessment criteria set by the Korea Occupational Safety and Health Agency to eliminate hazards and risk factors in our workplace. In 2021, such efforts led us to identify 11 small and significant hazards as well as their risk factors and actions to improve on them. In particular, our research facility was subject to the preventive analyses of risk factors and the precision safety audits conducted by third-party organizations to eliminate hazards and risk factors in the chemical, physical, and biological areas. The assessment results inform our workforce to create a daily health and safety checklist, conduct daily reviews and take corrective action accordingly.

2021 Risk Assessment

Article 36 on Occupational Safety and Health Act

2021. 11. 10

Company	Noul Co., Ltd.
Assessment Period	2021.09.01-2021.09.30
Assessment Organization	Korea Occupational Safety and Health Agency

General Opinion of Risk Assessment

- Distribute safety shoes/protective equipment when transporting/loading products, install stoppers in preparation for the use of wheeled carriers
- Make the wearing of protective equipment mandatory while working to reinforce training and awareness on the prevention of safety incidents
- Take ergonomic and managerial prevention measures against the risk of musculoskeletal diseases caused by repetitive, fixed or long work shifts
- Post and place safety information including the MSDS, for illness prevention while handling chemicals, provide handling instructions and safety measures through MSDS training
- Clear and organize workspaces to prevent workers from slipping or tripping, continue to manage activities to prevent electric shock accidents and fires

Health and safety training for members and health management support

We provide safety training at all levels as well as by job position and job level to help members recognize the importance of safety and abide by safety standards in the workplace. We also set and implement plans to support the health management of members in compliance with legal requirements and stakeholder expectations.

Health and Safety Training	Support for Health Management
<ul style="list-style-type: none"> Safety managers/supervisors: Complete mandatory training pursuant to specific roles and responsibilities All members: Attend quarterly online courses and special expert courses for health and safety training (in consideration of the pandemic) New hires: Receive training on basic safety requirements, including taking necessary precautions prior to work assignments, risk factors, emergency actions, and PPE Researchers/workers handling special substances: Provide training to protect researchers and prevent accidents, brief members on handling methods, ensure that all know how to respond in the event that a person is exposed, how to block off exposed areas and how to report, with a focus on the MSDS (Material Safety Data Sheet) 	<ul style="list-style-type: none"> Comprehensive health check-ups: Provide to members (biennial) Special health check-ups: Researchers and workers operating at research and manufacturing sites handling chemicals (annual) On-site health counseling service: 30 members receive counseling (semi-annual) Conduct musculoskeletal risk assessments and hazard surveys to monitor the medical conditions of members

2022 Plans

From 2022 onwards, we will take the following actions to systematically manage health and safety issues across the board and better protect the health of our members.

- Organize the Health and Safety Committee and convene quarterly meetings to preemptively manage issues
- Provide work-related stress training to help promote the physical/mental health of members
- Strengthen health support activities, including the on-site health counseling provided by healthcare professionals

Partnerships and Collaborations

Our mission 'We explore global challenges that threaten human health and life', and our aspiration to 'distribute decentralized diagnostics platforms across the globe' are directly aligned with the global issue of healthcare access, and cannot be achieved with the efforts of any single company alone. For Noul, collaboration and collective impact have always been the critical driver in realizing our mission from day one, and we have teamed up with world-renowned partners and experts across a wide array of sectors. We will continue to expand our global partnerships to improve healthcare access and create social value, and in so doing, will move beyond the limitations we face as an individual company to contribute to the System Change for global healthcare access.

Partner and Collaborating Organizations

Europe

Noul GmbH (Basel, Switzerland)

(R&D) FIND (Foundation for Innovative New Diagnostics)
(R&D) Swiss Tropical and Public Health Institute

Africa

Noul Tropical Infectious Diseases Center (Mzuzu, Malawi)

(R&D) Wezi Medical Centre (Malawi)

Korea

Noul Co., Ltd. (Yongin, Korea)

(R&D) Research Investment for Global Health Technology Fund (RIGHT Fund)
(R&D) Institut Pasteur Korea (IPK)
(R&D) Seoul National University Nano System Institute (NSI) SOFT Foundry
(R&D) Ulsan University College of Medicine
(Sustainability) UN Global Impact
(Sustainability) Impact Alliance

US

(R&D) University of Notre Dame du Lac
(R&D) Boston Children's Hospital
(R&D) The Earth Institute, University of Columbia

Noul Sustainability Fact Sheet

Summary of consolidated financial results

(Unit : USD 1K)

Item	Term 5	Term 6	Term 7
GAAP	K-IFRS	K-IFRS	K-IFRS
	31-Dec-19	31-Dec-20	31-Dec-21
[Current assets]	1,572	9,010	10,853
· Trade receivables		108	306
· Inventories		670	1,585
· Other current assets	1,572	8,232	8,962
[Non-current assets]	836	5,294	5,985
· Investments			
· Property, plant and equipment	710	4,949	5,539
· Intangible assets	98	176	159
· Other non-current assets	29	169	287
Total assets	2,408	14,304	16,838
[Current liabilities]	878	2,241	11,256
· Trade payables			102
· Short-term borrowings	475	1,103	1,012
· Other current payables	402	1,138	10,142
[Non-current liabilities]	5,486	23,682	4,016
· Long-term borrowings			
· Other non-current payables	5,486	23,682	4,016
Total liabilities	6,363	25,924	15,271
[Issued capital]	570	3,070	3,745
[Capital surplus]	4,927	3,525	24,632
[Elements of other stockholder's equity]		59	373
[Other Comprehensive income/loss accumulated amount]	1	2	2
[Retained earnings]	(9,452)	(18,276)	(27,185)
Total equity	(3,955)	(11,620)	1,566
	Jan ~ Dec, 2019	Jan ~ Dec, 2020	Jan ~ Dec, 2021
Revenue	-	250	1,289
Operating income(loss)	(4,093)	(6,157)	(9,995)
Consolidated profit (loss)	(5,138)	(7,604)	(10,759)
Basic earnings (loss) per share (Unit: USD)	(0.9)	(1)	(1)
Diluted earnings (loss) per share (Unit: USD)	(0.9)	(1)	(1)

* Current exchange rates were applied to balance sheet components, and average exchange rates were applied to income statement components.

Current Exchange Rates (won/USD)	1,157.80	1,088.00	1,185.50
Average Exchange Rates (won/USD)	1,165.65	1,180.05	1,144.42

Environmental Performance

Category	Subcategory	2021	Unit
GHG	Total GHG emissions	286.04	tCO2e
	Direct (Scope 1)	5.48	
	Indirect (Scope 2)	280.56	
Energy	Energy consumption	5.86	TJ
Water	Water consumption	388	Ton
Waste	Chemical waste discharge	1,900.60	Kg
	Pathological waste	488.5	Kg
	General medical waste	1,392	Kg
Environmental Training	Training on sustainability	22	Persons
		330	Hours

Compliance Disclosure

Category	Subcategory	2021	Unit
Environmental Non-compliance	Penalties and non-monetary/monetary sanctions imposed for environmental non-compliance	0	Cases
Corruption	Total corruption cases	0	Cases

Social Performance

	Category		2020		2021	
			Number of Persons	Percentage	Number of Persons	Percentage
Employment	Total employees (y-o-y increase)		70 (37%) *74 when registered executives are included		100 (41%) *104 when registered executives are included	
	Type of employment	Full-time	56	80%	83	83%
		Contract	14	20%	17	17%
	Type of work	Manufacturing	9	13%	13	13%
		Office	24	34%	40	40%
		R&D	37	53%	47	47%
	Gender	Female	29	41%	40	40%
		Male	41	59%	60	60%
		Other	0	0%	0	0%
	Leadership	Female	6	25%	7	35%
		Male	18	75%	13	65%
		Other	0	0%	0	0%
	Age	Youth (under 34)	29	41%	41	41%
34~50		37	53%	55	55%	
Over 50		4	6%	4	4%	
Recruitment and Turnover	Recruitment	Total new hires	26		41	
		Ratio of female new hires	12	46%	12	29%
			14	54%	29	71%
	Turnover	Total turnover (persons/percentage)			30	30%
		Full-time			9	9%
		Contract			21	21%

	Category	Description	2020		2021	
			Persons (completion rate)	Hours	Persons (completion rate)	Hours
Training	Occupational health and safety	1) Persons in charge of safety and health management : 6hrs 2) Safety and health management supervisors : 16hrs 3) All employees : 12hrs 4) New hires : 8hrs 5) Researchers/workers handling special substances : 16hrs	74 persons (100%)	1,038	104 persons (100%)	1,482
		Anti-sexual harassment (diversity)	70 persons (100%)	105	100 persons (100%)	150
	Improvement in perception on disability	70 persons (100%)	105	100 persons (100%)	150	

	Category	2020		2021	
		Persons	Percentage	Persons	Percentage
Maternal and paternal rights	Employees who took materiality leave (male/female)	1 (female)	Persons	2 (male) 1 (female)	Persons
	Employees who took parental leave (male/female)	0	Persons	2 (female)	Persons
Labor-Management Council	Number of members	70	Persons	100	Persons
	Membership rate	100	%	100	%
Workplace Safety	Cases of occupational injuries	0	Cases	0	Cases
	Occupational injury rates	0	%	0	%

- Certified as a Great Employer in Gyeonggi Province (valid until Jul. 9, 2023 / first certified in 2019 and re-certified in 2021)
- Certified as a company which pays for interview expenses

About This Report

Purpose

Noul Co., Ltd. publishes sustainability reports to take stock of its business operations from the economic, social, and environmental aspects to identify their value and impact. These annual reports serve to look back on our achievements and reflect on necessary improvements. As a company, we consider sustainability as our management philosophy and act on it accordingly while we reach out to stakeholders and pave the way for long-term growth.

Reporting Principle

GRI (Global Reporting Initiative) Standards

Reporting Boundary

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

Reporting Period & Cycle

Jan. 2021 ~ Dec. 2021 (including a portion of the performance data generated in the first half of 2022)

Annual (first report published in 2020)

Report Publication on the Web

[Web Link](#)

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Thank you.