Board Report 2024

The Norwegian Geotechnical Institute Foundation

Reviewed by NGI's Board on 19.03.2025

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Operations and Future Prospects

NGI – The Norwegian Geotechnical Institute is an independent research institute within geotechnics and other engineering-oriented geosciences that combines geoscience knowledge and technology to develop smart and sustainable solutions within infrastructure on land and at sea, environmental technology, contaminated soil, and natural hazards such as landslides and avalanches. NGI's research provides knowledge that helps solve some of the most important challenges the world faces in terms of climate, environment, energy, and societal security. NGI allows research and consultancy to go "hand in hand" and serves as a bridge between academia, industry, and the public sector. NGI also assists in educating new candidates in geotechnics and other geosciences. NGI has approximately 400 employees in Oslo, Trondheim, and Tromsø in Norway, in Houston and Boston in the USA, and in Perth in Australia.

From January 1, 2024, the operational activities of the Norwegian Geotechnical Institute Foundation (NGI) were transferred to the wholly owned subsidiary Norges Geotekniske Institutt AS. The foreign offices NGI Inc. in Houston, USA, and Norwegian Geotechnical Institute PTY LTD in Perth, Australia, are organized as limited companies and are part of the operational business but are not included in the part of NGI that qualifies for state basic funding. The NGI Foundation also owns 50% of the company Campus Ullevål AS, which develops and owns the property at Sognsveien 72 in Oslo. In addition, the foundation holds a stake in Emerald Geomodelling AS, a tech company that emerged from ten years of research, development, and innovation at NGI.

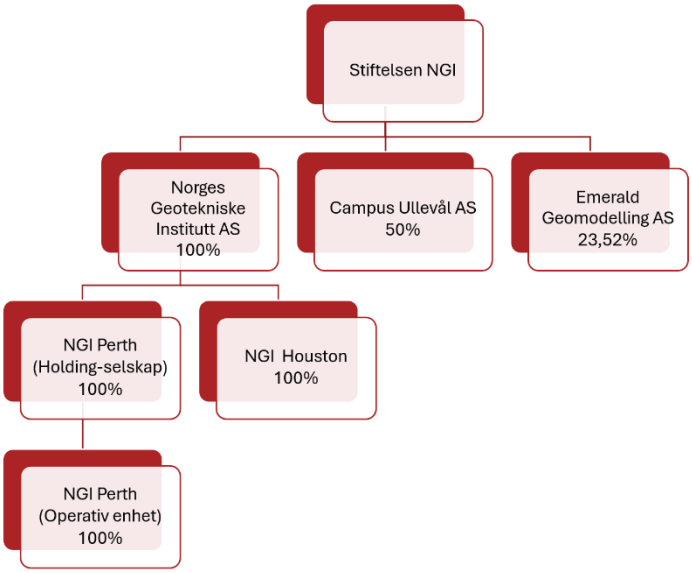

Figure 1: Company Structure from January 1, 2024

NGI Group's Main Activities

The Norwegian Geotechnical Institute Foundation, together with its subsidiary companies (hereafter referred to as NGI), provides research and development (R&D), consulting, field and laboratory operations, instrumentation and monitoring, and digital services within engineering-oriented

geosciences. NGI's activities target both national and international markets, both onshore and offshore.

NGI's Norwegian operations are part of the state basic funding scheme for research institutes and have their headquarters in Oslo and offices in Trondheim and Tromsø. NGI's Tromsø office was established in 2024 to strengthen research collaboration in the north and contribute with NGI's expertise on climate adaptation, risk assessment, and protection against natural hazards. In Oslo, NGI has laboratories and other research infrastructure for testing and characterizing various geomaterials, in addition to a research station at Fonnbu and a full-scale avalanche test site at Ryggfonn in Strynefjellet for triggering and studying avalanches.

NGI USA, USA

NGI's office in Houston, Texas, delivers geotechnical engineering services, laboratory testing, and research and development, mainly targeting the American offshore market. In recent years, NGI USA has established a presence in Massachusetts focusing on expert consultancy, research, and development linked to the offshore wind market. In 2024, a new office was established in Boston as part of NGI USA. Both US offices collaborate with a number of leading players in the offshore energy sector and work closely with local and regional leading universities and research environments in their fields.

NGI Perth, Australia

NGI's office in Perth, Western Australia, delivers geotechnical engineering services, laboratory testing, and research and development, primarily targeting the offshore market in the Asia-Pacific (APAC) region. NGI Perth collaborates with leading players in offshore energy and with local and regional leading universities and research environments in their fields. NGI Perth also operates a modern geotechnical laboratory that was established in 2023 and became fully operational in 2024.

Market Situation and Outlook

The market situation and order backlog at the beginning of 2025 remain strong, but they are affected by increased uncertainty due to significant geopolitical instability.

We expect a significant decline in offshore wind activity in the USA, with a shift back toward increased oil and gas activity. There is also uncertainty surrounding offshore wind projects in Norway and APAC. NGI Perth will likely be able to compensate for this with increased oil and gas activity. At the same time, we expect continued high activity and strong order intake for NGI in Europe, particularly in the United Kingdom. This will likely also increase the demand for laboratory services and instrumentation.

NGI expects that the Norwegian market for construction, transport, and infrastructure will remain stable or increase. We anticipate increased investments in maintenance, greenhouse gas reduction, climate adaptation, and measures to strengthen civil security and preparedness as part of Norway's total defense strategy.

The market for mapping and managing natural hazard risks is expected to remain stable and strong. An increasing share of this market will be linked to climate adaptation and climate-induced natural hazards. This presents opportunities for NGI in the northern regions through its presence in Tromsø and internationally.

We expect the funding framework for project-based research from the Research Council of Norway, which is relevant for NGI, to remain unchanged or possibly decrease. Nevertheless, we expect a slight increase in Research Council projects through strategic initiatives, as well as a small increase in project-based research from the EU through Horizon Europe.

Focus on Digitalization and New Technology

NGI is investing heavily in digitalization and new technology. NGI Digital, our department for software development, digitalization, and digital innovation, develops new digital solutions both internally and externally for clients and stakeholders, as well as through research projects.

In 2024, NGI Digital experienced significant growth with increased activity, including the commercialization of products and services and several new permanent hires.

Among other things, we have further developed Field Manager, a data platform for organizing and making geodata available. Field Manager now holds a strong position as a commercial product in the Norwegian geotechnical market and is in the early stages of international expansion into the offshore market.

In 2024, we also launched COPIT, a digital tool for interpreting CPTU data (Cone Penetration Test with pore pressure). By commercializing these solutions, NGI is contributing to the digital transformation of the geoscience field.

NGI Code Academy, our commercial training program, offers a range of courses to help geotechnicians, geologists, and other geoscience professionals with digitalization. In 2024, we conducted the following courses: "Python Basics for Geoscience and Geotechnics", "Introduction to Applied Machine Learning – Using Geotechnical Data," and "Basics of Parametric Modelling for Geotechnics with Grasshopper"

These courses have been very popular and have seen strong participation.

Campus Ullevål

NGI and Aspelin Ramm are developing the Campus Ullevål property of approximately 36,000 square meters at Sognsveien 72. Aspelin Ramm and the NGI Foundation each own 50% of Campus Ullevål AS. The building will serve as a campus for multiple tenants and activities focused on research and innovation within climate, energy, environment, societal security, and infrastructure.

Campus Ullevål will be part of and a key contributor to the development of the Oslo Science City innovation district. So far, NGI, NIVA (Norwegian Institute for Water Research), and CICERO (Center for International Climate Research) have signed lease agreements and will together occupy approximately 60% of the available space.

Campus Ullevål will become NGI's headquarters in Norway. It will provide modern, attractive, and flexible office spaces along with custom-built areas and facilities for NGI's laboratories and research infrastructure. NGI will move into its spaces in Campus Ullevål on June 1, 2026, and will then lease about 25% of the building's total volume.

NGI Oslo will operate from temporary offices at Sandakerveien 140 in Nydalen during the construction period.

Annual Accounts and Economy

The NGI Group (The NGI Foundation, NGI AS, NGI USA, and NGI Perth)

Gross operating revenues for the NGI Group in 2024 amounted to 908 MNOK, an increase of 57 MNOK (6%) compared to 2023. The main reason for the increase in operating revenue is primarily due to increased activity in Offshore Energy, Geodata, and Technology, as well as a weakening of the NOK against both the USD and EUR.

The operating result for 2024 was 26.2 MNOK, compared to 22.4 MNOK in 2023. The net financial result was 17.6 MNOK, compared to -41.3 MNOK in 2023. The annual result for the NGI Group ended at 35.3 MNOK, compared to -21.5 MNOK in 2023.

Net cash flow from operational activities amounted to 38.3 MNOK compared to 123.5 MNOK in 2023. Net cash flow from investment activities was -36.4 MNOK compared to -188.5 MNOK in 2023. Cash flow from financing activities was 1.9 MNOK compared to -7.9 MNOK in 2023.

The NGI Group has a total capital of 909 MNOK compared to 886 MNOK in 2023. The NGI Group has very strong financial solidity with an equity ratio of 62% compared to 59% in 2023. The company has a satisfactory liquidity situation, with 302 MNOK in bank holdings at the end of the year, compared to 296 MNOK at the beginning of the year. The company has no interest-bearing debt at the end of 2024. NGI Group primarily has a customer portfolio with high creditworthiness and has historically experienced minimal losses on receivables.

The NGI Foundation

Gross operating revenues for the NGI Foundation in 2024 amounted to 38 MNOK compared to 753 MNOK in 2023. The revenues for 2024 are primarily related to EU projects awaiting regulatory approval for transfer.

The operating result before tax was -3.1 MNOK compared to 13.9 MNOK in 2023. The net financial result was 18.5 MNOK compared to -78.2 MNOK in 2023. The annual result for the NGI Foundation ended at 14.2 MNOK compared to -68.1 MNOK in 2023.

The NGI Foundation has a total capital of 573 MNOK compared to 798 MNOK in 2023. The foundation has a very strong financial solidity with an equity ratio of 81% compared to 56% in 2023. The foundation has a satisfactory liquidity situation, with 162 MNOK in bank holdings at the end of the year compared to 276 MNOK at the beginning of the year. The foundation has no interest-bearing debt at the end of 2024.

The figures for 2023 are not comparable to 2024 due to the transition to a new corporate structure in which all operational activities were transferred from the NGI Foundation to the newly established subsidiary Norges Geotekniske Institutt AS with effect from January 1, 2024.

The Norwegian Geotechnical Institute AS

Gross operating revenues for the company in 2024 amounted to 804 MNOK. The operating result before tax was 22.8 MNOK. The net financial result was 1.8 MNOK. The annual result for the company was 18.8 MNOK.

The company has a total capital of 400 MNOK and very strong financial solidity, with an equity ratio of 31%. It has a satisfactory liquidity situation, with 106 MNOK in bank holdings at the end of the year and no interest-bearing debt at the end of 2024.

There are no comparable figures from previous periods due to the transition to a new corporate structure. On January 1, 2024, all operational activities were transferred from the NGI Foundation to the newly established subsidiary Norges Geotekniske Institutt AS.

State Basic Grant

In 2024, the basic grant from the Ministry of Trade, Industry and Fisheries through the Research Council of Norway to the NGI Foundation amounted to 58.03 MNOK. This represented 6.4% and 7.2% of gross operating revenues for NGI Group and Norges Geotekniske Institutt AS, respectively.

In addition, NGI received 4 MNOK to fulfill its national responsibility for avalanche research. These funds were allocated from the Ministry of Petroleum and Energy through the Norwegian Water Resources and Energy Directorate (NVE).

Other Income and Export

Other operating revenues come from project-based and contract research, research-based consultancy, field, laboratory, and instrumentation services, as well as digital services for private industry, the public sector, and foreign markets.

International revenues for Norges Geotekniske Institutt AS, including project-based research under the EU framework programs, represent 41.3% of the company's turnover.

High employee engagement and numerous active projects within NGI's commercially oriented activities resulted in NGI calculating a profit-sharing bonus for the 2024 financial year, which will benefit all employees. The profit-sharing is included as part of NGI's salary costs.

Continued Operations

The company's equity and operational status, combined with positive prospects for 2024, provide a strong foundation for continued operations. The assumption of continued operations remains valid, and the 2024 annual accounts have been prepared based on this assumption. The board considers that the accounts provide an accurate representation of the company’s results and balance sheet at the end of the year.

Insurance for Board Members and the CEO

A liability insurance policy covering 50 MNOK has been established for board members, management, and employees in senior positions.

Key Tasks in 2024

NGI's main strategy for 2022–2025, NGI25, emphasizes NGI's role as a collaborative partner and a clear bridge between applied research, industry, and the public sector. The strategic focus areas of the strategy are:

- **Research and consultancy for societal security and the green transition**
  NGI will contribute geotechnical and geoscientific expertise, particularly focused on climate, energy, environment, and societal security. Key focus areas include nature-based solutions, climate adaptation, quick clay, and offshore wind.
- **Digitalization and enabling technologies**
  NGI aims to take a leading role in the digitalization of the geosciences industry and make its solutions available to the entire industry.
- **A platform for knowledge development, collaboration, and sharing**
  Collaboration and sharing contribute to generating ideas, developing the field, and finding solutions to complex challenges. NGI will establish strategic external partnerships and serve as a bridge between applied research, industry, and the public sector.

Publications and Publication Points

2024 was once again a successful year for the publication of NGI's research results in scientific journals and books. Of approximately 240 research articles published, around 200 articles qualified for points in the Norwegian Scientific Index (NVI).

About 1/5 of the articles were published in high-ranking scientific journals within their field — i.e., Level 2 in the Norwegian ranking system. NGI's scientific publications were reported in the national research database Cristin on April 1, 2024.

Examples of Research Projects

gigaCCS – Large-Scale Carbon Capture, Transport, and Storage

The research center for environmentally friendly energy (FME), spanning 8 years, aims to promote Norway's expertise in carbon capture and storage (CCS) and support the global implementation of CCS on a gigaton scale. gigaCCS is led by SINTEF and consists of 43 research and industry partners and over 30 associated partners. NGI contributes knowledge on seal integrity, risk assessment, and monitoring. gigaCCS is a continuation of FME NCCS, which was completed in 2024.

TAILWIND – Sustainable Anchoring Systems for Floating Offshore Wind

NGI is the coordinator for 12 partners in this four-year EU project aimed at advancing anchoring and floating technologies for floating offshore wind. The project covers everything from seabed conditions and anchors to mooring lines, floating platforms, and cables, identifying opportunities for cost reduction, reduced environmental impact, and material usage, as well as diversification of the supply chain.

Smart AUVs

NGI coordinates the Smart AUVs research project, which develops technology to improve the suitability of Autonomous Underwater Vehicles (AUVs) for environmental monitoring. The goal is for the AUV to use real-time data from its sensors to "understand" its surroundings and respond accordingly. This allows the AUV to spend less time collecting uninteresting data and focus its efforts on mapping valuable findings, such as CO_2 and CH_4 leaks from the seabed.

DT-GEO: Connecting Geoscience and Supercomputers to Strengthen Disaster Preparedness

NGI is a participant in this major European initiative funded by Horizon Europe, where leading research institutes are working to develop accurate, digital models – so-called digital twins of various geophysical processes.

The digital twins will be able to connect measurements and models, update them continuously based on new data, and provide early warnings of natural disasters such as earthquakes, landslides, and tsunamis. Scientists and decision-makers will be able to test different scenarios to improve disaster preparedness. Norway's contribution to DT-GEO includes developing digital twins to calculate tsunami impacts caused by earthquakes.

Pile Foundations in Carbonate Sand Off Australia

The Piles in Carbonate Sand (PCS) project is a joint project conducted by NGI's Perth office and researchers from the University of Western Australia (UWA).

Pile foundations in carbonate soils off Australia have historically experienced challenges due to the fragile nature and extreme behavior of the particles (i.e., high compressibility and high strength degradation). The PCS project, funded by the Australian Research Council (ARC), focuses on understanding the behavior of pile foundations in these soils, particularly for the emerging offshore wind industry, and developing design methodologies. The project includes a range of activities, including soil characterization at NGI's laboratory, centrifuge modeling at UWA and numerical modeling.

In 2024, the project began with acquiring a large amount of carbonate sand and testing at NGI's laboratory.

PIGS JIP – Pile Foundations in Glauconitic Sand

The PIGS (Piling in Glauconitic Sand) joint industry project investigates soil resistance to pile driving (SRD) in glauconitic sand and explores methods to mitigate it.

The project aims to understand the mechanisms behind the crushing of glauconitic sand around piles and how this affects the pile's lateral and axial response. NGI has conducted pile load testing at several onshore test sites, including small and large piles under axial compression, tension, and lateral loading, including redrives and restrikes.

These tests were complemented with detailed site characterization and laboratory tests on undisturbed batch samples to analyze the geotechnical properties of glauconitic sand and assess how crushing affects soil behavior. Last ongoing phase includes centrifuge testing and constitutive modeling to refine predictive models for pile behavior in glauconitic sand

The findings will support the development of a risk assessment framework and improved design methods for offshore foundations, enhancing industry guidelines for this specific soil type. The project is led by NGI USA.

Examples of Contract Research and Expert Consultancy

Expert Consultancy for the Rehabilitation of the Bersimis-2 Dam

The Bersimis-2 power plant in Quebec, Canada, was commissioned in 1959 and consists of a 42 km^2 reservoir that produces 845 MW of electricity. This is one of Hydro-Quebec's pioneering installations and includes an 84-meter-high concrete dam and two embankment dams, which are 1,038 km and 1,190 km long.

The facility is currently undergoing a major safety upgrade that will continue until 2028. NGI is assisting Hydro Quebec with expertise in risk assessment and ensuring the selection of the best possible solutions for safety measures.

Dogger Bank – The Importance of Understanding Buried Landscapes
Dogger Bank is the world's largest offshore wind farm site to date. The site is being developed in the North Sea across six licenses.

Over the last 130,000 years, the movement of large ice sheets has built a ridge on the seabed, which was flooded 6,000 years ago and has created a perfect location for offshore wind turbines. Since 2011, NGI, together with industry partners, has been working to understand and map the ground conditions in the Dogger Bank area.

NGI's latest engagement, Dogger Bank South, started in 2024 and is expected to continue until at least the end of 2027. Understanding the submarine glacial landscapes is critical for securely installing wind turbines, which can reach heights of up to 260 meters.

Can Floating Plastic in the Ocean Be Monitored by Satellites?

No one knows how much plastic is floating on the surface of the Norwegian seas. To better understand the scale of the problem, NGI and the independent research and consulting company SALT conducted a project commissioned by the Norwegian Environment Agency titled "Proposal for the Use of Earth Observation Data as a National Plastic Indicator."

The project investigated the potential for developing a satellite-based monitoring and warning system for floating plastic in the ocean. The findings could contribute to improved methods for monitoring and combating marine plastic pollution.

NGI Contributes to the Safe Return of Rock and Soil Samples from Mars

As part of the ESA/NASA Mars Sample Return (MSR) program, NGI leads the characterization of terrestrial analogue samples in the MSR Analogue Sample Library at the University of Oslo (UiO).

NGI provides a complete package of geotechnical and geochemical tests for each sample, supported by the laboratories at NGU (Geological Survey of Norway) and UiO. The information generated from this work will help develop future test equipment that will be designed worldwide, as well as inform the future design of special sample reception facilities designed to preserve sample integrity and protect the Earth (called curation facilities) planned by NASA and ESA.

Consulting for Bane NOR – Moss Station

Throughout 2024, NGI has contributed to the design of several measures to ensure area stability in Moss city center. This has involved extensive monitoring of construction work, including evaluating data from instrumented measurement points for pore pressure and deformation and comparing them with calculated values.

The project has led to new research and innovation and has supported the start of a PhD candidate from NGI in 2024. Regarding billed hours, this is one of the largest projects NGI worked on in 2024.

Feasibility Study for the Defence Science and Technology Agency (DSTA) in Singapore

NGI conducted a feasibility study for DSTA for a system of underground rock caverns and tunnels to dispose of weapons and explosives. The work involved cost assessments, rock mechanics analysis, engineering geological assessments, and advanced numerical modeling related to demolition activities. The project was valued at approximately 1.5 million NOK for NGI.

Deep Push – Improved Method for Direct Cone Penetration Test (CPTU) from the Seabed

The growing number of offshore wind developments requires efficient soil investigations. The Cone Penetration Test (CPTU) provides reliable data quickly, but its effectiveness depends on continuous penetration beyond foundation depths.

Dense sand layers and friction can cause the test to stop prematurely, leading to expensive downhole CPTU tests. To address this challenge, Ørsted Wind Power A/S is coordinating a Joint Industry Project (JIP) to develop methods for enabling CPTU testing directly from the seabed down to 45–50 meters.

This will reduce the need for downhole CPTU tests while improving data quality and reducing costs. NGI is collaborating with GEO as the contractor on the project.

Library of Shear Modulus Reduction Curves for North Sea Sand

The project is a continuation of a research collaboration (JIP, 2020–2022) with Ørsted Wind Power A/S, but in 2024–2025 as contract research for the same client. NGI will perform deformation-controlled cyclic triaxial tests on samples of reconstituted Cuxhaven sand at different relative densities, stress states, stress histories, fines contents, drainage conditions, and number of cycles. The samples are instrumented with (i) two sets of local deformation gauges (a total of 4 "on-specimen" LVDT sensors) with different resolutions and ranges (±0.25 mm and ±1.0 mm), and (ii) a set of bender elements (for measuring shear wave velocity). These measurements enable a better definition of the strain-dependent shear modulus development (G/Gmax) in a shear strain range (<0.1%) that cannot be defined by conventional static or cyclic triaxial tests. The database of experimental tests and resulting G/Gmax curves will provide an important contribution to Ørsted's early-stage design of foundations for offshore wind turbine generators, as well as contribute to a better understanding of the discrepancies between the calculated and actual natural frequencies measured on installed turbines.

Numerical Modeling of Flexible Piles in Sand

The design of offshore structures, such as wind turbines and oil platforms, depends on the lateral resistance of piled foundations. Design guidelines estimate soil resistance, but these formulations are largely empirical.

Pile behavior in sand remains poorly defined, leading to uncertainty in offshore foundation design. To address this, BP is supporting NGI in a research project that will use advanced numerical modeling to develop more accurate p-y curves for flexible piles in sand under lateral loading.

Using Finite Element (FE) simulations in Plaxis 3D, this study aims to refine soil-structure interaction models and improve the reliability of engineering design. The project is led by NGI's Houston office.

NGI Live – A Cloud-Based IoT Solution for Monitoring Critical Infrastructure

Sensors and advanced Internet of Things (IoT) solutions are increasingly being used to automatically collect data and monitor buildings, structures, and ground conditions during infrastructure projects. NGI Live has been built from the ground up and offers a wide range of functionality for remote monitoring, such as real-time analysis and digital twins. Through a web-based portal, customers can monitor data in real time, perform analysis, visualize trends on a map, download data, and set alarms on the time series.

Ground models and geotechnical interpretation services for offshore wind in Japan

NGI delivers ground models and geotechnical interpretation services for Murakami Tainai Offshore Wind Farm Co., Ltd (M-T OWF), a joint venture of RWE, Osaka Gas, and Mitsui & Co. The offshore wind farm is located off the coast of the city of Murakami-Tainai in Japan. NGI has delivered a combined ground model and geotechnical interpretation report based on geophysical and geotechnical data obtained in 2022. In the second phase, separate ground models and geotechnical interpretation reports will be delivered. The project emphasizes integrating geological, geophysical, and geotechnical data to characterize the complex geology through a multidisciplinary geo-team, understanding, and collaboration. The project will provide geotechnical parameters for seismic response analysis across the development area, utilizing in-situ and laboratory shear wave velocity data, plus the correlation of shear wave velocity to several geotechnical parameters. A third aspect is that NGI will provide a ground model and geotechnical interpretation that can be easily referenced and used in the design of foundations, and which meets the requirements of the Japanese certification authority. The project is led by NGI's Perth office.

Communication and Public Relations

The board's view is that NGI emphasizes reputation building and actively participating in public debate to ensure a good understanding and knowledge of NGI's societal mission.

According to figures from the media monitoring service Retriever, NGI was mentioned more than 448 times in Norwegian media in 2024.

NGI has produced 17 independent articles in the form of opinion pieces and popular science articles. In NGI's two podcast series, "Med blikket mot bakken" and "NGI Technical," a total of six podcasts were published in 2024, three in the "Med blikket mot bakken" series and three in "NGI Technical." In 2024, the two podcasts were downloaded 2,319 and 2,073 times, respectively.

The website, ngi.no, is NGI's primary channel for external information about our work and has approximately 21,000 monthly visits. NGI has a strong presence on social media, with LinkedIn being the largest platform, with over 29,000 followers at the beginning of 2024. In 2024, NGI began

sending out monthly newsletters in Norwegian and English. By the end of the year, the newsletters had a total of 273 subscribers.

In line with NGI25's aim of being a platform for knowledge development, collaboration, and sharing, NGI hosted and organized several professional seminars in 2023:

- **The Future of Energy is Green and Digital. CO2-H2 seminar -** Underground Storage of CO2 and H2 - Synergies and Opportunities. 10-11 January 2024 at University of Oslo.
- **I Hardt Vær –** How Do We Prepare for a Tougher Climate?" on 7 May 2024 at Meet Ullevål, Oslo.
- Two events at **Arendalsuka** with more than 200 participants:
  Together with NORCE: "One Year After 'Hans': How Can We Help Municipalities Adapt to a Future with More Extreme Weather?"
  Together with the Norwegian Computing Center: "How Can Digital Solutions and AI Be Used to Address Climate Challenges?"
  RMCC 2024: 1st international Rock Mass Classification Conference – 30-31 October 2024 at Sentralen, Oslo.
- **ZeroPM** (EU-funded R&D project) **workshop** Prioritization through Substance Grouping and Risk Assessment in Dessau-Rosslau in Germany 19-20 September 2024.

Work Environment and Personnel Conditions

Employees

At the end of the year, the NGI Group had 417 permanent employees. 360 of these are employed at NGI in Norway, and over 87% have a university or college education.

Since 2004, NGI has contributed to financing doctoral education for permanent employees. In 2024, NGI fully or partially funded 15 PhD candidates. One candidate defended their dissertation in 2024. In NGI Norway, 30% of permanent employees hold a PhD.

Equality and Diversity

NGI facilitates continuous competence development and opportunities for professional and personal development, regardless of gender, ethnic background, political views, sexual orientation, or religion.

Recruitment and promotions must be based on qualification and competence requirements. NGI works actively to promote equality and gender balance. Gender balance is considered achieved when the proportion of both men and women is at least 40%.

The recruitment and personnel policy should ensure equal opportunities and rights. NGI provides support for reduced work capacity when needed. Any form of discrimination is contrary to the company's core values. NGI’s equality work is anchored in NGI’s values and ethical guidelines.

NGI, in collaboration with employee representatives, has assessed and discussed equality and discrimination as the basis for its activity and reporting obligations.

33% of the permanent employees in the NGI Group are women (137 out of 417). 42% of middle managers are women, and two women are among the seven members of the management team.

Among NGI's nine board members, there are four women.

Of the permanent employees, 42% are of non-Norwegian origin, representing 35 countries.

NGI hosted 14 visiting researchers during 2024 and had six postdoctoral fellows from abroad as of December 31, 2024.

Sustainability, Health, and Safety

NGI contributes to a knowledge-based sustainable development of society. This is done through project activities, standardization work, outreach, collaboration with and teaching positions at universities, and through assistance and advice to the authorities. NGI continuously works with sustainability and contributes with solutions related to nature-based solutions, climate adaptation, and the reduction of greenhouse gas emissions and environmental toxins in the built environment. In 2024, NGI hired a Sustainability and Compliance Advisor, a newly created position at NGI. In 2024, NGI also began working to establish sustainability reporting in accordance with the Corporate Sustainability Reporting Directive (CSRD). The requirements of the sustainability directive have been presented to NGI's management.

NGI established a project group for sustainability reporting, with representatives from relevant areas (Controlling, People and Development, Finance, and professional market areas). The project group held a kickoff meeting in November 2024. The work includes reviewing existing governance documents, procedures, and processes for risk assessments, quarterly reporting, compliance reports, deviation systems, action plans for implementing the Transparency Act, gap analysis, and training. On NGI's initiative, a collaborative group with other institutes called the "Institute Sustainability Network" was established. The first meeting was held in December 2024. The group's purpose is to share experiences and find the most effective solutions for sustainability reporting.

NGI's Code of Conduct is approved annually by NGI's board. The guidelines cover business conduct, working environment and personal conduct, and reporting of critical matters. No significant changes were made in 2024. NGI follows general research ethics guidelines and specific research ethics guidelines for natural sciences and technology established by the national research ethics committees. No whistleblowing cases were reported at NGI in 2024.

NGI imposes strict requirements on suppliers to comply with regulations and requirements related to health, safety, and the environment (HSE), ethics, the external environment, and social conditions. This also includes the company's requirements for ethical and sustainable behavior. NGI has adopted new ethical guidelines for suppliers. The ethical guidelines are based on international frameworks and conventions for human rights and labor rights, including the UN Universal Declaration of Human Rights, the European Convention on Human Rights, the ILO's core conventions, and the UN Guiding Principles on Business and Human Rights. Through these guidelines, NGI's suppliers commit to respecting human rights and labor rights outlined in international conventions and local legislation in the countries where the supplier operates, in line with the Transparency Act.

NGI has mapped how the company complies with the Transparency Act. The mapping revealed gaps between current practices and the requirements of the Transparency Act. Therefore, an action plan has been prepared and is under implementation to ensure that NGI meets the requirements of the Act. How NGI has worked with the Transparency Act has been published on NGI's website. By June 30 each year, NGI will publish a statement on due diligence assessments for the previous year. The work for 2024 began in January 2025. The statement will be published on NGI's website within the legally

mandated deadline and in accordance with the Transparency Act. At present, NGI has mapped the supplier chain and portfolio analysis in line with OECD guidelines. This process includes identifying and managing actual and potential risks of breaches of social and human rights, both internally and in the supply chain.

In 2023, NGI conducted an initial mapping of risk areas related to basic human rights and decent working conditions in its own business and among its subcontractors and business partners and conducted a supplier audit. NGI is in the process of updating its routines for risk assessments and follow-up of its partners in accordance with the Transparency Act's requirements for due diligence assessments.

NGI's risk management procedures include risk assessments of potential negative impacts on basic human rights and decent working conditions. NGI has identified risks related to systematic health and safety work, absenteeism, and follow-up of overtime work. An action plan has been implemented to address these risks and improve NGI's systems.

NGI systematically improves working conditions to prevent work-related accidents, occupational diseases, and absenteeism caused by physical and psychosocial risk factors in the working environment. A working environment survey is conducted every other year, showing that NGI has a good and satisfactory working environment. The results have been presented to all employees, and measures and action plans are being implemented at the departmental level.

In 2024, the total absenteeism rate in Norway was 4.6%. Absenteeism was, therefore, slightly higher than the target limit of 3.5% and the same as in 2023. Injuries within the company are monitored using key performance indicators, including the H2 value (TRIR), which shows the number of injuries that resulted in absence and injuries that required medical treatment without leading to absence the following day.

The H2 value (TRIR) for NGI's employees was 4.89 in 2024, a significant decrease from 2023. This indicates that the measures implemented in 2023 and 2024 have contributed to increased focus and engagement throughout the organization.

The systematic work to prevent injuries in operations and projects will continue in 2024. There will continue to be a strong focus on reducing the number of personal injuries. Measures in the HSE action plan to improve HSE work at NGI were implemented in 2023 and will continue to be implemented in 2024. HSE training for employees and managers is a central focus in 2024.

NGI implemented a new incident reporting system in 2023 to ensure better data and strengthen the follow-up of unwanted incidents to prevent injuries. This has resulted in more than double the number of reported HSE incidents and observations. This is very positive, as more reported incidents and observations provide a better basis for working proactively rather than reactively.

NGI prioritizes the protection of life, health, and the environment in all parts of its business and aims for zero injuries. The board believes that NGI has a good working environment and works consciously to maintain it. Safety and environmental work are conducted in accordance with the requirements of the Working Environment Act.

NGI's environmental management system is certified in accordance with ISO 14001:2015 for research and development, consulting, and services within geosciences. NGI works systematically and purposefully to eliminate negative impacts on the environment resulting from its activities. NGI makes active choices to fulfill environmental commitments and demonstrate responsibility for its

surroundings and the environment. NGI is committed to identifying, mapping, and following up on environmental aspects related to its activities and projects.

NGI is certified in accordance with ISO 9001:2015 for research, development, and consulting within geosciences. NGI works continuously to improve quality, safety, and environmental management.

NGI's soil mechanics laboratory holds accreditation document test 118 and performs accredited analyses within the scope of accreditation P9901 – Geotechnical Testing.

Thanks to All Employees

The board extends its sincere gratitude to NGI's management and employees for the effort and results achieved. The employees are our most important resource. Their knowledge, motivation, and enthusiasm are fundamental to the continued development of the NGI Group. We look forward to continued success in the future.