

Next- Generation High Performance Computing

Annual Report
2021

At a glance

Key data of the Northern Data Group

		2021	2020	Δ
Revenues	EUR million	189.9	16.4	>100%
Total Output	EUR million	492.8	18.8	>100%
EBITDA	EUR million	320.1	-12.3	n/a
Adjusted EBITDA	EUR million	89.6	-12.3	n/a
EBIT	EUR million	254.1	-30.5	n/a
Adjusted EBIT	EUR million	10.7	-30.5	n/a
Net result	EUR million	287.2	-84.3	n/a
Cash flow from operating activities	EUR million	88.1	183.5	>100%
Cash flow from investing activities	EUR million	126.6	-211.6	n/a
Cash flow from financing activities	EUR million	-69.0	99.0	n/a
Shares outstanding (undiluted)	Thousand units	17,653	11,411	54.7%
Shares outstanding (diluted)	Thousand units	23,816	14,790	61.0%
Earnings per share (undiluted)	EUR	16.27	-7.38	n/a
Earnings per share (diluted)	EUR	12.06	-5.70	n/a
Employees (annual average)	FTE	150	121	24.0%
		31 Dec. 2021	31 Dec. 2020	
Cash and cash equivalents	EUR million	221,6	73,9	>100 %

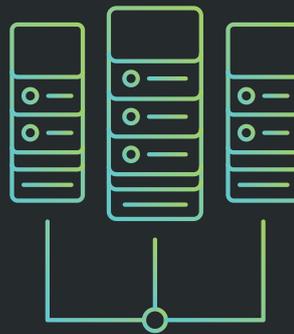
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To the Shareholders



Our Actions

“Crypto mining allows Northern Data to build an innovative data center portfolio and a competitive cloud compute division while owning the foundation for AI Compute of the future”

Aroosh Thillainathan



Letter to the shareholders

Dear shareholders, employees and friends of Northern Data,

in 2021, we managed to increase our sales more than tenfold compared to 2020 to EUR 190 million, in particular by focusing the business model on crypto mining. Furthermore, following a result that was still negative the previous year, we achieved EBITDA of more than a quarter of a billion euros in 2021, especially as a result of special effects such as reimbursements from the electricity contracts of the US subsidiary Whinstone due to weather-related power outages as well as the effects from the sale of Whinstone.

This record result is outstanding confirmation of our crypto mining-focused business model and gives us reason to feel proud.

The foundation of this success remains our new generation of data centers and how we plan and operate them: our specialization in crypto mining, with the goal of using our hardware to offer other computationally intensive applications of high-performance computing in the future, allows us to plan and erect data centers holistically, from the building to the hardware and software, to the actual workload itself.

In the industry, it is customary to speak of “end-to-end,” which in Northern Data’s case also includes innovative redundancy and cooling concepts. For example, we do not maintain any complex emergency power systems, but instead achieve the necessary fail-safety digitally through the automation platform we developed for our data centers ourselves. This enables us to move workloads quickly between different server locations in the event of a failure. In addition, instead of air conditioners with energy-intensive compressors, we only use cold outside air for cooling. Supported by passive evaporative cooling, our highly efficient, direct fresh air-cooling systems are controlled electronically, enabling automatic operation year-round.

We are already demonstrating what this means in terms of the utilization of the energy supplied at our site in Boden, Sweden. There, we limit the power loss, i.e. the share of energy that does not flow into the computer performance, to around four percent. By way of comparison, even 20 percent power loss is considered very efficient in many data centers. In an industry comparison, the average value for power loss is much higher – over 50 percent, according to the Uptime Institute Global Data Center Survey last year. This means we operate one of the most efficient data centers in the world at our site in Boden, with an annual power usage efficiency (PUE) of 1.04 certified by TÜV-Süd.

This vertical end-to-end integration is what sets us apart, enabling a new level of efficiency through power-saving “Green IT” and distinguishing us from our competitors.

Strength through diversification

Our groundbreaking HPC infrastructure plays out in our business model, whose setting is formed by three interlocking complementary cases that ensure high utilization of the current infrastructure:

The “Strategic Case” comprises the development and expansion of our modern HPC data center infrastructure.

Our profitable Cash Case – mining Bitcoin on ASIC chips and GPU-based mining of Ethereum – is based on this, assuming corresponding mining profitability as seen in the second half of 2021. The financial resources thus generated should allow us to both continue to grow in the data center foundation and to invest in the “Growth Case,” namely in the development and expansion of a GPU-based cloud platform from Northern Data, which is to offer cloud services for compute-intensive use cases in the future. Given the current mining profitability, additional borrowing may be necessary for further expansion.

With its virtualized resources, we believe our cloud represents nothing less than a crucial building block for the AI computing of the future. Our teams are working on the “engine for tomorrow’s world” – the Cloud-based GPUs that make possible or accelerate the development of artificial intelligence and related use cases, such as autonomous driving, digital prototyping in real-time, or many new medical advances. In the future, GPUs will also be supplemented by specialized AI ASIC chips for AI applications.

Market of the future

Cloud-based computing power, storage space, and software are essential prerequisites for smooth processes in the digital world of tomorrow, whose manifestations are only beginning to take shape today, whether in Web3 applications or the still young metaverse, for example. According to the International Data Corporation IDC, spending on cloud hardware, software, and services will rise by around 17 percent annually from USD 707 billion in 2021 to USD 1.3 trillion by 2025. By ramping up and expanding the cloud business, we are helping to feed this growing global hunger for HPC computing power.

Today, it is still mainly the “Cash Case” that determines our actions: Our Bitcoin mining picked up speed from September 2021, so that by December 2021, we were able to mine a total of 666 BTC and had 18,000 ASIC miners online. Then, by the end of July 2022 alone, we produced another 1,798 BTC and already had 47,300 miners installed. In our GPU cluster, we also produced 26,554 ETH from August to December 2021, and by the end of July 2022, we had another 33,571 ETH. Under the current circumstances, lower amounts can be realized for the time being.

Further development in crypto mining

Our focus will continue to be on expanding capacity and continuously developing sustainability and efficiency. By the end of 2022, we intend to operate up to 100,000 ASIC miners with a hashrate of between 8.3 to 9.3 exahash/s, both on behalf of customers and, in particular, for mining on our own account. To date, Northern Data has paid for and received delivery of approximately 70,000 ASIC miners. Due to the current market distortions in Bitcoin mining and tense supply chains, we are keeping open the option of having ASIC systems hosted by external service providers. At the same time, we plan opportunistically to take advantage of chances in the ASIC market to increase the inventory of equipment and, in turn, computing power. Bitcoin mining will remain challenging at current profitability levels due to factors such as inflation in the price of electricity and construction materials, the impact of weather and environmental regulations, and potential regulatory intervention. That being said, with our current generation costs, even at current crypto prices, we are able to generate gross margins in excess of 50 percent.

This said, we are convinced that Bitcoin mining, especially in our own setup, can be successfully developed and will be a cash supplier for the Group's expansion in the long term. Therefore, it is of elementary importance to achieve a critical mass. In order to achieve a higher market share of the global hashrate, the company will draw on the possibility of external financing if necessary, and consider allowing strategic investors to participate at the level of the individual business segments, such as in the area of Bitcoin mining.

Cloud computing will gain momentum in the future

We want to not only become one of the largest Bitcoin mining companies in the world, but also to gradually transfer the GPU computing power from Ethereum mining to cloud computing, and to leverage synergy effects from the data center business for the connected segments and external colocation services.

Since the end of 2021, up to 223,000 GPU cards from our partners Nvidia and AMD have been online to generate Ethereum with computing power. Of these, a portion was already migrated to cloud services in the first half of 2022. In fact, the whole GPU cluster is expected to become more and more part of cloud computing in the future. We are already preparing our sites in Norway and Sweden for this today while creating the hardware requirements, such as cloud networks and storage systems. Additionally, and above all else, our experts are working at full speed on the complex operating concept of virtualized hardware in a GPU-based cloud.

System prototypes and environment concepts – including different access options for customers and customer groups – have been developed and tested at the sites in Norway and Sweden, and

manufacturer components have evaluated, including in particular the resulting speed of gaining market access. The selected stack is then tested for scalability and stability with proof-of-concept projects under real conditions in cooperation with resellers.

Furthermore, our cloud team has partnered with a global Tier 1 consulting firm to develop approximately sales activities, and is confident of being able to sell the projected compute power of up to 4,000 state-of-the-art GPU cards from NVIDIA in 2022. The task ahead is to create the technical prerequisites on the software side to make current GPUs continuously usable for the cloud market, as well as the organizational prerequisites to market them permanently in the cloud.

Tailwind from political requirements

In the years ahead, our offering will be scaled up to full capability. As of today, we project that, by 2024, we will be able to sell one of the three largest European cloud computing offerings on the market. It is our goal to grow in the fast-growing cloud market to triple-digit million sales in the coming years.

With our cloud platform, we want to provide our customers with highly scalable, sustainable, and cost-effective computing power, always with a focus on efficiency and easy access.

The political climate in Europe calls for technological autonomy, green transformation, European data security, and an ecosystem for innovation. On all these fronts, Northern Data wants to add value that strengthens our positioning in Europe. Northern Data's cloud business will focus on our European locations to start with and is therefore not subject to the U.S. government's Cloud Act, as is the case with the European cloud business of U.S. hyperscalers. This is a clear competitive advantage in the European region. We will work with European partners to offer our own innovative solutions using already available infrastructure and hardware to advance the European goals of technological sovereignty and competitiveness.

"ESG" not just a buzzword for us

We refine energy into computing power that keeps the blockchain secure, satisfies the "hunger" for cloud-based services, and allowed Northern Data to achieve very good operating earnings in the past fiscal year in addition to the special effects mentioned above. Since our business is energy-intensive, we also believe we have a special responsibility to act sustainably. To create a sustainable business model, we must run on sustainable power. For this reason, when selecting and operating our sites, our main criterion is access to as much renewable energy as possible. Today, we are particularly successful in this respect already in Scandinavia, which is rich in hydropower.

Through the complementary purchase of carbon credits, we have already managed to make our entire infrastructure worldwide completely carbon neutral by 2021. You can read our ESG reporting in more detail in our Sustainability Report. While we are not legally required to do so, we are presenting it for the first time in this Annual Report.

Positive outlook on 2022

Assuming current Bitcoin and Ethereum prices, we expect moderate sales growth and EBITDA in the double-digit million-euro range in 2022. Since both sales and EBITDA in 2022 will still be generated primarily by crypto mining, strong changes in crypto prices could affect profitability in particular. Cloud computing is expected to contribute for the first time with sales revenues of EUR 5–14 million in 2022.

Northern Data is working towards becoming a leading player in the market for sustainably-delivered HPC computing power with a strategic focus on cloud computing.

On behalf of the entire management team, I would like to thank you for your interest in Northern Data and for accompanying us on our journey. We would also like to thank our employees around the world for their commitment and enthusiasm in driving Northern Data AG forward on our shared path every day.

Together with all of you, I look forward to what lies ahead of us!

Sincerely yours,



Aroosh Thillainathan
Chairman of the
Management Board

Report of the Supervisory Board

Dear Ladies and Gentlemen,

Fiscal year 2021 was a year of growth for Northern Data AG, which was characterized by good and close cooperation between the Supervisory Board and the Management Board.

In accordance with the provisions of the Articles of Association of Northern Data AG, the Supervisory Board comprises of three members. In 2021, these were the Chairman of the Supervisory Board, Dr. Tom Oliver Schorling, the Deputy Chairman, Dr. Bernd Hartmann, and Hermann-Josef Lamberti. The members of the Management Board in the entire fiscal year 2021, besides the Chairman, Aroosh Thillainathan, were Stefan Sickenberger (COO) and Dr. Mathias Dähn (CFO).

A total of 27 meetings of the Supervisory Board in 2021 once again reflected the Supervisory Board's close monitoring of business developments in the reporting year. All meetings were attended by all members of the Supervisory Board. Due to the corona pandemic, only one meeting was held in person, while 15 meetings were held by video and 11 by telephone. In certain cases, the Supervisory Board adopted resolutions outside its meetings by using the written procedure.

The Supervisory Board monitored the activities of the Management Board throughout the fiscal year 2021 and advised the Board on managing the company. This included the company's business performance, its earnings and financial position, as well as its investment plans, in particular. The Management Board always fulfilled its duties to provide information to an appropriate extent. The Management Board informed the Supervisory Board regularly, promptly, and comprehensively in written and verbal reports on all relevant issues related to company planning, the course of business, strategic development, and the current situation and overall development of the Group.

With regard to the company's operating business, 2021 was significantly impacted by acquisitions and the founding of new companies, as well as the expansion of our multi-site strategy and the subsequent sale of the subsidiary Whinstone US, Inc. based in Texas. In February 2021, the Supervisory Board dealt with the termination of the 2019 convertible bond and the acquisition of a property in Norway in order for us to be able to expand another data center there. At another meeting held at the end of February 2021, a resolution was passed to acquire the Hydro66 Group and thus also the Boden Data Center in Sweden, and to subsequently carry out the necessary capital increase in kind.

In March 2021, the Supervisory Board approved the acquisition of a site in North Dakota, USA, and the related founding of subsidiaries in the United States. At the end of March 2021, the Supervisory Board also approved a cash capital increase and its volume. The Supervisory Board approved the sale of the Texas-based subsidiary Whinstone US Inc. to Riot Blockchain Inc. in April 2021.

In meetings in August 2021, the Supervisory Board approved the acquisition of an additional site in Norway and the acquisition of a company in Georgia, USA, with a data center already in operation. In addition, the acquisition of Decentric Europe B.V. via a cash component and a capital increase in kind was resolved. The resolution to acquire Bitfield N.V. and its subsidiaries by way of a capital increase against contributions in kind was passed in September 2021. Other topics included personnel matters and a complaint lodged by the German Federal Financial Supervisory Authority (BaFin), which resulted in the public prosecutor's office refusing to initiate preliminary proceedings due to a lack of initial suspicion. Finally, several meetings in the second half of the year dealt with the 2020 Annual Financial Statements, in particular the conversion of accounting to the IFRS format, and took place in exchange with the auditor.

Audit and Approval of the Annual Financial Statements

These Annual Financial Statements and Consolidated Financial Statements of Northern Data AG for fiscal year 2021 have been audited by KPMG AG Wirtschaftsprüfungsgesellschaft, Berlin, the auditors appointed by the Annual General Meeting, and have been issued with an unqualified audit opinion. The Supervisory Board examined both the Annual Financial Statements as of December 31, 2021 of Northern Data AG and the Consolidated Financial Statements, in particular with regard to their legality, propriety and appropriateness, and discussed the documents in detail with the Management Board and the auditor on the basis of a draft of the audit report.

The auditor reported on the progress of the audit at several Supervisory Board meetings and attended the Supervisory Board meeting on August 29, 2022, at which the results of the audit as a whole and the individual focal points of the audit were reported. He was available to answer any questions arising from the members of the Supervisory Board. The members of the Supervisory Board noted and critically evaluated the audit reports and audit opinions and discussed them, as well as the audits themselves, among themselves and with the auditors. This included asking questions on the nature and scope of the audit and on the audit findings. The Supervisory Board was thus able to assure itself of the regularity of the audits and the audit reports. The Supervisory Board has conclusively assessed the Annual Financial Statements as of December 31, 2021, of Northern Data AG and the Consolidated Financial Statements, taking the auditor's audit reports into account, and raises no objections based on the results of its review. The Supervisory Board approved and thus adopted the Annual Financial Statements prepared by the Management Board by Supervisory Board resolution on August 29, 2022; it also approved the Consolidated Financial Statements.

The Supervisory Board would like to thank the members of the Management Board and all of the company's employees in this challenging year for their personal commitment, their energetic efforts in the interests of the company, and for the successes achieved in fiscal year 2021. The Supervisory Board would like to thank the shareholders for their interest in our company and for the trust they have placed in us.

Frankfurt/Main, August 29, 2022



Dr. Tom Oliver Schorling

Chairman of the
Supervisory Board

Investor Relations

Northern Data AG on the Capital Market

The international stock markets developed positively in the past stock market year 2021. After the availability of Covid-19 vaccines had become apparent from the fourth quarter of 2020 on, the most important global stock indices achieved double-digit growth rates in the first half of 2021. Monetary measures by the central banks, fiscal support from governments, and positive economic data supported the stock markets' recovery. The growth trend on the stock markets slowed in the third quarter, but picked up again strongly in the fourth quarter. As a result, the DAX, the S&P 500, the EURO STOXX 600, and the NASDAQ-100 all reached new all-time highs. However, dynamically rising inflation rates and the prospect of interest rate hikes by the US Federal Reserve dampened the positive trend at the end of the year.

The German DAX share index started the stock market year on January 4, 2021 at 13,751 points and recorded its low of 13,433 points that same month. On March 31, the DAX leaped over the 15,000-point mark for the first time in its history and rose over the rest of the year to its all-time high of 16,272 points on November 17. For the full year 2021, the German benchmark index closed up 15.4 percent at 15,885 points.

Overview – share price development 2021

Year-end share price in 2020	December 30, 2020	EUR 77.00
Lowest closing price	October 22, 2021	EUR 52.80
Highest closing price	February 16, 2021	EUR 138.50
Year-end share price in 2021	December 30, 2021	EUR 77.00
Market capitalization	December 30, 2021	EUR 1.8 billion
Number of shares outstanding	December 30, 2021	23,815,514
Price development (Xetra prices)	DE000A0SMU87/A0SMU8	0.0%

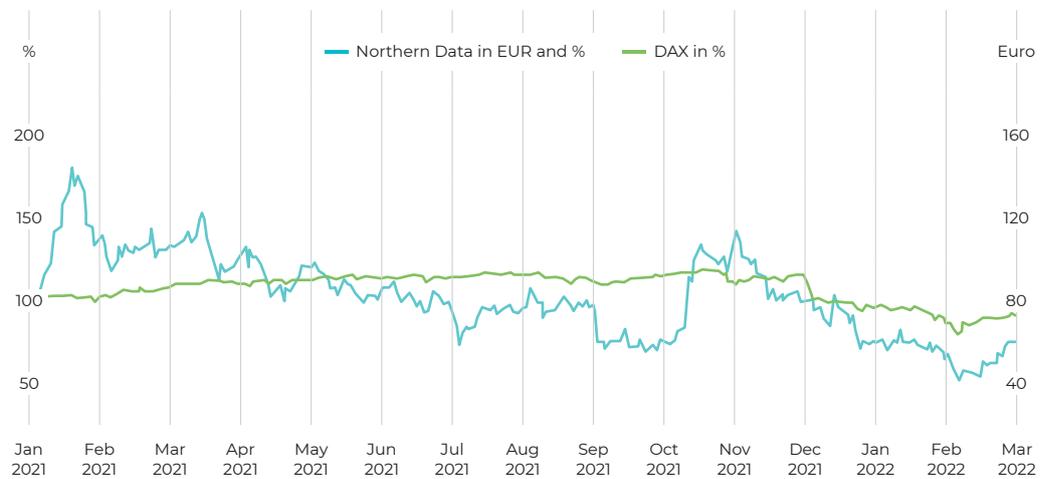
Status on December 31, 2021, daily Xetra closing prices, source: Deutsche Börse

In the first quarter of the past fiscal year, Northern Data share prices benefited from dynamic growth in cryptocurrency prices. These were characterized by high volatility in the reporting period and temporarily transferred to the performance of the Northern Data share. After share price declines in the first half of the year, the fourth quarter of 2021 was characterized by a strong recovery of the share price as well as a strategic adjustments to the business model.

The Northern Data share started the trading year on January 4, 2021 at a price of EUR 82.00 and reached its high for the entire year on February 16 at EUR 138.50. This price also marked the all-time high to date. Falling prices on the crypto markets led to price declines in the following months to the low for the year of EUR 52.80 on October 22, 2021. As the fourth quarter progressed, the company-specific fundamental key figures of Northern Data once again came into the focus of investors in

the course of the confirmation and auditing of the 2020 Annual Financial Statements, so that the share reached prices of up to EUR 109.60 again. At a closing price of EUR 77.00 and 23,815,514 shares outstanding, the market capitalization of Northern Data AG amounted to around EUR 1.8 billion as of December 31, 2021.

Development of the Northern Data share in 2021/2022 by comparison (indexed)



In the reporting year 2021, the average daily trading volume in Northern Data shares on all German stock exchanges was 70,023 shares. In the entire year 2020, 41,638 shares were traded each day on average.

Share price development in the first quarter of 2022

Shares of Northern Data AG started the first quarter of 2022 at a price of EUR 78.10 on January 3 and reached their quarterly high at EUR 80.70 on January 11. The start of the Russian war against Ukraine sent both international stock exchanges and cryptocurrencies on a downward slide and subsequently also led to significant price declines for Northern Data shares. The shares marked their three-month low on March 7, 2022 at EUR 39.75. Following a return to normal prices, the market capitalization of Northern Data AG was EUR 1.4 billion on March 31, 2022, at a closing price of EUR 57.90 and 23,815,514 shares outstanding. While 92,808 shares were traded in the same period of the previous year, the average daily trading volume in the period from January to March 2022 was 41,227 shares.

Overview Research Coverage

Research	Date	Target price	Recommendation
Hauck&Aufhäuser	February 10, 2022	EUR 208.00	Buy
Baader Bank	December 13, 2021	EUR 154.00	Buy
SMC Research	March 17, 2021	EUR 116.00	Suspended
Stifel Europe	January 7, 2021	EUR 130.00	Suspended

Research Coverage

Northern Data AG shares have been constantly analyzed and evaluated by the investment banks Baader Bank Aktiengesellschaft, Hauck&Aufhäuser Privatbankiers AG, and Stifel Europe Bank AG, as well as the firm that specializes in German mid-caps, SMC Research. In nearly all studies, the analysts recommend Northern Data shares as a buy with price targets of up to EUR 208.00. This equates to price potential of up to 160 percent on the closing price on March 31, 2022.

In doing so, the analysts emphasize the attractive market opportunities of the innovative technology that Northern Data offers through the development and operation of efficient, environmentally friendly HPC infrastructures and, in the future, through the GPU cloud. The growing demand for HPC services opens up growth prospects in the generation of cryptocurrencies in the data centers, among other possibilities. The structural further development of the business model, which has provided for global diversification of the production sites since the past fiscal year in order to avoid potential centralization risks, is also cited as positive.

Information on the share

Initial listing	April 1, 2015
Stock exchange	Xetra, Frankfurt, Munich, Berlin, Düsseldorf, Tradegate
Market segment	Open market
Transparency level	m:access
Symbol	NB2
ISIN/WKN	DE000AOSMU87/AOSMU8
Index membership	MSCI Germany Index
Type of shares	Bearer shares with no nominal value
Total number of shares	23,815,514
Amount of share capital	EUR 23,815,514
Designated sponsors	mwb fairtrade Wertpapierhandelsbank AG, Baader Bank AG

Status on December 31, 2021

Capital measures

In fiscal year 2021, the Management Board of Northern Data AG, with the approval of the Supervisory Board, resolved various capital increases to bolster the balance sheet, expand the shareholder structure, increase liquidity, and accelerate the growth of its current business activities. Northern Data AG's share capital increased from EUR 14,639,684 to EUR 23,815,514 in the year under review through the issue of 9,175,830 shares.

For further information on capital measures, please refer to chapter Financial position of the management report and Business combinations of the notes.

Shareholder structure

As of December 31, 2021, pursuant to Section 20 of the German Stock Corporation Act (AktG), the company is not aware of any individual shareholders holding a stake of more than 25 percent in Northern Data AG. Shares in the voting capital of the company that have been voluntarily disclosed to Northern Data AG are distributed as follows: The management team holds approximately 6.5 percent of the shares outstanding. Anchor investors hold approximately 54 percent of the voting shares in Northern Data AG. Among others, Block.one Investments 1 holds around 20 percent, Singularity Capital AG and BlackMars Capital GmbH approx. 13 percent and Cryptology Asset Group PLC and Apeiron Investment Group Limited around 15 percent. Approximately 51 percent of the shares with voting rights are in free float as defined by Deutsche Börse (voting rights of under 5 percent).

Intensive dialogue with the Capital Market

In the year under review, Northern Data maintained an intensive dialogue with existing and potential shareholders and is in continuous exchange with media representatives, investors, and analysts. In view of the Corona pandemic, virtual formats such as video or telephone conferences were again mainly used for dialog in 2021. As part of its investor relations work, the management presented Northern Data AG at the 31st Munich Capital Market Conference on May 4, 2021, and at the B. Riley Securities Crypto Conference in New York on December 8, 2021. In addition, the management communicated Northern Data AG's strategy, business development and growth prospects to domestic and foreign investors at numerous virtual and physical roadshows. Physical investor roadshows were held in New York, Frankfurt, London, Zurich, and Paris. An overview of the roadshows held in the reporting year is shown in the following table:

April 2021	Virtual Investor Group Call with Stifel Europe Bank AG
April 2021	Virtual Investor Group Call with Hauck&Aufhäuser Lampe Privatbank AG
October 2021	Management Roadshow with Hauck&Aufhäuser Lampe Privatbank AG, London
November 2021	Management Roadshow in New York
December 2021	Management Roadshow with Baader Bank, New York
December 2021	Virtual Roadshow with Stifel Europe Bank AG

The Northern Data AG share

In addition to Xetra, Germany's most important stock trading platform, and the m:access segment for small and medium-sized companies at the Munich Stock Exchange, Northern Data AG shares are also traded at the company's headquarters, on the stock exchange in Frankfurt/Main, on the Berlin and Düsseldorf stock exchanges, and via the Tradegate Exchange.

As designated sponsors, mwb fairtrade Wertpapierhandelsbank AG and Baader Bank AG provide binding bid and offer prices, thereby ensuring that Northern Data shares can be traded properly. Further information is available to interested investors in the Investor Relations section of the homepage at www.northerndata.de.

2022 Financial Calendar

March 30, 2022	Pareto Securities' German TechITService Conference
May 11–15, 2022	HAIB Stockpicker Summit
May 23–26, 2022	H.C. Wainwright Global Investment Conference





ESG Report

(unaudited)



Sustainability

“Building a more sustainable global economy will help reduce the greenhouse gas emissions that cause climate change. Sustainable development and climate action are linked – and both are vital to the present and future well-being of humanity.”

UN Sustainable Development Goals

Northern Data – Sustainability From the Very Beginning

In the light of climate change, limited resources, and a growing world population, collective awareness of the need to act sustainably has emerged. It arises from the responsibility of society to build a future that is optimistic and worth living in. Consequently, corporate success is becoming increasingly dependent on sustainable action.

Institutions, companies, and organizations of all kinds must develop sustainability strategies. For a company to live up to its social responsibility, it must consider all its actions and decisions as though they affect the entire world. Companies must have a hand in facilitating a good quality of life now and in the future.

To this end, Northern Data has integrated ESG criteria (ESG= Environmental, Social, Governance) into its corporate culture. As a company that builds and operates a global HPC infrastructure, Northern Data has a special responsibility in its sustainability agenda, particularly regarding environmental causes. The company carefully centers climate neutrality and efficient energy management into its decisions and solutions at an early stage. Wherever possible, Northern Data strives to operate the data centers powered by renewable energy.

When setting up sites and operating and maintaining hardware, Northern Data uses proprietary software and hardware tools to ensure that every kilowatt of electricity that flows into the data centers is used as efficiently as possible. As a result, together with the supplementary purchase of Renewable Energy Certificates, the company presently operates at climate-neutral standards. As a result, the company also empowers customers to achieve their own climate targets. At the same time, Northern Data does not take the social and economic aspects of the sustainability agenda any less seriously.

As Northern Data still finds itself in the market development and establishment phase, the company has had the incredible advantage of being able to integrate sustainable actions without having to rebuild existing structures. Sustainability is firmly embedded into the corporate and, as such, that finds ample expression in the corporate culture.

In shaping the sustainability agenda, Northern Data takes guidance from common international standards such as the UN Sustainable Development Goals, the GRI Standards, and the Principles for Responsible Investing. For fiscal year 2021 Northern Data has decided to voluntarily create its first ESG report. This report represents an important step in the commitment to monitor ESG issues continuously, to improve the implementation of ESG issues and to report of the main ESG KPIs.

ESG Data Overview

A detailed description of the individual data may be found in the following sections:

	Material Topic	Reported Indicator	Value (2021)
E	Power Usage Effectiveness	Benchmark PUE ¹	1.04
	Energy Consumption & Sources	Total Energy Consumption	468 GWh
		Total Emission-free Energy	347 GWh
		Share of Emission-free Energy	74%
		Total Fossil Fuel Energy	121 GWh
		Share of Fossil Fuel Energy	26%
	Carbon Footprint	Benchmark Carbon Footprint ¹	0 t CO ₂ e in Scope 1 0 t CO ₂ e in Scope 2 7,248 t CO ₂ e in Scope 3
		Carbon Offsetting (RECs)	147 GWh
		Carbon Neutrality Percentage	105%
Carbon Offsetting Cost		EUR 570 thousand	
S	Talent Attraction	Employee Number	2020: 56 2021: 159
	Diversity	Workforce Breakdown Contract	Open-ended contract: 97% Fixed-term contract: 3%
		Workforce Breakdown Age	<30: 20% 30–50: 50% >50: 7% Unknown: 23%
		Workforce Breakdown Gender	Men: 67% Women: 33%
		Workforce Breakdown Nationalities	Germany: 41% Canada: 21% USA: 16% Norway: 6% Sweden: 3% United Kingdom: 3% Other/Unknown: 10%
G	Anti-Corruption & Compliance	Whistleblowing Cases	0
	Data Privacy	Data Privacy Breaches	0
	Cyber Security	Cyber Security Breaches	0

¹ Figures for the data center in Sweden

ESG Reporting at Northern Data

Managing ESG

The responsibility for ESG issues lies with the Executive Board, which wants to ensure that sustainability with all its facets is being implemented in group-wide processes. The overall operative management and the reporting process of ESG issues are led by the Investor Relations department that works together with other business divisions to develop and implement sustainable management processes.

2021 Reporting

The 2021 reporting aims to establish the first inventory of ESG data by determining where exactly Northern Data stands and what data can be measured or quantified. To determine Northern Data's material ESG issues; stakeholders' expectations from Northern Data concerning ESG issues; and the impact of the business activities on the environment were all analyzed. Once the company identified the material ESG issues, it started to collect data. In this undertaking, departments dealing with energy, operations, people, and risk & compliance matters played a key role. Wherever possible, data and information were included in the reporting. In cases in which data could not sufficiently be collected, planning and implementation of actions was started. The 2021 reporting provides the fundamental knowledge that Northern Data needs to create a long-term ESG strategy and establish ESG KPIs that will be reported on in future reports. Additionally, it provides a stable groundwork for ESG rating agencies to carry out sound ESG ratings on Northern Data in the future.

Material Topics

To identify the ESG material topics for Northern Data an internal material assessment consisting of a stakeholder analysis and a materiality analysis was conducted. All investigations within this context were solely based on internal group discussions that were fueled by the information and experiences that the company regularly exchanges with its stakeholders – including the management team, employees, investors, and customers.

Stakeholder Analysis

The stakeholder analysis describes the stakeholders' expectations of Northern Data. The results of the stakeholder analysis are presented in the table below:

	Stakeholder	Expectation from Northern Data
Internal	Employees	A secure job with career opportunities, flexible working conditions regarding working hours and opportunities for home office, work-life balance, recognition and appreciation of one's own work performance, pleasant working atmosphere, fair salary, training and learning opportunities, possibility to implement own ideas, benefits and incentives, sought-after employer with good image
	Students/Interns	Assignment according to own abilities, learning opportunities, flexible working conditions regarding working hours and opportunities for home office, fair salary, excellent internship certification, approachable mentors
External	Investors	Sustainable growth, good operational performance, solid financial figures, research coverage with buy-rating, credible and experienced management, knowledge of market, high potential for innovations, transparent investor communication, ESG compliance, good ESG rankings
	Customers	Added value at good prices, reliability, competent and proactive advice and support, easy to reach, expert problem-solving, smooth running of customer projects, ESG-compliant behavior, highest data security, principal "one face to the customer"
	Partners, Suppliers	Reliable adherence to agreements and prices, high quality and ESG standards, smooth and easy co-operation, expertise, professionalism
	Media, Press	Easy and quick access to all relevant information, accessibility of spokespersons and management, quick response to inquiries, press releases with substantial content, transparent and continuous updated information
	NGOs	High environmental standards and moral values, transparency, safety, human rights commitment, environmental commitment
	Public	High environmental standards and moral values, taking corporate social responsibility seriously, local engagement as a "good citizen"
	HPC Expertise Industry	Supporting the goals of the Crypto and Bitcoin Industry, engagement in HPC and crypto industry associations (events, fairs, representatives), sharing of expertise
	Legislator and Authorities	Observing and meeting national laws and regulations as well as internal company guidelines (compliance), observing and fulfilling regulations of the stock exchange, EU taxonomy

Materiality Analysis

The materiality analysis was key to identifying the most relevant topics for Northern Data regarding ESG issues. For this purpose, guidance from common international standards and frameworks such as the United Nations' Sustainable Development Goals (SDGs), the Global Reporting Initiative (GRI), and the Principles for Responsible Investment (PRI) were taken into consideration. The identified topics were ranked by importance to the main stakeholders and by the impact each topic has on Northern Data's business activities. The scale of the ranking differentiates between low and high importance for our stakeholder (y-axis) and low and high impact on Northern Data's activities (x-axis).

The results of the material analysis are presented in the matrix below:



Environmental

- 1 Power Usage Effectiveness
- 2 Energy Consumption & Sources
- 3 Electricity Waste Disposal
- 4 Carbon Footprint
- 5 Resourcing

Social

- 6 Recruiting and Retention of Employees
- 7 Health and Safety of Employees
- 8 Employee Appreciation and Engagement
- 9 Diversity
- 10 Human Capital Development
- 11 Social and Local Impact
- 12 Human Rights

Governance

- 13 Corporate Governance, Corporate Structure
- 14 Anti Corruption and Compliance
- 15 Data Privacy
- 16 Cyber Security
- 17 Innovation Management

The table below explains the materiality of the chosen topics for Northern Data:

No.	Topic	Definition of Materiality
1	Power Usage Effectiveness	The more efficiently energy is used, the more profitable and environmentally sustainable Northern Data's business becomes.
2	Energy Consumption & Sources	Northern Data's business is very energy intensive. Therefore, factors such as the amount of energy used and where the energy comes from are essential.
3	Electrical Waste Disposal	Northern Data operates tens of thousands of servers in its data centers. Computer hardware that runs constantly will eventually need to be replaced and therefore will be electrical waste by then.
4	Carbon Footprint	Northern Data wants to comply to with its own business ethics, such as global goals and standards that have the aim to control global warming.
5	Resourcing	The integrated view of Northern Data's own sustainable behavior also includes sustainability regarding resourcing.
6	Talent Attraction	Northern Data is expanding. As new sites are being developed, the workforce must grow as well. Especially expertise in certain fields must be recruited successfully.
7	Health and Safety of Employees	The safety and well-being of the employees are priority one for Northern Data. This concerns safety procedures in the data centers as well as in the offices.
8	Employee Recognition and Engagement	The success of the company is dependent on its employees. Northern Data believes that good work and development require employee satisfaction and well-being.
9	Diversity	Northern Data as a globally operating company is an employer to people from many different nationalities and backgrounds. Thus, diversity is at the core of the business.
10	Learning and Development	Northern Data wants its employees to learn, grow, and realize their full potential to ensure employee satisfaction and to stay on track with developments in the business.
11	Social and Local Impact	Northern Data wants to strengthen its reputation as a responsible company and have a positive impact on both local communities and society as a whole.
12	Human Rights	Northern Data commits to human rights under the UN Guiding Principles on Business and Human Rights. Northern Data wants to proactively identify and assess potential impacts and risks relating to respecting human rights and address these successfully.
13	Corporate Governance, Corporate Structure	Northern Data is growing rapidly, which means that the number of employees is also increasing at a fast pace. It is therefore important for Northern Data to establish a legal and factual regulatory framework for the management and supervision of the company based on good corporate governance.
14	Anti-Corruption & Compliance	Breaches of compliance guidelines, unlawful conduct, and failure to comply with internal company standards can have far-reaching consequences for Northern Data. These include claims for damages and monetary fines, which can inflict both financial and major reputational damage on Northern Data.
15	Data Privacy	Due to the business model, data protection plays a major role at Northern Data. In times when even large amounts of data can be stored, duplicated, and sent very quickly, it is crucial to identify and avoid potential data violations at an early stage.
16	Cyber Security	As a company that is digital, decentralized, and global with multiple locations in different countries, cyber security is an important component. Like any high-tech company, also Northern Data rely on digital and cloud services and needs to address how to maintain the operations and best protect its customers' data as well as its own.
17	Innovation Management	In the IT industry developments are fast-changing, invest in research and development and realize creative innovational potential.

Environmental

In the context of ESG compliance, Northern Data bears a high level of responsibility to the environment because of its high electrical consumption. The company's goal is to ensure that its energy consumption, which is also a significant operational cost factor, is as efficient and environmentally friendly as possible. In 2021, Northern Data operated nine data centers in Germany, the Netherlands, Sweden, Norway, and the USA. Their construction and operating processes aim for the highest energy efficiency. At this time, the monitoring and gathering of data about the energy consumption and other relevant environmental parameters, can only be documented for the Sweden site. The data center in Sweden, thanks to special ESG project management with a tier 1 consultancy performed in 2021, provides the Benchmark for our data center portfolio. The site is equipped with all needed devices to measure environmental performance and has been TÜV-Süd-certified for 2021 in terms of carbon emissions in scopes 1, 2, and 3.

Power Usage Effectiveness

Power Usage Effectiveness (PUE) is defined as the ratio that describes how efficiently data centers use electrical energy to generate compute power. Northern Data calculates its data centers' PUE by dividing the amount of power entering the data center by the power that is used to run our IT infrastructure in it. For the reporting year 2021, the PUE of our Flagship Data Center Sweden 1 which is 1.04¹ was determined. Northern Data is currently working on the roll-out of suitable measuring methods in all data centers globally as it strives to determine the PUE in its data centers with the same reliable standard method as Sweden's.

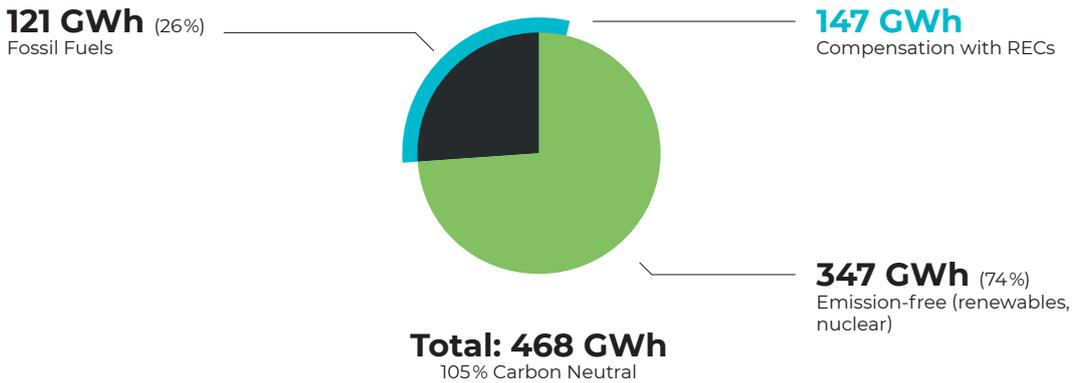
Energy Consumption & Sources

The total energy consumption is defined as the sum of all electrical energy consumed in Northern Data's data center operations including contracted third-party data centers. The data for the energy consumption is provided by the contracted energy suppliers according to the data center location. Based on this information, the total energy consumption for 2021 was 468 GWh.

Northern Data reports on the share of emission-free and fossil energy whereas emission-free energy is defined as electricity coming from renewable energy sources (such as hydro, wind, solar) as well as from nuclear energy. The share of emission-free energy was determined by multiplying the data taken from the fuel mix by the amount of energy used in the data centers. In 2021, 347 GWh (74 percent) of Northern Data's energy sources were emission-free, whereas most of this figure (precisely: 226 GWh/65 percent) came from renewable energy sources. 121 GWh (26 percent) were drawn from fossil fuel sources.

¹ The PUE value describes the ratio of the total power demand of a data center in relation to the power demand of the IT devices. The lower the ratio, the more energy efficient the data center.

Energy Sources



To compensate for the 121 GWh reliance on fossil fuels in 2021, Northern Data purchased 147 GWh of RECs (Renewable Energy Certificates), making their data center operations 105 percent carbon neutral in 2021. Through the purchase of RECs, Northern Data is advocating for the advancement of clean energy policy, markets, and technology. Northern Data firmly believes in their economic and environmental benefits. The RECs purchased were retired against Northern Data's energy consumption in the North American Renewable Registry (NARR) and are a combination of Certified Green-e, wind, and solar. The overall capital expenditure was EUR 570 thousand.

Electrical Waste Disposal

Electrical waste is defined as both discarded electronic devices and assets. Northern Data manages its electrical waste by deciding whether it can be remarketed, refurbished, or recycled, before deciding it must be disposed. By this process of consideration, the company strives to give discarded electronic devices and assets a second life through refurbishment and resale. In 2021, there were been no significant amounts of electric waste at Northern Data. Northern Data handles the recycling and disposal of electrical waste in a manner that is compliant with local and European laws and guidelines.

Carbon Footprint

Of Data Center Operations

For the Benchmark data center Sweden 1 Northern Data reported a TÜV-Süd certified Carbon Footprint of 0 t CO₂e in Scope 1 and 2 activities and 7,248 t CO₂e in Scope 3 emissions in 2021. For the other operating data centers, the carbon footprint has not been determined for 2021.

Of Business Travel

Most of the business travel at Northern Data is booked through GreenPerk, TravelPerk's carbon-neutral business travel program. GreenPerk partners with carbon calculation and offset providers, so that Northern Data compensates for its CO₂ emissions directly through the platform. Offsetting happens on a per-trip basis, helping to reduce the carbon footprint of the company's business travel to zero. With the contribution Northern Data supports projects to combat deforestation in Indonesia, to aid reforestation in Cambodia, and to promote the use of hydropower in Turkey. All projects are VERRA/GOLD-awarded and audited.



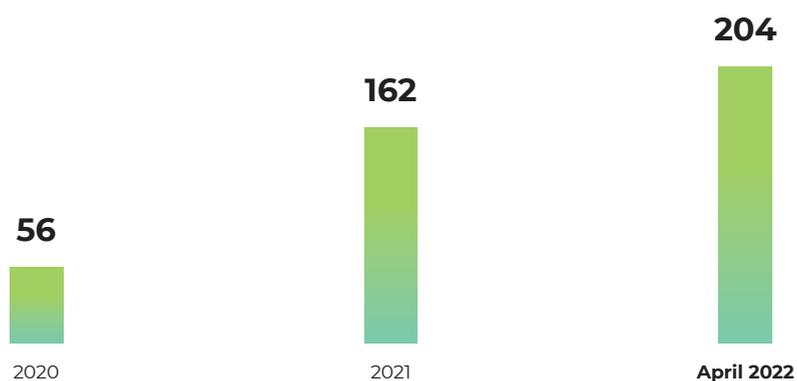
Social

In 2021, Northern Data's focus was to attract top talent to support the strategic objectives of the company. The hiring campaigns resulted in an almost threefold increase in the workforce compared to 2020. Northern Data's employees are spread across key locations in North America and Europe and have specialized expertise, primarily in IT skills. Talent attraction and retention is critical to the future success of Northern Data, as such Rosanne Kincaid-Smith was hired as Chief People Officer in February 2022 to provide professional leadership for the company's ongoing personnel strategy.

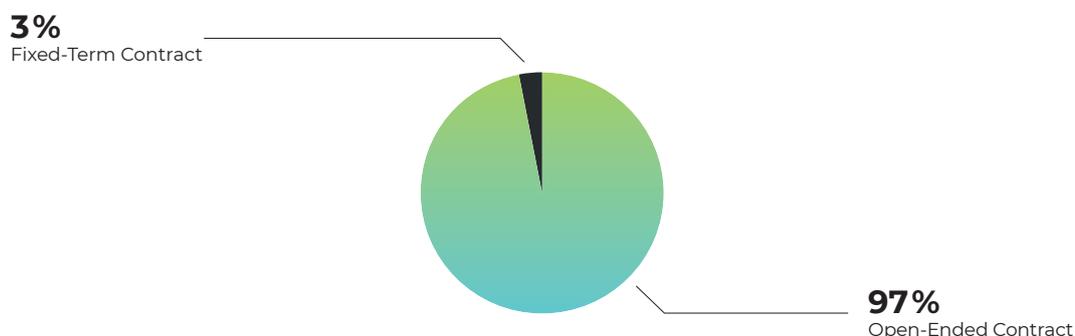
Talent Attraction

Northern Data, as a fast-growing business, maintains a special focus on Talent Attraction. The company requires specialized talent with expert skills. To support this, the company has built a Talent Acquisition function that is focused on the recruitment of employees with specialized skills in information technology. The company uses many focused strategies to attract talent, such as the recently launched employee referral program that motivates employees to bring expertise from their own network to the company. In 2021 Northern Data employed 162 employees of whom 97 percent have a full-time contract and 3 percent a fixed-term contract.

Total Number of Employees



Type of Employment



Health and Safety

Northern Data places great importance on the physical and mental well-being of its employees. The rules of conduct for a safe workplace as well as healthy interaction are documented in Northern Data's Code of Business Conduct & Ethics. Northern Data provides ergonomically designed office equipment, including height-adjustable desks, to ensure that the work environment supports employees' posture and physical health. During the Covid-19 pandemic, swift action was taken to protect the health of all employees. Working from home was enabled and supported. In addition, an unlimited supply of Covid-19 masks and Covid-19 antigen tests were available to employees.

Employee Recognition and Engagement

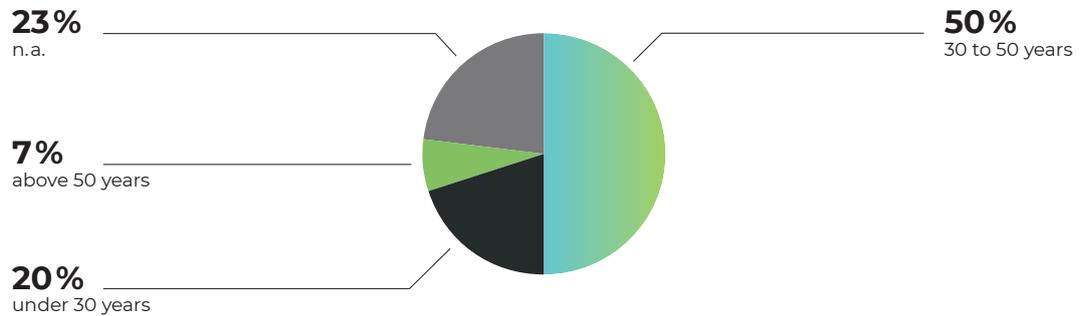
Northern Data is currently building a sustainable, strong, and committed workforce. Every employee should have the opportunity to fully develop their personal and professional ambitions. To underpin this conviction, Northern Data is currently developing a recognition workplace strategy. As part of

this strategy, Northern Data already offers competitive salaries and flexible working hours and supports professional development. In 2021, Northern Data paid every full-time employee a Covid-19 bonus.

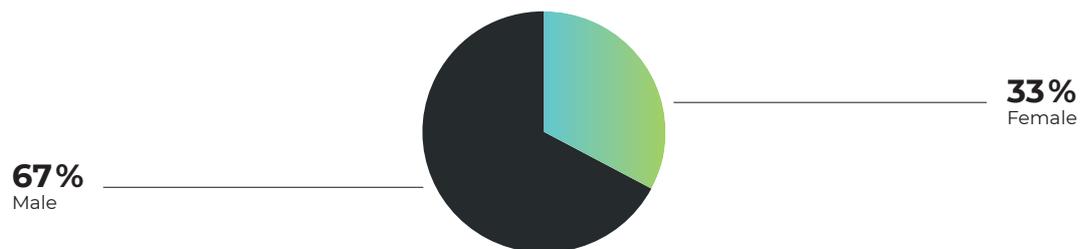
Diversity

Northern Data strictly opposes the discrimination on gender, ethnicity, age, sexual orientation, or religion. The company provides the following statistics on workforce: age, nationality, and gender. In 2021 50 percent of the workforce was between 30 and 50 years of age, 20 percent under 30 years, and 7 percent 50 or older. 23 percent of the workforce is not registered with birthdates due to data privacy laws of individual countries. In regard to the workforce gender breakdown group-wide, 33 percent female and 67 percent male were reported. Northern Data currently employs a workforce consisting of 20 different nationalities, hailing from five continents. They are German (41 percent), Canadian (21 percent), American (16 percent), Norwegian (6 percent), Swedish (3 percent), and British (3 percent). The remaining 7 percent of the workforce yields from other countries and 3 percent cannot be identified due to data privacy laws in their respective countries.

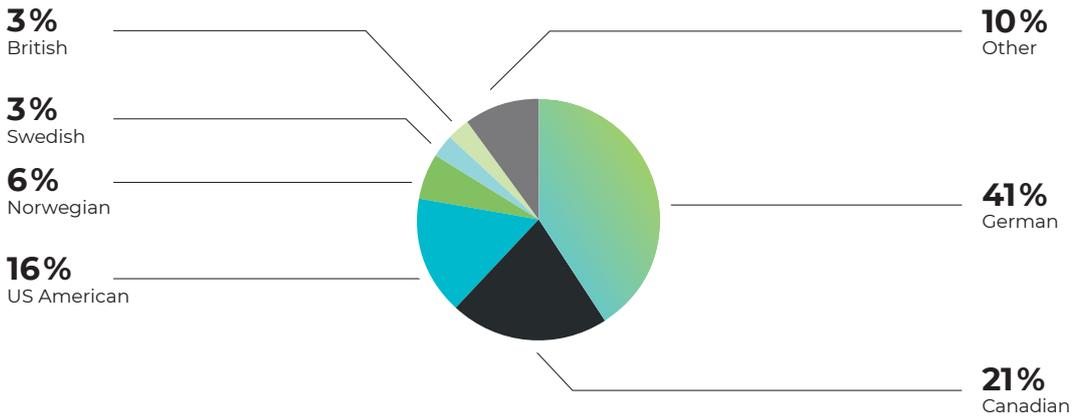
Age of Workforce



Gender of Workforce



Nationality of Workforce



Learning and Development

In 2021, Northern Data rolled out Proliance 360 Data Privacy Training to ensure that every employee is trained on the basics of data protection. This was completed by 100 percent of the workforce in 2021 and will be repeated yearly. In addition, the Haufe Academy, a leading provider of flexible development programs, has been integrated into Northern Data. From 2022 onwards, the platform is providing a variety of flexible development programs to employees. Northern Data promotes individual further education, in line with our specialized capability requirements.

Human Rights

Northern Data's advocacy for human rights is detailed in the company's Human Rights Policy. The policy is guided by international human rights principles encompassed in the Universal Declaration of Human Rights, the International Labor Organization's Declaration, the Fundamental Principles and Rights at Work, the United Nations Global Compact, and the United Nations Guiding Principles on Business and Human Rights. It applies to Northern Data on a group-wide level and covers the subjects of anti-discrimination, freedom of association and collective bargaining, safe and healthy workplace, forced labor, human trafficking, child labor, and working hours.

Governance

In 2021, Northern Data focused on establishing processes geared toward resilience and creating and implementing guidelines and policies, including a risk management system. In 2021, Nicole Schwoch was appointed Head of Compliance, Risk, and Internal Audit to centrally manage and work on this area.

Corporate Governance and Corporate Structure

Northern Data is committed to the highest values and morals. These are presented in the Code of Conduct. In 2021, Northern Data's Code of Conduct was further developed and finalized. The "Code of Business Conduct & Ethics" applies to all employees, suppliers, customers, and partners. It provides guidelines that must under any circumstances be followed. The code covers important topics such as health and safety, equality and anti-discrimination, conflicts of interest, confidentiality of information, intellectual property, competition and anti-trust, risk management and awareness, money laundering, and insider trading. The code is centrally placed in the Northern Data intranet and translated into three languages covering all first languages our employees and main partners speak. To ensure consent and compliance, all employees are required to complete a course that teaches the basics of the Code of Conduct and confirm that they agree with and follow it.

In 2021 Northern Data placed a special focus on establishing and developing corporate structure. As a globally growing and developing company, processes must be implemented, and responsibilities defined. Therefore, in 2021 Northern Data established a department that exclusively handles the implementation of procedures and working infrastructures the foundation of an organized, global work environment in the long term.

Anti-Corruption and Compliance

Northern Data does not tolerate any form of corrupt practices including, but not limited to, extortion, fraud, or bribery. Northern Data encourages employees who suspect that serious issues exist within the company to report them through a whistleblowing form without fearing any kind of reprisal. Normally, suspected irregularities must be reported to the related manager, who will observe the matter and seek a solution. If an employee, for whatever reason, does not feel comfortable with reporting the issue to the manager, the Compliance or People Team may be directly addressed. Whistleblowing, however, does not only concern employees. To offer the opportunity to report wrongdoing to anyone in the general public, Northern Data provides a whistleblowing form on the corporate website. In 2021, no cases were reported.

Data Privacy

The responsibility of preserving privacy is placed on group-wide Risk and Compliance Management. It is carefully considered – especially when hiring freelancers, implementing new software, making changes in processing personal data, incoming questions of clients, business partners, or suppliers, video surveillance, and when personal data is transferred outside the EEA. To ensure company-wide data privacy, all our employees undergo data privacy training once a year. The requirements in regard to data privacy are recorded in Northern Data's privacy policies, which are all third-party audited. They cover all GDPR-relevant procedures and apply to the entire operations including suppliers. In 2021, there have been no data protection breaches and the company is working towards maintaining this result.

Cyber Security

Cyber security is of critical importance for all departments that are directly connected with IT activities. In 2021, these departments included internal IT, the team responsible for the data center infrastructure, and the team responsible for STEIGER, Northern Data's software for the management of data centers and mining.

For the group-wide workforce, Northern Data provides cyber security guidelines that offers recommendations and sets rules in the fields of email security, password protection, and multi-factor authentication. To ensure compliance, all employees are obliged to undergo data privacy training once a year. Additionally, newly hired employees are receiving an IT guide during onboarding, and training materials and information are provided on the intranet and via IT newsletters regularly. For the employees working with STEIGER Software, Northern Data provides additional guidelines covering the matters of network security (ensuring security in internal networks), 2-factor authentication, penetration-testing, and SSL (securing Internet connections and protecting sensitive data transferred between two systems). Finally, the STEIGER Team meets quarterly to discuss developments in the fields of data center network infrastructure and security.

To manage incidents and breaches in the internal IT, several security mechanisms (Defender for Endpoint, Defender for O365, Identity Security), that all report to one central location are applied. Depending on the incident, the management system automatically executes actions or calls for a manually executed action. In addition, every installed software is analyzed frequently for possible vulnerabilities and outdated versions. STEIGER Software has its own management system, that performs regular tests, and automatically provides notifications in case of internal or external cyber security threats. In the case of a pool change that indicated crypto rewards running into another wallet, the management system would sound an alarm. In 2021, Northern Data reported no cyber security breaches, whereas a breach.

ESG in the Future

As social actors, corporations share the responsibility for sustainable development. Northern Data has accepted this responsibility and decided to report on its contribution to sustainable development for the first time with this voluntary ESG Report. In accordance with the growth of our company, structures, and procedures key for the professional monitoring of our ESG reporting will successfully be implemented. The goal for future ESG reporting is to create a transparent, sincere, and comparable ESG data record that is created in line with global standards and frameworks and serves the overall vision to become as sustainable as possible. Northern Data wants to actively take part in the process of creating a more sustainable world for current and future generations.



Group Management Report

1 — Basis of the Group

Business Model

The Northern Data Group (hereinafter also referred to as Northern Data or the Group), headquartered in Frankfurt/Main, develops and operates global infrastructure solutions in the area of High Performance Computing (HPC). The focus here is on the mining of cryptocurrencies, the provision of hosting services and the hardware required for this, and the expansion of both stationary and mobile data centers for the future development of an HPC business field.

In fiscal year 2021, Northern Data entered the crypto market in the context of providing computing power for crypto mining. The Group employed an average of 144 employees worldwide in the reporting year.

The Northern Data Group's main business activities were divided into two segments for the first time in fiscal year 2021:

- › the provision of computing power for crypto mining (Segment Mining)
- › the provision of the necessary hardware for crypto mining activities and the provision of hosting services, as well as the expansion of stationary and mobile data centers (Hardware & Other segment)

Mining

Crypto mining was the main focus of the business model in the reporting year. Revenues in this area were mainly generated with external customers in the crypto mining sector and directly via a mining pool. Remuneration for the computing power generated is mainly in the corresponding cryptocurrency.

Hardware & Other

Northern Data's offering is aimed at planning, building and operating both stationary and mobile data centers in an energy-efficient manner with a high degree of automation. In-house software and hardware developments help to achieve the targeted high level of automation and consistent utilization of the data centers. The Group's mobile data centers are in-house developments, whereas the stationary data centers are either built in-house or corresponding facilities are acquired. If necessary, these are adapted structurally to Northern Data's needs. The data centers are located in North America and Europe.

Northern Data procures, installs and operates server hardware in its data centers that is owned by customers or attributable to the Northern Data Group. This distinguishes the Group from co-location providers, who lease server space in their data centers for various applications of their customers. Northern Data's business model is characterized by the design-to-cost approach, which focuses on the cost and energy efficiency of the server architecture. Northern Data advises its customers accordingly on the selection of hardware. In the area of procurement, the Group works with well-known vendors such as Gigabyte and AMD, among other companies.

In addition, the Group continued to work on the development the HPC business in fiscal year 2021. HPC involves high computing power in a short time. Application areas include crypto mining, blockchain, artificial intelligence, big data analytics or rendering. Basically, HPC provides a multiple of computing power and storage capacity compared to conventional server systems. This is accompanied by increased heat generation and therefore requires special thermal management.

The HPC computing power provided in the operation of Northern Data's data centers is based on two different types of microchips, specialized for different applications: ASIC (Application-Specific Integrated Circuit) chips and GPUs (Graphic Processing Unit). While Northern Data's ASIC chips are used exclusively to generate computing power for the Bitcoin blockchain, GPUs are used for altcoin mining, but are also suited for artificial intelligence, big data analytics or rendering applications.

With the completion of the acquisitions of Decentric Europe B.V., Amsterdam, Netherlands ("Decentric") and Bitfield N.V., The Hague, Netherlands (formerly Bitfield AG, Hofheim am Taunus) ("Bitfield") in August and October 2021, respectively, the Group currently has a strong focus on the provision of computing power for crypto mining, also using its own hardware, as part of the development of the future-oriented HPC business.

Due to the first-time segmentation of the business units, no comparative figures are provided.

Group History

Northern Bitcoin AG, as the predecessor of Northern Data AG, was active in the field of Bitcoin mining in 2018 and 2019. Its business activities mainly comprised the expansion and operation of the infrastructure for Bitcoin mining.

The merger of Whinstone US, Inc., Rockdale, Texas, USA, and Northern Data AG took place in fiscal year 2020. Whinstone US, Inc. acted as an operator of data centers specializing in blockchain applications such as Bitcoin mining and had already begun investing in the construction of a scalable data center at the end of 2019. The merger of Whinstone US, Inc. and Northern Data AG created the Northern Data Group with Northern Data AG as the Group parent company in fiscal year 2020.

Following the merger with Whinstone US, Inc., Northern Data invested in the expansion of the HPC data center in Rockdale, Texas, USA, in particular for customer applications in the field of blockchain and Bitcoin mining, with the goal of gaining competitive advantages from low operating costs. Furthermore, the business model was further developed and a profit-sharing model¹ was developed within the hosting services. Sales from the customer relationships of Whinstone US, Inc. were recognized for the first time in the course of the second half of 2020.

In addition, Northern Data began building its own data centers in Europe in 2020.

Hardware supply and service agreements were also concluded with the companies Decentric and Bitfield in December 2020. Decentric was a wholly owned subsidiary of Block.one Group, which held 3.2 percent of Northern Data Group as of December 31, 2020. The company's business was the generation of computing power using GPU servers for crypto mining and other HPC applications. As of the reporting date, 27.1 percent of Bitfield was held by Block.one Group, 13.0 percent by Apeiron Investment Group Limited, which belongs to Christian Angermayer, 2.9 percent directly by Marco Beckmann, and 12.9 percent by Beckmann Capital GmbH, which belongs to Marco Beckmann. As of December 31, 2020, Christian Angermayer and Marco Beckmann held 16.7 percent and 19.9 percent respectively of the Northern Data Group through Apeiron Investment Group Limited and Cryptology Asset Group P.L.C. and BlackMars GmbH and Singularity AG. Bitfield is focused on providing computing power for Bitcoin mining. The computing power is generated using ASIC miners and remunerated in Bitcoins. The aforementioned contracts included in particular hardware supply contracts as well as service contracts for the operation of the hardware supplied. Despite mutual fulfillment of all contractual obligations in this regard, Northern Data assessed in 2020 that the criteria for a contract within the meaning of IFRS 15.9 were not met and in the absence of a transfer of economic control as of December 31, 2020, no revenue was recognized with these companies for the hardware deliveries. Similarly, despite mutual fulfillment of all contractual obligations in this regard, no revenue recognition from services to Bitfield took place.

¹ The term "profit-share model" refers to the variable compensation for hosting services rendered, under which Northern Data receives additional compensation equal to a contractually defined percentage of customer profit (EBIT) in addition to the fixed costs defined for hosting.

Additional hardware units were delivered to Decentric and Bitfield in fiscal year 2021, which were gradually put into operation by the Northern Data Group. The computing power generated was collected by the companies and sold to the respective pool. The companies received Bitcoins and Ethereum, respectively, as compensation.

The acquisition of the companies took place in the third quarter of 2021 with the objective of entering the mining business and being able to participate in the overall profits from the provision of computing power. In particular, the acquisition resulted in the transfer of legal ownership of the hardware provided to the companies between Northern Data and these companies. As a result of the transactions, the Northern Data Group was subsequently entitled to the full earnings potential from the companies' activities.

In March 2021, the acquisition of the Hydro66 Group completed the takeover of a data center site in Boden, Sweden, and further expanded computing capacity as a result.

The sale of Whinstone US, Inc. to Riot Blockchain Inc., USA, took place in May 2021.

Corporate Governance

Management Board

Northern Data AG is managed by its Management Board. The Group's strategic development is closely coordinated with the Supervisory Board. The Supervisory Board is always informed by the Management Board regarding new strategies as well as opportunities and risks.

The Management Board is responsible for the strategic development and successful management of Northern Data. The Management Board consisted of three members in fiscal year 2021 – Chief Executive Officer (CEO) Aroosh Thillainathan, Chief Operating Officer (COO) Stefan Sickenberger and Chief Financial Officer (CFO) Dr. Mathias Dähn. Since March 2022, the Management Board has consisted of two members, Aroosh Thillainathan and Stefan Sickenberger.

Supervisory Board

The Supervisory Board serves as a supervisory body for the Management Board and consists of three members: Dr. Tom Oliver Schorling (Chairman), Hermann Josef Lamberti, and Dr. Bernd Hartmann.

Group Structure

The Group is headed by Northern Data AG. It performs Group management tasks in the areas of finance, investor relations, controlling, legal, and compliance as well as purchasing and human resources. In addition, central management and administrative functions for the Group are integrated in Northern Data AG and computing power is sold.

The Northern Data Group includes the following significant subsidiaries (as of December 31, 2021):

- › Bitfield N.V., as well as its two direct subsidiaries, 1277963 B.C. Ltd, a company incorporated and existing under the laws of British Columbia with its principal place of business in Vancouver BC in Canada, including its branches/operations in North Dakota, Bismarck, USA, Minondo Ltd. in Gibraltar, and Oslo, Norway (hereinafter "Bitfield Group"). The Bitfield Group has the hardware hosted by companies in the Group and specializes in generating computing power that is used exclusively for Bitcoin mining.
- › Decentric Europe B.V. is a company incorporated under Dutch law and headquartered in Amsterdam, the Netherlands. The GPUs owned by Decentric are installed in facilities of the Northern Data Group. The Group provides everything necessary (other required equipment besides the GPUs, including all relevant services) to operate the GPU servers. The GPU-based servers primarily generate the computing power used for Ethereum as well as Altcoin mining. Starting August 2022, the GPU-based computers are also expected to generate computing power for HPC customers.
- › The Kelvin Emtech Inc. Group and its three direct subsidiaries Kelvin Emtech Inc., Kelvin Emtech Technologies Inc. and CEDTECH Construction Inc. all located in Montreal, Canada (hereinafter referred to as "Kelvin Emtech Group" or "KE Group"). The Kelvin Emtech Group is responsible for manufacturing the containers used to house the server equipment. Its activities include, among other tasks, statics testing, needs analysis, planning and construction and operation of the facilities.
- › Northern Data Services (UK) Limited, London, UK (formerly Hydro66 UK Ltd., London, UK) and its direct subsidiaries Hydro66 Property Services AB, Hydro66 Svenska AB and Hydro66 Services AB, all based in Boden, Sweden (hereinafter referred to as Hydro Group). With its classic colocation portfolio², the company rounds off Northern Data's portfolio of solutions for businesses.
- › Northern Data US Holding, Inc., USA, and the operating hosting companies Northern Data ND LLC, USA, Northern Data NY LLC, USA, and Northern Data PA LLC, USA, were established in Reston, Virginia, in the reporting period. North Georgia Data LLC, Atlanta, Georgia, USA, was acquired as another operating company under Northern Data US Holding Inc. in July 2021. The companies mainly provide hosting services to end customers. Northern Data US Inc., Reston, Virginia, USA, owns the property in North Dakota, USA.

² Colocation (also known as server housing, server homing and co-location) stands for the housing and network connection of customers' servers in the Northern Data Group's data center. The Northern Data Group provides infrastructural services and operational support.

- › Northern Data NOR AS, Notodden, Norway, and its direct subsidiary ND Real Estate 1 AS, Oslo, Norway. Northern Data NOR AS provides hosting services to affiliated companies.
- › Northern Data Software GmbH, registered in Frankfurt/Main, which is largely responsible for operational tasks such as software development or the sale of computing power.
- › Northern Data CA Ltd., Calgary, Canada, provides hosting services as well as container leasing to affiliated companies.
- › Northern Data NL B.V., Egelshoven, the Netherlands, whose task is to build and operate a data center in the Netherlands.

The US subsidiary Whinstone US, Inc., which operates the HPC data center at the Rockdale, Texas, site, was sold to the US-based company Riot Blockchain Inc. with effect from May 26, 2021, and has left the scope of consolidation of the Northern Data Group.

Research and Development

The Northern Data Group operates in a strongly innovation-driven environment, therefore actively pursued research and development are crucial to its business success. Research and development takes place in particular in the areas of software and hardware as well as in the planning, development, and construction of data centers.

The goal of its activities is to optimize the setup and operating processes in terms of time. Through more process-optimized digitalization and user guidance, as well as through software-side optimization of the hardware used, both power usage and computing power are to be adapted on an environment-specific basis.

Work is also being carried out on cooling concepts in order to permanently improve the so-called "Power Usage Effectiveness" (PUE), which is a measure of the energy efficiency of data centers. Mobile data centers are also being further developed. This involves the use of renewable raw materials (such as wood, for example), as well as process optimization in the area of deployment and automation of work.

Research and development expenses totaled EUR 2,775 thousand in fiscal year 2021 (previous year: EUR 195 thousand).

2 Economic Report

Macroeconomic and Industry-Specific Conditions

According to the International Monetary Fund (IMF), the global economy recovered in 2021 as a whole despite the emergence of ever new variants of the Covid-19 virus. Following a better-than-expected start to the year, global gross domestic product (GDP) momentum slowed from the second quarter on, with increasing infections in many emerging and developing economies and disruptions in global supply chains.³ Supply disruptions continued in the second half of the year and slowed global production, particularly in Europe and the United States. The emergence of new virus variants also posed a burden, as did rising inflation as a result of increasing energy, raw material, and transport prices.⁴ According to the IMF, global GDP growth for the full year 2021 was 6.1 percent.⁵

According to the market research firm Intersect360 Research, the global high-performance computing market experienced a recovery in 2021 due to a rebound in demand after the pandemic-related decline in the previous year. Depending on Covid-19 effects, shipment delays and exascale computing developments, the HPC market grew by 5.2 percent in 2021, according to Intersect360 Research.⁶ Growth of 16.4 percent had been previously expected. Over the next five years, HPC and AI education will return to a stable level of growth. The expected average growth rate is 7.7 percent.

In 2021, so-called flipping dominated the discussion surrounding the two largest cryptocurrencies, Bitcoin and Ethereum, i.e. the displacement of Bitcoin as the most valuable asset in the crypto universe by Ethereum. Meanwhile, cryptocurrencies continued to assert themselves as an established asset class. As of April 2021, the U.S. crypto exchange Coinbase was the first Bitcoin trading platform to become a publicly traded company. The recognition of Bitcoin as the official national currency in the Latin American country of El Salvador in June 2021 was equally historic. Meanwhile, in China, the June mining ban was followed by a so-called crypto transaction ban in September 2021. The mining ban in China was followed by investments from U.S. and Canadian mining companies and the resulting rise of the U.S. as the world's largest crypto nation.⁷

Overall, the market capitalization of all current cryptocurrencies continued to grow compared to the end of the previous year, rising to USD 2,211 billion as of December 31, 2021. The upswing was subject to the volatility inherent in cryptocurrencies. For example, bitcoin started 2021 at a price of USD 30 thousand/BTC and reached a new all-time high of more than USD 64 thousand/BTC by mid-April. Due in particular to the mining ban in China, the price of the Bitcoin dropped to around

³ <https://www.imf.org/-/media/Files/Publications/WEO/2021/October/English/text.ashx>

⁴ <https://www.imf.org/-/media/Files/Publications/WEO/2022/Update/January/English/text.ashx>

⁵ <https://www.imf.org/-/media/Files/Publications/WEO/2022/April/English/text.ashx>

⁶ <https://www.intersect360.com/report/worldwide-hpc-and-ai-training-2021-total-market-size-and-2022-2026-forecast-products-and-services/>

⁷ <https://www.btc-echo.de/news/bitcoin-jahresueckblick-2021-allzeithoch-china-verbot-und-neue-bitcoin-wale-130822/>

USD 30 thousand/BTC on July 20, 2021. The recovery of Bitcoin quotations in the further course of the year to USD 67 thousand/BTC was not sustainable. Bitcoin ended the year 2021 at a closing price of around USD 46 thousand/BTC. Since the beginning of 2022, the BTC price dropped from USD 46 thousand/BTC to USD 20 thousand/BTC as of June 30, 2022.⁸

The second largest cryptocurrency Ethereum developed better than Bitcoin in 2021 and rose from around USD 730/ETH at the beginning of the year to a new record value of over USD 4,800/ETH at the beginning of November 2021. Growth drivers for Ethereum were, in addition to the increased interest of institutional investors as a result of the improved tradability in the form of futures and ETFs, the practical use cases of the Ethereum blockchain, with Non-Fungible Tokens (NFTs), for example. The Ethereum Improvement Protocol EIP-1559, which is a step towards reducing Ethereum's energy requirements, also had a positive impact with the so-called "London-Upgrade." By December 31, 2021, the Ethereum price had decreased to around USD 3,700/ETH⁹ as a result of the general correction. The ETH price developed analogously to the BTC price in 2022 and amounted to approximately USD 1,100/ETH as of June 30, 2022.¹⁰

Business performance

The Northern Data Group continued to be in the market development and establishment phase in fiscal year 2021. This is characterized by the construction of data centers and the recruitment of qualified employees, but also the acquisition of new customers. Parallel to this, the Group continued to expand in the reporting period by acquiring companies that are already on the market and by establishing its own new subsidiaries. Important steps in the reporting period included the construction and expansion of the data centers in North America, the further expansion of a distributed computing cluster at locations in the Netherlands, Scandinavia, Germany, and Canada, the acquisition of the British-Swedish Hydro Group and the Bitfield Group as well as Decentric, and the conclusion of further research and technology partnerships.

Northern Data changed its business model from a mega-site approach to a multi-site approach in fiscal year 2021. This will enable Northern Data to develop and build data centers simultaneously in different regions and countries with different teams and local suppliers, even in times of a global pandemic. The goal is to minimize the impact of the pandemic on the Northern Data Group's business activities.

In March 2021, Northern Data further expanded its capabilities by acquiring the Hydro66 Group and through the related acquisition of a data center site in Boden, Sweden. The data center is used for the Northern Data Group's own GPU-based high-performance computing hardware.

⁸ Bitcoin (BTC/EUR) Prices, Charts and News | Coinbase

⁹ <https://coinmarketcap.com/charts/>

¹⁰ Ethereum (ETH/USD) Prices, Charts, and News | Coinbase

To fund faster expansion focused on value-added HPC services, Northern Data sold its U.S. subsidiary Whinstone US, Inc. to Riot Blockchain Inc., a U.S.-based publicly traded Bitcoin miner, in May 2021. The transaction proceeds will be used to further expand the company's six current HPC sites or those that are under construction in Canada, Germany, the Netherlands, and Scandinavia.

In May 2021, Northern Data signed a contract for large-scale supplies of mining equipment to the Canadian blockchain technology company, Digihost Technology Inc.

In the course of fiscal year 2021, besides deliveries to two additional customers, additional hardware units were delivered to the companies Decentric and Bitfield and gradually put into operation. In the first half of 2021, the companies received the remuneration in cryptocurrency for the computing power delivered to the respective pools. Both companies were already able to generate revenue from the provision of computing power for the mining of cryptocurrencies in the first half of 2021. A final contract for the operation of Decentric's hardware by Northern Data was not concluded, contrary to the original plan. In the third quarter of 2021, the acquisition of the companies took place with the objective of entering the mining business and being able to participate in the overall profits from the provision of computing power. The purchase involved, among other items, the transfer of ownership of the hardware previously supplied by Northern Data to the companies. As a result of the acquisitions of Decentric and Bitfield, there was no recognition of revenue from the supply of mining hardware and the agreed services, including the operation of the hardware, in fiscal year 2021. In 2021, two additional sites were also completed in Norway at Notodden and Aurland.

The strategic growth project of the "Distributed Computing Cluster," a cloud-based GPU HPC solution for use cases such as artificial intelligence, deep/machine learning, big data analysis, or the rendering of CGI (Computer Generated Imagery) projects was further advanced at the sites in Germany, the Netherlands, Norway, and Sweden. With this new solution, Northern Data intends to expand its current activities in data center construction, operations, and managed services to include the field of a cloud provider for the HPC mass market and compute-intensive enterprise customers. This project continues to be a primary focus of the teams at Northern Data.

In the area of "Pod Engineering," Northern Data implemented a new, modular design of data centers in mobile containers including cooling by outside air. Following the completion of the test phase, Northern Data started production of 51 units of the new pod generation in fiscal year 2021 to enable immediate availability of the new solution for mobile data centers.

Please refer to the Notes to the Consolidated Financial Statements for significant events after the reporting period.

Development of the Asset, Financial and Earnings Position

The comparability of the asset, financial, and earnings position of the current reporting period with the corresponding comparative periods of the previous year is only possible to a limited extent, as the initial consolidation of the acquired and newly established subsidiaries and a change in the business model have resulted in new bases.

Asset position

Due to the first-time consolidation of the acquired and newly established subsidiaries, nearly all asset and liability items as well as the balance sheet total have increased significantly compared to the previous year's reporting date. Consequently, they are only comparable with the previous year to a limited extent.

On the assets side, non-current assets of EUR 460,675 thousand (previous year: EUR 407,562 thousand) are recognized. Intangible assets amounted to EUR 85,636 in total (previous year: EUR 138,163 thousand), property, plant and equipment amounted to EUR 354,573 thousand in total (previous year: EUR 234,201 thousand). Non-current intangible assets mainly include cryptocurrencies held for the long term (EUR 59,419 thousand; previous year: EUR 0 thousand) and goodwill resulting from the first-time consolidation of the Kelvin Emtech Group and Hydro Group after taking the need for impairment into account (EUR 1,008 thousand and EUR 19,090 thousand respectively). With regard to the development of property, plant and equipment, additions from investments (EUR 200,405 thousand) and first-time consolidation of the Hydro Group (EUR 10,456 thousand) are mainly offset by disposals from the deconsolidation of Whinstone US, Inc. in the amount of EUR 54,177 thousand. Reference is made to the relevant explanations in the section Business Model and Group History. In addition, rights of use from leases (EUR 8,908 thousand; previous year: EUR 12,933 thousand) are reported under non-current assets.

Other non-current assets mainly include security deposits paid.

Current assets amount to EUR 338,093 thousand (previous year: EUR 95,015). They mainly comprise cash and cash equivalents (EUR 221,597 thousand; previous year: EUR 73,862 thousand), and other current assets (EUR 102,484 thousand; previous year: EUR 6,702 thousand).

Other current assets (EUR 102,484 thousand; prior year: EUR 6,702 thousand) as of the reporting date mainly comprise receivables in connection with the sale of Whinstone (EUR 52,749 thousand; prior year: EUR 0 thousand), VAT receivables (EUR 20,176 thousand; prior year: EUR 5,760 thousand), and the share of cryptocurrencies held in the short term as of the reporting date (EUR 18,799 thousand; previous year: EUR 58 thousand).

The deferred tax assets amounting to EUR 8,401 thousand mainly resulted from the first-time consolidation of Decentric Europe B.V.

On the liabilities side, consolidated equity in the amount of EUR 612,269 thousand (previous year: EUR 176,525 thousand) and current and non-current liabilities totaling EUR 186,499 thousand (previous year: EUR 326,052 thousand) are reported.

Following the capital increase measures carried out in the reporting period and as a result of the earnings generated, equity increased further. For details on the capital increase measures, please refer to the comments on the financial position and the Notes to the Consolidated Financial Statements.

Current and non-current financial liabilities total EUR 106,347 thousand (previous year: EUR 79,684 thousand). They mainly include trade payables (EUR 20,410 thousand, previous year: EUR 20,246 thousand), loan liabilities to shareholders and third parties (EUR 76,891 thousand in total; previous year: EUR 27,566 thousand), and lease liabilities (EUR 9,046 thousand, previous year: EUR 14,771 thousand).

Other liabilities to third parties (EUR 12,850 thousand, previous year: EUR 219,975 thousand) are mainly current (EUR 12,497 thousand; previous year: EUR 217,938 thousand) and mainly result from advance payments (EUR 4,535 thousand; previous year: EUR 213,346 thousand) and security deposits (EUR 5,030 thousand; previous year: EUR 0 thousand). The decrease in other current liabilities is due to the consolidation of Decentric and the Bitfield Group.

Income tax liabilities amounted to EUR 33,584 thousand (previous year: EUR 7,131 thousand).

Deferred tax liabilities result mainly from currency translation, temporary differences in the context of accounting for expenses in connection with equity procurement measures, as well as the disclosure of hidden reserves in connection with the initial consolidation of the Kelvin Emtech Group. As of the reporting date, they totaled EUR 8,133 thousand (previous year: EUR 14,354 thousand). The decrease in deferred tax liabilities is due in particular to the deconsolidation of Whinstone.

Financial position

The following capital procurement and financing measures were carried out in the reporting period.

Using part of the Authorized Capital 2020/II resolved by the Annual General Meeting on November 10, 2020, and entered in the commercial register on December 8, 2020, a capital increase against cash contributions of EUR 900,000 was initiated in December 2020 and completed in January 2021. It was filed with the Frankfurt/Main Local Court on December 23, 2020, and entered in the commercial register on January 6, 2021. The gross proceeds from the capital increase already received in December 2020 amounted to approximately EUR 52,470 thousand. The amount was reported in equity as of December 31, 2020, under the item "Contributions made to implement the resolved capital increase." Upon entry in the commercial register on January 6, 2021, a transfer was made to subscribed capital, and the remaining amount of EUR 51,570 thousand was transferred to the capital reserve.

Based on the conditional increase of the share capital resolved on August 30, 2019, as amended by the resolution of the Annual General Meeting on December 30, 2019 (Conditional Capital 2019/I), subscription shares with a nominal value of EUR 1,750 were issued in January 2021 in connection with the servicing of the convertible bond. As a result, the share capital of Northern Data AG increased to EUR 15,541,434. The difference between the nominal value of the shares issued and the value of the convertible bond attributable to them (EUR 12 thousand in total) was transferred to the capital reserve.

As part of the merger with Northern Data Services (UK) Limited (Hydro66 UK Ltd.), a non-cash capital increase was carried out in March 2021. Based on the authorization granted by the Annual General Meeting on November 10, 2020, the share capital was increased by EUR 338,273 to EUR 15,879,707 by issuing 338,273 no-par value bearer shares, each with a notional share of EUR 1.00 in the share

capital. The shareholders of Hydro66 UK Ltd. were admitted to subscribe against contribution of their respective shares in Hydro66 UK Ltd. The capital increase was completed in the first quarter of 2021 in the full amount of EUR 338,273 against contributions in kind. The contributions in kind were made by transferring all shares to Northern Data AG with entry in the commercial register on March 9, 2021. The difference between the fair value (stock market price) at the time of the transaction and the nominal value of the shares issued (totaling EUR 32.227 thousand) was transferred to the capital reserve.

By partially utilizing the Authorized Capital 2020/II, which was approved by the Annual General Meeting on November 10, 2020, and entered in the commercial register on March 16, 2020, a capital increase against cash contribution of EUR 563,968 to EUR 16,443,675 was implemented in April 2021. The gross proceeds from the capital increase amounted to approximately EUR 58,575 thousand. The amount exceeding the nominal value of the issued shares (totaling EUR 58,011 thousand) was transferred to the capital reserve.

As part of the merger with Decentric Europe B.V., a capital increase against contributions in kind was carried out in August 2021. By making partial use of the Authorized Capital 2021 resolved by the Annual General Meeting on April 28, 2021, and entered in the commercial register on July 26, 2021, a capital increase against contributions in kind of EUR 2,306,294 to EUR 18,749,969 was carried out in August 2021 by issuing 2,306,294 no-par value bearer shares, each with a notional interest in the share capital of EUR 1.00. The shareholder of Decentric Europe B.V. was admitted to subscribe in return for the contribution of its shares in Decentric Europe B.V. The contribution in kind was made by transferring all shares to Northern Data AG with entry in the commercial register on September 14, 2021. The difference between the fair value (stock market price) at the time of the transaction and the nominal value of the shares issued (EUR 165,131 thousand in total) was transferred to the capital reserve. In the course of accounting for the acquisition of Decentric Europe B.V., the capital reserve was reduced by EUR 165,718 thousand (see Notes to the Consolidated Financial Statements).

As part of the merger with Bitfield N.V., two capital increases against contributions in kind were carried out in the period from October to December 2021. On October 19, 2021, a capital increase of EUR 4,490,142 to EUR 23,240,111 was carried out by issuing 4,490,142 no-par value bearer shares with a notional share in the share capital, using part of the Authorized Capital 2021 resolved by the Annual General Meeting on April 28, 2021, and entered in the commercial register on July 26, 2021. The shareholders of Bitfield N.V. were admitted to subscribe against contribution of their shares in Bitfield N.V. The contributions in kind were made by transferring all shares to Northern Data AG with entry in the commercial register on November 2, 2021. Furthermore, a share capital increase of EUR 575,403 to EUR 23,815,514 thousand was carried out on December 6, 2021, using part of the Authorized Capital 2021 resolved by the Annual General Meeting on April 28, 2021, and entered in the commercial register on July 26, 2021, by issuing 575,403 no-par value bearer shares with a notional interest in the share capital of EUR 1.00 each. The shareholders of Bitfield N.V. were admitted to subscribe against contribution of their shares in Bitfield N.V. The contributions in kind were made by transferring all shares to Northern Data AG with entry in the commercial register on December 15, 2021. The difference between the fair value (stock market price) at the time of the transaction and the nominal value of the shares issued (totaling EUR 297,677 thousand) arising from the aforementioned capital increases was transferred to the capital reserve. In the course of the accounting treatment of the transaction, the capital reserve was reduced by EUR 253.869 thousand (see Notes to the Consolidated Financial Statements).

Cash and cash equivalents amounted to EUR 221,597 thousand as of the reporting date (previous year: EUR 73,862 thousand).

Cash flow from operating activities amounted to EUR 88,066 thousand (previous year: EUR 183,484 thousand). The cash flow in fiscal year 2021 is characterized by payments received for services rendered up until the balance sheet date as well as cryptocurrencies sold. On the other hand, there were payments to suppliers in the fiscal year for hardware deliveries and payments for various advance services purchased.

Cash flow from investing activities (EUR 126,618 thousand; previous year: EUR –211,577 thousand) mainly comprises the cash inflows resulting from the sale of the shares in Riot Blockchain, Inc. (EUR 328,007 thousand; previous year: EUR 0 thousand) and investments in property, plant and equipment (EUR –200,334 thousand; previous year: EUR –216,139 thousand). Investments in property, plant and equipment mainly relate to the construction of data centers and advance payments made for hardware. Payments for additions to the consolidated Group (EUR –35,689 thousand; previous year: one-time inflows for addition amounting to EUR 8,297 thousand) are offset by payments received from disposals from the consolidated Group (EUR 34,613 thousand; previous year: EUR 0 thousand).

The negative cash flow from financing activities (EUR –69,033 thousand; previous year: EUR 99,058 thousand) in fiscal year 2021 resulted mainly from cash capital increases (EUR 58,575 thousand; previous year: EUR 104,172 thousand), which are offset by payments from the repayment of lease and loan liabilities (EUR –27,866 thousand in total; previous year: EUR –18,189) and payments from the repayment of financial liabilities to shareholders (EUR –89,930 thousand; previous year: EUR –3,020 thousand).

Cash and cash equivalents (EUR 221,597 thousand; previous year: EUR 73,861 thousand) comprise bank balances less liabilities to banks due at any time.

Earnings

Northern Data reported Group sales of EUR 189,860 thousand (previous year: EUR 16,377 thousand) and EBITDA of EUR 320,058 thousand (previous year: EUR –12,345 thousand).

Sales revenues of EUR 189,860 thousand in fiscal year 2021 (previous year: EUR 16,377 thousand) resulted primarily from the provision of computing power for crypto mining (EUR 110,657 thousand; previous year: EUR 0 thousand), the sale of hardware (EUR 52,113 thousand; previous year: EUR 0 thousand) and hosting and HPC services (EUR 12,512 thousand; previous year: EUR 11,348 thousand). The input services purchased for this purpose are reported under cost of materials (EUR 76,319 thousand; previous year: EUR 10,285 thousand).

Other income in the fiscal year (EUR 302,961 thousand; previous year: EUR 2,401 thousand) resulted mainly from the deconsolidation result of Whinstone US, Inc. (EUR 159,451 thousand) and refunds from electricity contracts of Whinstone US, Inc. (EUR 104,453 thousand) for electricity units not purchased.

The increase in personnel expenses by EUR 13,662 thousand to EUR 19,169 thousand (previous year: EUR 5,547 thousand) is mainly due to the addition of new companies and the growth of the Group.

Other expenses (EUR 77,275 thousand; previous year: EUR 15,291 thousand) mainly include legal and consulting fees (EUR 26,244 thousand; previous year: EUR 5,647 thousand), the impairment of a receivable from electricity contracts (EUR 21,840 thousand; previous year: EUR 0 thousand) and expenses from currency translation (EUR 8,354 thousand; previous year: EUR 5,068 thousand). The U.S. dollar appreciated significantly against the euro in fiscal year 2021, with the result that the euro weakened from USD 1.23 on December 31, 2021, to USD 1.13 compared to the end of the previous year.¹¹ The difference from currency translation resulting from this development is recognized in other comprehensive income in the amount of EUR 5,831 thousand. Furthermore, expenses from currency translation amount to EUR 8,354 thousand and income from currency translation to EUR 27,379 thousand.

Consequently, EBITDA amounted to EUR 320,058 thousand (previous year: EUR –12,345 thousand) in the fiscal year.¹²

Depreciation, amortization and impairment losses (EUR 65,932 thousand; previous year: EUR 18,131 thousand) in the fiscal year include among other items current amortization of the hidden reserves identified in the course of business combinations (EUR 6,439 thousand; previous year: EUR 8,609 thousand) and impairment losses on goodwill amounting to EUR 11,065 thousand (previous year: EUR 0 thousand).

Financial expenses of EUR 7,170 thousand (previous year: EUR 53,252 thousand) mainly comprise interest expenses for loans taken out (EUR 4,884 thousand; previous year: EUR 1,912 thousand). Financial income (EUR 89,765 thousand; previous year: EUR 16 thousand) includes in particular income from the fair value measurement of an embedded derivative from electricity contracts (EUR 28,109 thousand) and income from the sale of the securities of Riot Blockchain, Inc. (EUR 61,521 thousand).

Income tax expense (EUR 49,562 thousand; previous year: EUR 547 thousand) includes effective tax expense of EUR 41,933 thousand (previous year: EUR 7,025 thousand) and deferred tax expense of EUR 7,629 thousand (income in previous year: EUR 6,478 thousand). The expenses from deferred taxes mainly result from currency translation, temporary differences in the context of accounting for expenses in connection with equity procurement measures, and the netting with deferred tax assets.

In total, a consolidated net profit for the year of EUR 287,159 thousand (previous year: EUR –84,258 thousand) is reported. The consolidated net profit for the fiscal year 2021 is influenced by significant special effects in the amount of EUR 230,504 thousand. The special effects mainly comprise the refunds from electricity contracts of Whinstone due to weather-related power outages and the effects from the sale of Whinstone. Accordingly, the consolidated net profit for the year adjusted for special effects amounts to TEUR 56,655.

¹¹ US dollar (USD) (europa.eu)

¹² For the calculation, please refer to the consolidated statement of comprehensive income

Financial Performance Indicators

Northern Data Group

The key figures of sales revenues and EBITDA contribute to the management of the Group and serve as the basis for strategic decisions.

EBITDA (income from operations before depreciation and amortization)¹³ serves as a key performance indicator for measuring the profitability of Northern Data. In fiscal year 2021, operating profitability was slightly below the Group's expectations. The sales revenue forecast in the range of EUR 180 million to EUR 220 million for fiscal year 2021 was met. At EUR 89.6 million, EBITDA adjusted for special effects was slightly (-10.4 percent) below the forecast EBITDA adjusted for special effects in the range of EUR 100 million to EUR 125 million. The special effects mainly comprise refunds from Whinstone power contracts due to weather-related power outages and the effects of the sale of Whinstone.

Business Divisions

In assessing operating performance, Northern Data's management focuses on the core businesses, which consist of the segments "Mining" and "Hardware&Other." In this context, Northern Data's management uses the financial performance indicators of sales and EBITDA to manage the segments.

The "Mining" segment and the "Hardware&Other" segment are identified and reported as separate segments for the first time in this reporting period. Due to this, no disclosures are made on comparative figures at the divisional level.

For the reporting period, the Mining segment generated EUR 135,541 thousand in external sales. The revenue result is therefore within the expected target range of the Group. The revenue in this segment is mainly attributable to the computing power generated in the area of crypto mining. The revenues are hereby volume-driven and also directly depend on the development of the cryptocurrency exchange rate. EBITDA for the segment amounts to EUR 335,309 thousand.

In the reporting period, the "Hardware&Other" segment generated external sales of EUR 54,319 thousand. The main revenue drivers within this were hardware sales. The segment posted EBITDA of EUR 70,102 thousand.

¹³ The performance indicator EBITDA is not defined under IFRS. Northern Data defines EBITDA as consolidated profit before income taxes, finance income and finance costs, depreciation, amortization and impairment losses. Please refer to the Consolidated Statement of Comprehensive Income for the calculation of EBITDA.

Non-Financial Performance Indicators

Environmental protection

One focus of the Group is on resource-conscious management and environmental protection. The generation of computing power and the cooling of the equipment require a lot of energy. The data centers in Scandinavia obtain their electricity from hydroelectric power.

Furthermore, the software is constantly optimized for the careful use of the servers. The careful use of resources is of vital importance to the Northern Data Group not only from an ecological but also from an economic point of view. The Northern Data Group is already focusing on energy efficiency in the expansion of new data centers as well as in the operation of its current facilities.

Employees

The Northern Data Group is in a state of constant growth. As of December 31, 2021, the Group employed a total of 162 people, 3.2 percent more than at the end of the previous year. The increase in employees is mainly due to the newly established US companies and the expansion of the mining business.

Ethical principles

The Group-wide Code of Business Conduct & Ethics reflects social, cultural and societal standards.

3 — Opportunity, Risk and Forecast Report

Opportunity and Risk Management at Northern Data

For Northern Data, systematically addressing potential opportunities and risks is one of the cornerstones of responsible corporate governance. Identifying and quickly seizing opportunities and mitigating risks are essential to the company's success. Northern Data defines opportunities and risks as events that, if they occur, will lead to positive or negative deviations from its business objectives. In order to act in a forward-looking and controlled manner, Northern Data identifies potential opportunities and risks and evaluates them in terms of their probability of occurrence and possible extent of damage.

Operational liquidity management is coordinated at the level of the parent company and is carried out in cooperation with the subsidiaries worldwide. Within the scope of economic possibilities, cryptocurrency holdings are changed on a daily basis in order to ensure liquidity and to be able to carry out planned investments. In addition to annual forecast planning, ongoing liquidity planning is carried out on a weekly basis with the aim of ensuring that the Northern Data Group can access sufficient reserves of liquid funds at any time. In this way, fluctuations in working capital due to falling cryptocurrency rates as well as rising electricity prices can be managed in fiscal year 2022. Northern Data does not have any financing agreements as of June 30, 2022.

Responsibility for the development and maintenance of an effective risk management system (RMS) at Northern Data lies with the Management Board. The identification and analysis of opportunities and risks is managed and carried out by the Risk&Compliance Team. In order to ensure that a holistic approach is taken, the Risk&Compliance Team works throughout the Group in close coordination with the departments and companies affected by the opportunities and risks.

Structure of the risk management system

Northern Data's risk management process is integrated into the Northern Data process landscape. The individual steps of the risk management process are interlinked. They are designed as a continuous cycle that enables timely feedback to all functions involved in risk management activities.



Illustration: Northern Data's risk management process

Goals of the RMS

The goals of the RMS are to create the transparency necessary for decision-makers with regard to risks, to promote the risk culture, and to build a common understanding of risks within the company.

Identification and monitoring of risks

Risks are identified and assessed on an ongoing basis by the risk officer and half-yearly by the Risk & Compliance Team using various tools such as workshops and self-assessments. In addition, Northern Data has implemented ad hoc reporting to inform the Risk & Compliance Team and the Management Board about current risk events and changes.

Risk assessment

All individual risks identified are assessed in terms of their probability of occurrence and potential impact within a period of one year. The risks that are identified are then summarized. The summary is presented using the following risk matrix:

Impact	substantially	11	12	13	14	15
	significant	9	10	11	12	13
	moderate	7	8	9	10	11
	low	5	6	7	8	9
	very low	3	4	5	6	7
		very low	low	moderate	significant	substantially
Probability of occurrence						
3-6 ● low 7-9 ● moderate 10-11 ● significant 12-15 ● substantially						

The probability of occurrence represents the probability with which a certain impact of a risk could occur within the defined period of one year. The assessment of the potential impact is made using quantitative or qualitative scales. The quantitative scale refers to the potential financial profit impact (EBITDA). The qualitative scale takes the impact on the brand and reputation, customers and the market, but also on the financial performance and changing regulatory requirements into account.

Both gross and net risks are taken into account when assessing individual risks. The gross risk represents the inherent risk before taking risk-reducing measures into account. The net risk is the residual risk remaining after all risk-reducing measures have been taken into account. The risks presented in this report exclusively reflect the net risk.

Based on the assessment and the respective combination of probability of occurrence and impact, risks are classified as low, moderate, significant or material. The main risks are described in detail in this report.

Management of risks and opportunities

Risk owners are responsible for developing and implementing effective measures to mitigate risks within their area of responsibility. Depending on the nature, characteristics and assessment of the risks, risk owners apply various risk strategies to mitigate the risk, taking the cost and effectiveness into account. Possible risk strategies include risk acceptance, avoidance, mitigation, or the transfer of a risk to third parties.

Improvements in risk management and reporting

The Risk & Compliance Team reports to the Management Board on a half-yearly basis on the company-wide risk situation.

Opportunity and Risk Profile

The opportunities and risks that Northern Data has identified in view of its business model are broken down below into strategic, operational, and financial opportunities and risks.

Opportunities Report

Opportunities are constantly monitored and analyzed by Northern Data. The Group's management follows the latest developments in the cryptocurrency sector as well as in the HPC business. The company mainly benefits from a global development in the mining sector.

The management optimizes the Group structure and drives global expansion. The focus is always on acquisition opportunities.

The main opportunities relating to both segments or, where indicated, to specific segments are described below.

Strategic Opportunities

Opportunities due to the growing interest in cryptocurrencies (Segment: Mining)

According to various assessments, interest in cryptocurrencies seems to continue to be on the rise.¹⁴ Decentralized blockchain technologies have still to realize their potential, as they have not yet reached the masses.

While it was mainly private investors who dealt with cryptocurrencies in the past, the importance of crypto assets for institutional investors and investors is now also growing. Accordingly, the crypto trend is taking an even more dynamic development.¹⁵ Thus, for Northern Data, there is a chance that the profitability of its mining activities will increase. In addition, there is the prospect of higher demand for customer orders in the "Hardware & Other" segment with not only more attractive conditions, but also higher profit-sharing agreements.

Opportunities due to increased demand for digitalization and cloud-based solutions

In addition to the crypto trend, demand for digitalization and cloud-based solutions has also continued to rise. In the IT service market, cloud contracts could soon represent the segment with the highest revenue. Northern Data is currently in the development and market development phase with regard to its cloud-based solutions. The growing demand in the general industry thus creates an opportunity for Northern Data to quickly and successfully establish its new product segment in the market and to benefit from advantageously designed contracts.

¹⁴ Bank of America studies show: Interest in cryptocurrencies not frozen even after sell-off of Bitcoin & Co. | July 18, 22 | finanzen.at

¹⁵ Data and statistics on blockchain | Statista

Opportunities due to a general focus on sustainability

Sustainability is the most important megatrend of our time. As the trend becomes increasingly widespread and ever-evolving, it is essential for companies to adapt to the global economic situation in a sustainable manner within the context of preserving and conserving natural resources. Northern Data develops and operates its data centers with the highest interest in doing business sustainably. This environmental compliance creates an opportunity to differentiate itself from competitors that are less well adapted to the conditions.

Opportunities from diversification of data center locations (Segment: Hardware & Other)

The strategic transition from a mega-site to a multi-site approach could allow Northern Data to develop and build data centers in different countries in collaboration with local suppliers and staff. This reduces the lock-in to one site and the corresponding regulations and diversifies risk.

Opportunities from data-sensitive customers

Northern Data is a provider of HPC applications that is not subject to the US Cloud Act. This U.S. law requires U.S. Internet companies and IT service providers to provide U.S. authorities with access to the data stored, even if the storage does not take place in the U.S. Due to the large capacities that Northern Data can offer at the same time, there is therefore a chance that companies will decide to move computing capacities from a U.S. provider to Northern Data.

Risk Report

As described above, the Management Board of the Northern Data Group is responsible for establishing and maintaining an appropriate risk management system. The risks identified were reported to the Management Board.

All strategic, operational and compliance risks are presented below in the order of their probability of occurrence. The risks identified below relate to all segments or, where indicated, to specific segments of Northern Data.

Markets, competition and strategy**Risks from non-effective growth**

Northern Data is currently in the market development phase. The Group is currently developing various sites and expanding its operational capacities. The development of new sites places a heavy burden on Northern Data's management, operational, and financial systems. As a result, processes, structures and any type of organization must always be readjusted and expanded. Possible adjustments or changes to Northern Data's growth strategy could have a corresponding impact on the business and financial results if management, operational, and financial systems are not optimally aligned.

Risks from the provision of computing power for crypto mining as a business activity (Segment: Mining)

Due to the provision of computing power for crypto mining in the Bitcoin and Altcoin mining (“for own account & third parties”) business segments, the Group is subject to the high volatility of the price of the crypto currencies generated as well as the mining profitability. Cryptocurrency prices are unpredictable and are determined by supply and demand.

Crypto prices have declined in the first half of 2022, following the general stock market trend and the technology sector in particular. As the profitability of the mining business consists of one’s own cost base, the cryptocurrency exchange rate and other components such as the degree of difficulty (the “Difficulty”) and the market share of the global hash rate, the lower cryptocurrency exchange rate compared to the end of the financial year resulted in a reduction in mining profitability, and, consequently a reduction in revenues. A further decline in cryptocurrency rates could adversely affect the Group’s liquidity position.

In financial year 2022, the Group decided to sell its entire cryptocurrency holdings, to sell the remuneration generated in cryptocurrency on a daily basis starting at the end of May 2022, as well as to receive remuneration for the provision of computing power partly in fiat currencies with the objective of avoiding or keeping cryptocurrency risk low and ensuring the company’s liquidity. In addition, an adverse effect on liquidity can be compensated for by a reduction in investment spending.

Compliance risks

Risk from laws and regulations abroad

Due to its activities abroad, the Group is also exposed to potential political risks and legal uncertainties in these countries. On the one hand, this relates to address risks due to a lack of political security and acceptance of business locations, and on the other hand, a further situation of uncertainty arises from the actions of state governments and central banks in view of cryptocurrencies. To counteract counterparty risks, Northern Data limits its growth strategy to locations that are in politically stable regions and countries. It also relies on long-term, consistent contract partners with whom Northern Data maintains a long-term relationship.

Legal risks

Please refer to our comments in section 5.9 Other matters in the notes to the consolidated financial statements.

Operational risks

Risks from the Ethereum network switch from PoW to the PoS algorithm (Segment: Mining)

The majority of GPU servers located at Northern Data are set to the "Proof-of-Work" consensus algorithm for Ethereum. The Ethereum community has long been planning to change the consensus algorithm from "Proof-of-Work" (PoW) to "Proof-of-Stake" (PoS). Should this switch to POS occur, the GPU servers will no longer be usable for Ethereum mining. For this case, Northern Data is actively pushing the conversion of GPU servers for the cloud computing business. Alternatively, other altcoins could be generated using the PoW consensus algorithm. To the extent that Northern Data is unable to utilize its GPU-based servers for alternative application purposes, this could potentially have an adverse effect on the company's earnings power and liquidity position.

Electricity price and availability risk (Segment: Mining)

A secure and cost-effective power supply is of great importance to Northern Data's business. For the Group, on the one hand the development of prices on the global energy markets and their possible volatility are therefore of immense importance. In order to avoid the risk arising from fluctuations in electricity prices, long-term contracts are concluded with electricity suppliers and network operators. On the other hand, any circumstance that leads to an interruption in the energy supply to the data centers has a direct impact on the computing performance. This could be the case if technical failures occur at the power suppliers that negatively affect power generation and its transmission. In this context, administrative decisions, such as stricter environmental regulations or levies related to energy supply, could also have a negative impact. Direct damage to the data centers, due to severe weather conditions, for example, could also cause outages. However, the availability risk is to be minimized by selecting sites with good, predefined conditions (in terms of power and network capacities).

Risks from technical progress

Market developments, technology trends and new scientific findings can also pose risks if they are recognized too late. New technical developments on the part of competitors could lead to a reduction in Northern Data's competitiveness. Likewise, the emergence of strong new competitors or of new business models that were not previously recognized or not recognized in time are possible. In order not to miss new technical developments and trends, Northern Data actively invests in research & development and is thus able to keep up with the times.

Risks from the loss of know-how

Northern Data's business is based on the know-how developed by a few key individuals within the Group. The departure of such individuals within these key functions may have a material adverse effect. If such employees leave or Northern Data loses them, or is unable to recruit further qualified experts and managers on a permanent basis, this could jeopardize the Group's business operations.

Cyber and information security risks

An increase in cybercrime can be seen around the world. The functional security of the company's internal networks is an extremely important foundation for Northern Data's business. In the event of a cyber-attack, Northern Data could suffer reputational damage and the loss of some or all of its digital assets. For this reason, Northern Data goes to great lengths to protect its own information technology as well as the security of software running in its data centers. The Group is aware of the risks posed by the increasing professionalization of computer crime. That is why the systems designed to ward off possible attacks and protect sensitive data are under constant review.

Risks from a shortage of skilled workers

Northern Data is currently in the growth and market development phase. As new sites are opened and developed, the general workforce must also grow. The risk for Northern Data is that certain positions (which require special knowledge or experience) cannot be filled with the optimal expertise or that the Group has to make advance payments in terms of salaries in order to present itself more attractively to employees. To counteract this risk, Northern Data is investing more in recruiting activities with the goal of making the best possible use of potential.

Risks from supply bottlenecks (Segment: Hardware & Other)

The global shortage of silicon chips and further Covid-19 related production bottlenecks are causing delays in the manufacture of servers. Shortages in international transport capacity can lead to delayed deliveries. As a result, computing power cannot be generated and converted into cryptocurrency in the volumes planned. These supply bottlenecks could have a negative impact on the Northern Data Group's growth forecasts. As of June 30, 2022, the asset base of the necessary servers was basically built up.

Financial risks

Interest rate risk

Where Northern Data has entered into contracts with interest rate agreements, fixed rather than variable interest rates have been agreed. In this way, Northern Data counters the risk that, in a scenario of rising interest rates, expenses for refinancing funds will become more expensive and thus be reflected in the income statement as higher interest expense. Both in the event of a favorable economic development of Northern Data and due to changes in market conditions and market expectations, the situation could arise that Northern Data could currently refinance itself on the market more favorably or invest funds more advantageously than is possible at the fixed agreed interest rates. This results in asset value risk for Northern Data. The Group recognizes fixed rate liabilities at fair value through profit or loss.

Rising interest rates can, among other effects, have a negative impact on the results of an impairment test on property, plant and equipment. There were no indications of impairment in fiscal year 2021.

Currency risks

Some companies in the Northern Data Group are located outside the euro zone. Northern Data's reporting currency is the euro, which requires the companies to present the financial statements of these entities in euros for the purposes of preparing the Consolidated Financial Statements. Northern Data is exposed to risks associated with changes in foreign exchange rates when entering into transactions with international counterparties that result in future cash flows being denominated in foreign currencies or in currencies other than the Group's functional currency. To mitigate currency risk, Northern Data's contracts are structured so that the receivables due from Northern Data are denominated in the same currency as the payment obligations to be met by the Group. Within the Group, transactions, including intra-Group financing and investments, are primarily denominated in euros and US dollars in order to limit the risk of currency fluctuations.

A hypothetical change in the U.S. dollar exchange rate as of the balance sheet date by +/- 5 percent would result in a theoretical change in the Group's forecast EBITDA for 2022 of EUR 1,000 thousand, with the exchange rate fluctuation having a hypothetical impact on revenue of EUR 11,000 thousand.

Liquidity risks

The construction phases of the data centers are based on detailed schedules and more extensive acquisitions. Liquidity risk refers to the risk that Northern Data will not be able to meet its financial obligations. In the event that Northern Data does not generate sufficient revenues, the Group would be dependent on further equity and/or debt financing to meet its funding requirements. Should this financing fail, this could have an adverse material effect on the Group's asset, financial and earnings position. As part of the listing of its shares on the Open Market of the Munich Stock Exchange, Northern Data is also exposed to valuation by the capital market. In this respect, Northern Data may be restricted in its business model with regard to the financing that can be obtained via the capital market. In order to prevent insolvency or sustained damage to its image, Northern Data's business model is geared towards generating continuous cash inflows that can grow or accumulate on an ongoing basis or be used as a basis for growth investments.

Changed assessment of risks after the end of the reporting period

Effects of the Ukraine war

Northern Data has no direct business relations with Ukraine or the Russian Federation and does not procure any services indirectly from these regions. The current situation in Ukraine and the sanctions against Russia pose unassessable risks to global economic development and thus also to the economic development of Northern Data.

Impact of the crypto price development

Due to the downward trend in cryptocurrency exchange rates and the stock market, the lower cryptocurrency prices compared to the end of the fiscal year result in lower revenues. By reducing capital expenditures, liquidity needs can be adjusted when cryptocurrency prices decline and the resulting risks on liquidity can be counteracted.

Overall assessment by the Management Board

The previous sections have reported on opportunities and the main individual risks. The overall risk situation of the Group is composed of the individual risks of all risk categories of the subsidiaries and the main divisions.

Despite the existence of these risks, Northern Data Group assumes in its liquidity planning for the forecast period that the liquidity position will be balanced and that the company will be able to continue its business activities. However, this presupposes the occurrence of a number of assumptions underlying the company's liquidity planning. As the company generates the majority of its revenue from the mining of cryptocurrencies, it is affected by declines in the prices for cryptocurrencies, in particular for Bitcoin and Ethereum, in the first half of 2022 and the resulting reduction in mining profitability. The company planned to finance the further expansion of its infrastructure to a significant extent through further inflows from mining activities, while holding a portion of the Ethereum assets generated through mining for the long term. As a result of the declining developments in mining profitability in the first half of 2022, under the currently prevailing conditions, the further planned expansion of the infrastructure is dependent on being able to realize debt financing. If debt financing cannot be raised, the company's ability to meet future cash outflows for mining operations under current mining profitability conditions will depend on postponing some or all of the further infrastructure expansion plans to a later date and not experiencing a further reduction in mining profitability – also, for example, as a result of a possible change in the Ethereum consensus algorithm from "Proof-of-Work" (PoW) to "Proof-of- Stake" (PoS) – to the extent that postponing the infrastructure expansion would not be sufficient to meet operating expenses.

These events and circumstances indicate the existence of uncertainty with respect to the Company's ability to continue as a going concern.

Although such uncertainty exists in principle, in view of the liquidity planning, taking into account all opportunities and risks, and using existing management instruments such as investment postponement or cancellation, cost reduction, and debt financing, the Executive Board assumes a balanced liquidity position and the continuation of the Company's operations.

Forecasts and future development

Overall economic development

According to the International Monetary Fund (IMF), global growth will slow in 2022, particularly as a result of the war in Ukraine. In particular, economic developments that have already impacted the recovery from the pandemic are expected to intensify. Commodity prices and supply disruptions, for example, increased further after general price pressure had already prompted central banks to increasingly tighten monetary policy. Inhibiting growth, the Chinese economy could weaken more than previously assumed in the face of more comprehensive freezes as part of the strict zero-Covid strategy. In April 2022, the IMF expected global economic growth to decline to 3.6 percent in 2022. This is 0.8 percentage points less than assumed in January of the current year.¹⁶ In June 2022, the forecast was lowered by another 0.4 percentage points. The IMF assumes economic growth of 3.2 percent in 2022.¹⁷

Development of sales

As of January 1, 2022, the Group will be managed according to the three segments: Mining, HPC and Other. The forecast for fiscal year 2022 will be drawn up accordingly.

The Group plans to build a GPU-based distributed computing cluster for HPC applications at various sites in 2022. Tasks will be distributed across multiple computer systems to increase efficiency and performance. This will enable the necessary conditions to be created for applications in the fields of artificial intelligence, deep learning, rendering or the Internet of Things ("IoT").

As a result of the acquisition of Decentric in August 2021, a majority of the GPU servers are in operational condition. The company completed the installation of the remaining GPU servers at the end of fiscal year 2021. Sales revenues have been generated from the sale of computing services since August 2021.

Northern Data secured itself access to the Bitcoin market through the acquisition of a substantial majority stake in Bitfield in 2021. Northern Data has been generating its first revenues from the sale of computing power through Bitfield since September 2021.

Furthermore, the Group acquired two additional hardware customers in the US market in 2021. Northern Data AG supplies the customers with hardware and provides the hosting service for the respective customers. The variable profit-related remuneration model will be retained with these customers.

¹⁶ <https://www.imf.org/-/media/Files/Publications/WEO/2022/Update/January/English/text.ashx>

¹⁷ World Economic Outlook Update, July 2022: Gloomy and More Uncertain (imf.org)

Based on the development to date in fiscal year 2022, taking into account the opportunities and risks presented and depending on the development of mining profitability (Bear Case: BTC: EUR 0.06/TH/Day; ETH: EUR 0.01/MH/Day; Base Case: BTC: EUR 0.07/TH/Day; ETH: EUR 0.01/MH/Day; Bull Case: BTC: EUR 0.10/TH/Day; ETH: EUR 0.01/MH/Day), the Management Board expects the Group to generate the following sales revenues in the base case for fiscal year 2022:

EUR million	Bear Case	Base Case	Bull Case
Mining	165	180	200
Cloud computing	5	10	14
Other	30	30	36
Sales	200	220	250

Development of earnings

The EBITDA forecast includes ongoing business.

The Group is currently pressing ahead with the expansion of its current data centers and the delivery of the outstanding servers. The EBITDA forecast was prepared on the basis of the gradual build-up of the server base since 2020 and the data centers already expanded for this purpose in 2021. The focus is also on mining profitability and the uncertainties in the energy sector. If mining profitability falls and electricity prices rise significantly, this development could pose a risk for Northern Data that the forecast cannot be achieved. Please refer to the respective explanations in the Risk Report.

The Management Board expects the following EBITDA before special effects for the Group in fiscal year 2022:

EUR million	Bear Case	Base Case	Bull Case
Mining	6	15	33
Cloud Computing (HPC)	-5	-1	1
Other	5	6	6
EBITDA	6	20	40

Mining profitability is directly dependent on the respective cryptocurrency rate as well as the size of the respective network.

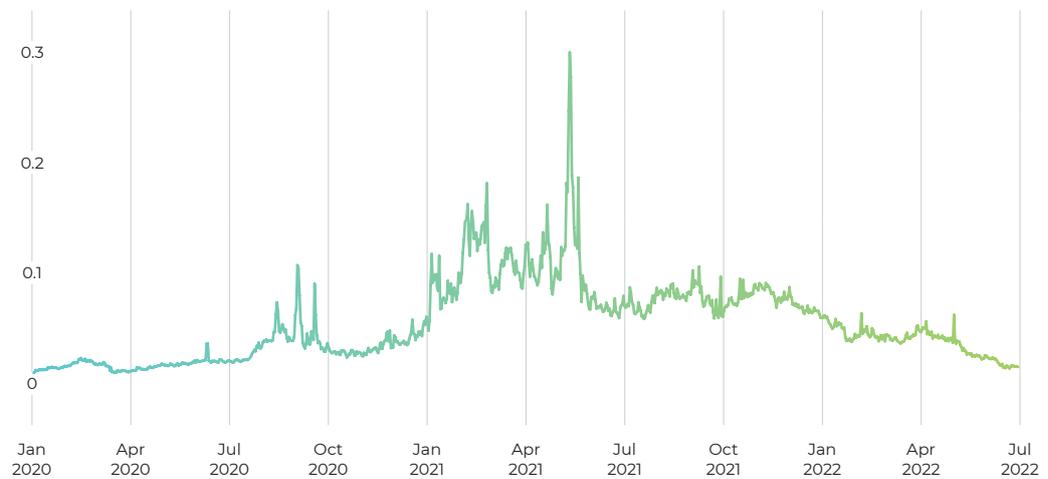
The mining profitability serves as a core parameter for calculating the profitability of the computing power. For the calculations, a conservative approach was chosen and the mining profitability for Ethereum and Bitcoin was taken as an assumption within the above-mentioned ranges.

Mining profitability is central to Northern Data Group's forecast. Therefore, the development of BTC as well as ETH mining profitability is shown separately below.

BTC Mining Profitability (in USD)¹⁸



ETH Mining Profitability (in USD)¹⁹



¹⁸ https://bitinfocharts.com/comparison/bitcoin-mining_profitability.html#3y

¹⁹ https://bitinfocharts.com/comparison/ethereum-mining_profitability.html#3y

Overall statement on the expected development of the Group

The Management Board expects sales of EUR 200–250 million and EBITDA of EUR 6–40 million in fiscal year 2022. The information regarding the future business development is based on the assumptions of the current market situation. If today's market situation changes, the change could have an impact on the key figures forecast. The mining profitability of Bitcoin and Ethereum, the scheduled delivery of the hardware, and the scheduled build-up of the data center and hosting capacities are crucial to achieving the forecast. In addition, there could be effects from the accounting of cryptocurrency positions and transactions.

Frankfurt/Main, August 29, 2022



Aroosh Thillainathan

Chairman of the
Management Board



Stefan Sickenberger

Member of the
Management Board





Group Financial Statements

Consolidated Statement of Comprehensive Income

EUR	Notes	2021	2020
Sales revenues	3.1	189,859,578	16,377,361
Change in inventories		–	–1
Other income	3.2	302,960,893	2,400,612
Total output		492,820,471	18,777,972
Cost of materials	3.3	–76,318,547	–10,284,949
Personnel expenses	3.4	–19,169,288	–5,546,733
Other expenses	3.5	–77,275,051	–15,291,080
Operating profit before depreciation, and amortization – EBITDA		320,057,585	–12,344,790
Depreciation, amortization, and impairment	4.1; 4.2; 4.3	–65,932,255	–18,131,080
Operating result – EBIT		254,125,330	–30,475,870
Financial income	3.6	89,765,308	16,026
Financial expenses	3.6	–7,169,821	–53,252,105
Financial result		82,595,487	–53,236,079
Earnings before income taxes		336,720,817	–83,711,949
Income taxes	3.7	–49,561,829	–546,539
Consolidated annual result		287,158,988	–84,258,488
of which attributable to shareholders of Northern Data AG		287,158,988	–84,258,488
Other result			
Currency conversion		5,831,252	–6,335,922
Items that may be reclassified to profit or loss in the future		5,831,252	–6,335,922
Other result		5,831,252	–6,335,922
Overall result		292,990,240	–90,594,410
of which attributable to shareholders of Northern Data AG		292,990,240	–90,594,410
Earnings per share	3.8		
undiluted		16.27	–7.38
diluted		12.06	–5.70

The Consolidated Statement of Comprehensive Income shown above should be read in conjunction with the notes below.

Consolidated Statement of Financial Position (EUR)

ASSETS	Notes	12/31/2021	12/31/2020
Non-current assets		460,675,156	407,562,206
Goodwill	4.1	20,098,604	43,479,382
Other intangible assets	4.1	65,537,697	94,683,996
Property, plant and equipment	4.2	354,572,909	234,201,092
Rights of use from leasing agreements	4.3	8,907,737	12,933,483
Shares in other companies	5.4.1; 5.10	1,449,556	1,450,622
Other assets	4.5	1,708,044	20,813,631
Deferred tax assets	3.7	8,400,609	–
Current assets		338,092,650	95,014,851
Inventories	4.4	4,689,048	11,874,570
Trade receivables	3.1.1; 5.2	5,253,552	2,292,659
Receivables from companies in which an equity investment is held	5.3.1	75,540	267,268
Contract assets	3.1.2	2,683,513	–
Rights of use from leasing agreements	4.3	–	16,540
Income tax receivables	3.7	1,309,796	–
Other assets	4.5	102,483,769	6,701,546
Cash and cash equivalents	5.2	221,597,432	73,862,268
Total assets		798,767,806	502,577,057

LIABILITIES	Notes	12/31/2021	12/31/2020
Equity	4.6	612,269,095	176,524,943
Subscribed capital		23,815,514	14,639,684
Capital reserve		402,552,345	216,504,263
For the implementation of the resolved capital increase against contribution made		–	52,470,000
Translation differences		–504,670	–6,335,922
Balance sheet profit/loss		186,405,906	–100,753,082
Non-current liabilities		18,283,494	49,861,665
Financial liabilities	4.8	–	17,108,596
Leasing liabilities	4.3; 4.8	7,049,381	13,874,563
Contractual liabilities	3.1.1 f.	269,723	2,481,592
Provisions	4.7	2,478,481	5,200
Deferred tax liabilities	3.7	8,132,740	14,354,390
Other liabilities	4.9	353,169	2,037,324
Current liabilities		168,215,217	276,190,449
Financial liabilities	4.8	76,891,228	27,558,475
Liabilities to companies in which an equity investment is held	5.4.1	17,544	–
Leasing liabilities	4.3; 4.8	1,996,900	895,910
Trade payables	4.8	20,409,586	20,246,385
Contractual liabilities	3.1.1 f.	20,792,974	1,522,219
Income tax liabilities	3.7	33,583,687	7,130,695
Provisions	4.7	2,026,723	899,237
Other liabilities	4.9	12,496,575	217,937,528
Total liabilities and shareholders' equity		798,767,806	502,577,057

The Consolidated Statement of Financial Position shown above should be read in conjunction with the notes below.

Consolidated Statement of Changes in Equity

EUR	Notes	Subscribed capital	Capital reserve	Contributions made for the implementation of the resolved capital increase	Conversion differences	Balance sheet loss	Total
Balance on 01/01/2020		7,441,500	582,256	-	-	-16,494,594	-8,470,838
Consolidated annual result		-	-	-	-	-84,258,488	-84,258,488
Currency translation		-	-	-	-6,335,922	-	-6,335,922
Other comprehensive income		-	-	-	-6,335,922	-	-6,335,922
Total comprehensive income		-	-	-	-6,335,922	-84,258,488	-90,594,410
Issue of ordinary shares		1,116,225	50,585,025	52,470,000	-	-	104,171,250
Issuance of ordinary shares in connection with business combinations		3,804,084	120,787,437	-	-	-	124,591,521
Servicing of the convertible bond		2,277,875	46,539,244	-	-	-	48,817,119
Deduction of direct transaction costs		-	-2,694,103	-	-	-	-2,694,103
Share-based payments		-	704,404	-	-	-	704,404
Transactions with shareholders		7,198,184	215,922,007	52,470,000	-	-	275,590,191
Balance on 12/31/2020		14,639,684	216,504,263	52,470,000	-6,335,922	-100,753,082	176,524,943
Balance on 01/01/2021		14,639,684	216,504,263	52,470,000	-6,335,922	-100,753,082	176,524,943
Consolidated annual result		-	-	-	-	287,158,988	287,158,988
Currency translation		-	-	-	5,831,252	-	5,831,252
Other comprehensive income		-	-	-	5,831,252	-	5,831,252
Total comprehensive income		-	-	-	5,831,252	287,158,988	280,092,564
Issue of ordinary shares		1,463,968	109,581,412	-52,470,000	-	-	58,575,380
Issuance of ordinary shares in connection with business combinations	5.2	338,273	32,227,183	-	-	-	32,565,456
Issue of ordinary shares in connection with other transactions with shareholders		7,371,839	462,807,200	-	-	-	470,179,039
Treatment of the difference amount between Decentric and Bitfield		-	-419,586,506	-	-	-	-419,586,506
Servicing of the convertible bond	5.2	1,750	720,250	-	-	-	722,000
Deduction of direct transaction costs	4.6.2	-	-5,057,784	-	-	-	-5,057,784
Share-based payments	5.5	-	5,356,327	-	-	-	5,356,327
Transactions with shareholders		9,175,830	186,048,082	-52,470,000	-	-	142,753,912
Balance on 12/31/2021		23,815,514	402,552,345	-	-504,670	186,405,906	612,269,095

Consolidated Statement of Cash Flows

EUR thousand	Notes	2021	2020
Consolidated annual result		287,159	-84,258
Depreciation and amortization of non-current assets	4.2	65,932	18,131
Decrease in provisions	4.7	435	856
Other non-cash expenses/income	3.2; 3.5	-154,086	704
Increase in inventories, trade receivables and other assets not attributable to investing or financing activities		-121,996	-28,582
Increase in trade payables and other liabilities not attributable to investing or financing activities		109,392	216,372
Cryptocurrency received for providing computing services		-87,507	-
Cryptocurrency sold		27,145	-
Losses/gains on disposal of non-current assets		-441	-
Financial expenses/financial income	3.6	-82,595	53,236
Income tax expense	3.7	45,726	7,025
Income tax payments/refunds		-1,098	-
Cash flow from operating activities		88,066	183,484
Payments made for investments in intangible assets	4.1	-528	-2,304
Proceeds from disposals of property, plant and equipment		520	-
Payments made for investments in property, plant and equipment	4.2	-200,334	-216,139
Proceeds from disposals of financial assets		328,007	-
Cash outflows for investments in financial assets	5.2	-1	-1,447
Proceeds from additions to the scope of consolidation		34,613	-
Cash outflows for additions/cash inflows from additions to the scope of consolidation		-35,689	8,297
Interest received	3.6	30	16
Cash flow from investing activities		126,618	-211,577
Proceeds from contributions to equity by shareholders of the parent company (cash capital increases)	4.6.2	58,575	104,172
Disbursements in connection with capital measures	4.6.2	-5,058	-2,694
Proceeds from the issuance of bonds and taking up of financial loans	4.8	-	20,968
Outflows from the redemption of bonds and financial loans and liabilities from leasing agreements	4.8	-27,866	-18,189
Cash outflows for the repayment of financial liabilities to shareholders of the parent company	4.8	-89,930	-3,020
Interest paid	3.5; 3.6	-4,754	-2,179
Cash flow from financing activities		-69,033	99,058
Cash-effective change in cash and cash equivalents		145,651	70,965
Currency-related change in cash and cash equivalents		2,085	-351
Cash and cash equivalents at the beginning of the period		73,861	3,247
Cash and cash equivalents at the end of the period		221,597	73,861
Composition of cash and cash equivalents			
Cash and cash equivalents		221,597	73,862
Liabilities to banks due at any time		-	-1
		221,597	73,861





Notes to the Group Financial Statements

E Notes to the Group Financial Statements

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1 — Information about the company and basics of the preparation of the financial statements

1.1 Reporting company

Northern Data AG (hereinafter also the “company”) is a listed stock corporation with its registered office in Frankfurt on the Main, Germany. The business address is: An der Welle 3, 60322 Frankfurt/Main. Northern Data AG is registered with the Local Court of Frankfurt/Main (HRB 106 465).

Northern Data AG as the parent company together with its direct and indirect subsidiaries forms the Northern Data Group (hereinafter also “Northern Data” or “Group”). Northern Data develops and operates global infrastructure solutions in the field of high-performance computing (HPC). The focus here is on the mining of cryptocurrencies, the provision of hosting services and the necessary hardware, as well as the expansion of both stationary and mobile data centers for the future development of an HPC business field.

The shares of Northern Data AG are traded on the Open Market of the Frankfurt Stock Exchange and the Munich Stock Exchange (m:access).

Until 2020, Northern Data AG was primarily in the mining hardware business and began building stationary and mobile data centers. With the acquisitions of Decentric Europe B.V., Amsterdam, Netherlands; Bitfield N.V., Amsterdam, Netherlands; Hydro66 Svenska AB, Boden, Sweden; and North Georgia Data LLC, Commerce, Georgia, USA, which were carried out in fiscal year 2021, the business model was shifted to providing computing power for cryptocurrency mining, with the goal of being able to serve the HPC business model in the future.

Due to the deconsolidation of Whinstone US, Inc., Rockdale, Texas, USA, in May of the fiscal year, as well as the above-mentioned acquisitions and effects from the change in the business model, the comparability of the figures for the reporting period with the corresponding comparative periods of the previous year is limited. In Notes 4.8 “Financial liabilities” and 5.2 “Disclosures on financial instruments,” there was a change in the presentation of a financial liability in the prior-year disclosures.

1.2 Basic principles of the preparation of the financial statements

Northern Data AG prepares its Consolidated Financial Statements in accordance with International Financial Reporting Standards (IFRS) and the interpretations of the International Financial Reporting Standards Interpretations Committee (IFRS IC) as adopted by the European Union. In addition, the application of commercial law provisions pursuant to Section 315e (1) of the German Commercial Code (HGB) is made in these financial statements.

The financial statements of the companies included in the Group are based on uniform accounting policies in accordance with IFRS. The fiscal year of all companies included in the Group corresponds to the calendar year.

A distinction is made in the balance sheet between current and non-current assets and liabilities. The Consolidated Statement of Income has been prepared using the nature of expense method, while the Consolidated Financial Statements are prepared on the basis of historical cost, with the following exceptions:

- › Derivative financial instruments, liabilities for cash-settled share-based payments, and financial assets whose cash flows do not consist solely of principal or interest payments are measured at fair value.
- › Monetary assets and liabilities denominated in foreign currencies are translated at closing rates.
- › The revaluation model is used for non-current assets in cryptocurrencies.
- › Current assets denominated in cryptocurrencies are measured at acquisition or production cost.

The Consolidated Financial Statements are prepared in euros, which is the reporting currency. Unless stated otherwise, all figures are presented in EUR thousand. The tables and figures presented can contain differences due to rounding.

Northern Data Software GmbH has made use of the exemption provision pursuant to Section 264 (3) of the German Commercial Code (HGB) for the fiscal year 2021 and has submitted the declarations required for this purpose in the electronic Federal Gazette for publication.

1.3 Principles of consolidation

Scope of consolidation

Subsidiaries are entities that are directly or indirectly controlled by Northern Data AG. Control exists only when Northern Data AG is exposed, or has rights, to variable returns from its involvement with an investee and has the ability to affect those returns through its power over the investee.

In accordance with the principles of full consolidation, the Consolidated Financial Statements of Northern Data AG include all domestic and foreign subsidiaries over which Northern Data AG exercises direct or indirect control and which are not of minor significance.

Number	2021	2020
Northern Data AG and fully consolidated subsidiaries		
Domestic	2	2
Abroad	24	7
Non-consolidated subsidiaries		
Domestic	–	–
Abroad	5	3
Total	31	12

The non-consolidated subsidiaries have not been included in the scope of consolidation for reasons of materiality. A complete list of shareholdings can be found in Note 5.10 "List of shareholdings of Northern Data AG pursuant to Section 313 (2) no. 1 to 4 HGB."

Consolidation methods

Companies newly acquired during the fiscal year are included in the consolidated financial statements from the date on which control is transferred in accordance with IFRS 10 and are fully consolidated using the purchase method. Subsidiaries are deconsolidated from the date on which control is lost.

Capital consolidation is performed by offsetting the carrying amounts of the investments against the Group's share in the equity of the subsidiaries. In the case of business combinations, initial consolidation is performed in accordance with IFRS 3 using the purchase method by offsetting the acquisition cost against the fair values of the identifiable assets acquired and liabilities and contingent liabilities assumed at the date of acquisition. Goodwill is recognized if the acquisition cost of the investment exceeds the proportionate share of the acquired revalued equity. If this is a negative goodwill of a debt nature, the purchase price calculation and allocation are to be reassessed. If this has been correctly accounted for, any remaining negative goodwill is recognized in other income in the year of acquisition.

Intra-Group transactions are eliminated. Receivables and liabilities between consolidated companies are offset against each other. Intercompany profits and losses are eliminated and intercompany income is offset against the corresponding expenses.

In the course of transactions in which shareholders of Northern Data contribute shares of third parties in exchange for equity instruments of Northern Data, the transaction is not accounted for in accordance with IFRS 3. In the course of initial consolidation, the net assets acquired are recognized at fair value and added to equity as a contribution. The difference between the fair value of the equity instruments issued and the fair value of the net assets acquired is not recognized.

Currency conversion

The financial statements of subsidiaries in countries outside the euro area are translated using the functional currency concept. For the subsidiaries, the functional currency is based on the primary environment in which they operate. In the Group, the functional currency of all companies corresponds to the respective local currency. The reporting currency of the Consolidated Financial Statements is the euro (EUR).

Transactions in foreign currencies are translated at the relevant foreign exchange rates at the time of the transaction. In subsequent periods, monetary assets and liabilities are measured at the closing rate and translation differences are recognized in profit or loss. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction. In addition, non-monetary items measured at fair value in a foreign currency are translated at the exchange rate prevailing at the date of the fair value measurement.

The financial statements of foreign subsidiaries whose functional currency is not the euro are translated into the Group currency, the euro, using the modified closing rate method. For simplification purposes, income statement items are translated at the average exchange rate for the year. Equity is translated at historical rates, asset and liability items at the closing rate on the balance sheet date. All differences resulting from the translation of financial statements prepared in foreign currencies are recognized in other comprehensive income.

The euro exchange rates on which the currency translation is based are shown below:

	2021
Closing rate USD/EUR	1.1326
Average rate USD/EUR	1.1827
Average USD/EUR exchange rate since date of first-time consolidation (North Georgia Data LLC)	1.1570
Average USD/EUR exchange rate since date of initial consolidation (Decentric Europe B.V.)	1.5510
Average USD/EUR exchange rate since date of initial consolidation (Bitfield Group)	1.1397
Closing rate CAD/EUR	1.4393
Average rates CAD/EUR	1.4826
Closing rate GBP/EUR	0.8403
Average GBP/EUR exchange rates since date of initial consolidation (Hydro Group)	0.8554
Closing rate NOK/EUR	9.9888
Average exchange rates NOK/EUR	10.1633

1.4 Valuation premise of a going concern

The preparation of the Consolidated Financial Statements requires an assessment of the going concern assumption. The Management Board has reviewed the forecasts for a period of at least twelve months from the date of approval of the Consolidated Financial Statements. The Management Board has taken the impact of Covid-19 and the war in Ukraine into account, as well as the adverse development of cryptocurrency prices and risks from a possible conversion of the Ethereum and network algorithm from PoW to PoS.

Despite the existence of these risks, Northern Data AG assumes in its liquidity planning for the forecast period that the liquidity position will be balanced and that the company will be able to continue its business activities. This presumes the occurrence of a number of assumptions underlying the company's liquidity planning, however. As the company generates the majority of its sales revenue from the mining of cryptocurrencies, it is affected by declines in the prices for cryptocurrencies, in particular for Bitcoin and Ethereum, in the first half of 2022 and the resulting reduction in mining profitability. The company planned to finance the further expansion of its infrastructure to a significant extent by further inflows from mining activities and at the same time to hold a share of the Ethereum assets generated by mining in the long term. As a result of the downward trend in mining profitability in the first half of 2022, under the currently prevailing conditions, the further planned expansion of the infrastructure is dependent on being able to raise debt financing. To the extent that debt financing cannot be obtained, the company's ability to cover future payments for the operations of the mining business under the currently prevailing mining profitability is dependent on the further planned expansion of the infrastructure being partly postponed to a later point in time or, if necessary, not being carried out, as well as on a further decrease in mining profitability – also, for example, as a result of a possible change in the Ethereum consensus algorithm from "Proof-of-Work" (PoW) to "Proof-of-Stake" (PoS) – to an extent that would not be sufficient to cover the operating expenses even if the expansion of the infrastructure were postponed.

These events and conditions indicate the existence of uncertainty regarding the Company's ability to continue as a going concern.

Although such uncertainty exists in principle, in view of the liquidity planning, taking all opportunities and risks into account, and using existing management instruments such as postponement or cancellation of investments, cost reductions, and borrowing, the Management Board assumes that the liquidity situation will be balanced and that the company will be able to continue as a going concern.

1.5 IFRS standards applied

Standards, interpretations and amendments whose application was mandatory for the first time in the past fiscal year and whose application will be mandatory in future reporting periods

The following new or amended accounting standards already adopted by the IASB have not been taken into account in the Consolidated Financial Statements for fiscal year 2021 where there was no obligation to apply them yet, with the exception of the standards whose application is mandatory as of January 1, 2021. Some of the effects of these new or amended accounting standards on the financial statements are still being examined. The amendments to the standards relating to rental concessions, insurance contracts and effects of the IBOR reform are already to be applied from January 01, 2021.

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Standards/ Interpre- tations		Mandatory date of application according to the EU as of fiscal years beginning on or after:	Impact
IFRS 17	Insurance Contracts (issued on May 18, 2017)	Jan. 1, 23	No relevance
IFRS 17	Amendments to IFRS 17 (issued on June 25, 2020)	Jan. 1, 23	No relevance
IFRS 3	Amendments to IFRS 3 "Reference to the Framework" (issued on May 14, 2020)	Jan. 1, 22	No significant effects are expected
IFRS 16	Amendments to IFRS 16: "Covid-19 Related Lease Concessions" (issued March 31, 2021).	Jan. 1, 21	No relevance
IFRS 4	Amendments to IFRS 4: "Insurance Contracts" (issued on June 25, 2020)	Jan. 1, 21	No relevance
IFRS 9, IAS 39, IFRS 7, IFRS 4, IFRS 16	Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16: "Effects of IBOR Reform (Phase 2)" (issued August 27, 2020).	Jan. 1, 21	No significant effects
IFRS 17, IFRS 9	Amendment to IFRS 17 to allow the use of the "classification overlay approach" (issued on December 9, 2021)	EU endorsement pending	No relevance
IAS 1	Amendments to IAS 1 on the classification of liabilities as current or non-current (issued on January 23, 2020)	EU endorsement pending	No significant effects are expected
IAS 1, Practice Statement 2	Amendments to IAS 1 "Presentation of Financial Statements" including amendments to Practice Statement 2 "Making Materiality Judgements" (issued on February 12, 2021)	Jan. 1, 23	No significant effects are expected
IAS 8	Amendments to IAS 8 "Accounting Policies, Changes in Accounting Estimates and Errors" (issued February 12, 2021)	Jan. 1, 23	No significant effects are expected
IAS 12	Amendments to IAS 12 regarding "Deferred Tax related to Assets and Liabilities arising from a Single Transaction" (issued on May 7, 2021)	Jan. 1, 23	No significant effects are expected
IAS 16	Amendments to IAS 16 in relation to revenue before intended use (issued on May 14, 2020).	Jan. 1, 22	No significant effects are expected
IAS 37	Amendments to IAS 37 relating to onerous contracts (issued on May 14, 2020)	Jan. 1, 22	No significant effects are expected
	Annual Improvements to IFRSs (2018–2020 cycle) (issued May 14, 2020).	Jan. 1, 22	No significant effects are expected

Balance on August 12, 2022, according to EFRAG EU Endorsement Status Report.

1.6 Discretionary decisions and estimation uncertainties

Discretionary decisions must be taken into account in two respects when preparing the Consolidated Financial Statements. In addition to the need to interpret indeterminate terms and rules, management is required to make (forward-looking) assumptions and estimates that can have an impact on the asset, financial and earnings position. Estimation uncertainties also arise from forward-looking company planning.

Property, plant and equipment and intangible assets (excluding goodwill)

In estimating the useful lives of assets, judgment is required on the part of the Group's management. In making this assessment, Northern Data takes the experience already gained from comparable assets as well as from current and future technological changes into account, among other information.

Northern Data assesses on each reporting date whether there is any indication that a non-financial asset might be impaired. If any such indication exists, or when annual impairment testing for an asset is necessary, Northern Data makes an estimate of the asset's recoverable amount. The recoverable amount is determined for each individual asset, unless an asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. If the carrying amount of an asset or a cash-generating unit exceeds its recoverable amount, the asset is impaired and written down to its recoverable amount.

To determine the value in use, the expected future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In order to determine the fair value less costs to sell, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model is applied. This is based on valuation multiples, stock market prices of exchange-traded shares in companies or other available fair value indicators.

Furthermore, with regard to GPU hardware, it should be noted that September 19, 2022, has been named the tentative date for the transition from proof-of-work mining consensus (PoW) to proof-of-stake (PoS). Thus, the Ethereum network will transition to staking. Various test forks have already been successfully completed. The further merge tests are expected in August 2022. In particular, the transition to PoS will reduce power consumption by more than 99 percent.

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Northern Data has already installed several GPU clusters:

- › AMD MI50
- › AMD RX5700
- › Nvidia A100
- › Nvidia A6000

Compared to the MI50 and Nvidia A100, the RX5700 and A6000 GPUs are lower cost but slightly slower products. The amount of installed graphics cards allows Northern Data to compete with other GPU installations. A large number of user software runs on AMD as well as NVIDIA hardware. This means that this hardware can be used not only to provide computing power for Ethereum mining, but also for HPC applications. The software such as Alya, a high-performance program for computing mechanics code to solve complex coupled multiphysics/multiscale problems, mostly from the field of engineering, is installed on GPU-based hardware units. Such software as "HiFun" (High Resolution Flow Solver on Unstructured Meshes) is installed on NVIDIA GPUs.

The carrying amount recognized as of December 31, 2021 is also covered in a scenario in which the hardware would be realized through sale to third parties, as the hardware could also be used by third parties due to the portfolio of GPUs described. In such a case, the fair value less costs to sell would exceed the carrying amounts recognized as of December 31, 2021. Against this background, the Company does not see any risk of a potential impairment of the GPU servers. Northern Data uses recent trends in the market values of GPUs in its impairment assessment to thus determine fair value less costs to sell. In view of this, the company does not consider there to be any risk of potential impairment of the GPU servers.

Impairment losses are recognized in profit or loss. This does not apply to assets that have previously been revalued, provided that the increases in value resulting from the revaluation have been recognized in other comprehensive income. For these, the impairment loss is also recognized in other comprehensive income up to the amount of the previous revaluation.

Leasing

Discretionary decisions were made in assessing whether to extend current leases. Economic and operational factors were taken into account in the assessment of probability.

Revenue recognition

Provision of computing power for mining cryptocurrencies

The Group operates several data centers to provide computing services directly to a crypto mining pool or to sell them independently to third parties. Discretionary decisions are required when assessing whether contracts with third parties are within the scope of IFRS 15. In particular, Northern Data considers whether the contract was negotiated with economic substance. In determining the consideration Northern Data expects to receive for the transfer of promised products or services from a customer, the company exercises judgment. This includes estimates of the amount of consideration to be received. In some cases, the company has the discretion to determine whether the consideration is cash (FIAT currency) or non-cash (cryptocurrency). In the case of non-cash computing services, significant judgments are present on the part of Northern Data's management, particularly with respect to the inclusion of trading platforms¹ or web-based lists² for cryptocurrency exchange rates and the selection of the cut-off date. Any subsequent exchange rate losses or increases are not recognized in revenue but in other expenses or income in profit or loss. Furthermore, contracts for the provision of computing power very rarely include significant financing components.

Engineering and hosting

It is possible for several contracts to be concluded with the same customer. The Group treats these contracts as one contract for accounting purposes if the contracts are entered into at the same time or with a small time interval and are economically interrelated. Judgments are required in assessing whether different contracts are related. Consideration is given to whether a single economic purpose has been negotiated, whether the consideration for one contract is contingent on the performance of the other contract, or whether some or all of the products in the contracts represent a single performance obligation.

Products and services are normally classified as separate performance obligations. The portion of the contract price allocated to them is recognized separately. However, the determination of whether a product or service is considered a separate performance obligation requires the use of judgment. Particularly in the case of engineering and hosting activities, judgment is required to assess whether these services are significantly interdependent. As a rule, engineering services relate to fundamental conceptual designs, while hosting involves simple operation and maintenance measures.

Basic discretionary decisions

Two different approaches are used to determine the stand-alone selling prices. If the stand-alone selling prices for an offering are observable and sufficiently uniform for all customers (i.e., not very different), the stand-alone selling prices are estimated on the basis of past prices. This approach is used for standardized products and services.

¹ Kraken, Coinbase and Binance

² <https://coinmarketcap.com>

In particular, for new products and services where the stand-alone selling prices are not directly observable, the estimate is based on cost plus margin.

The input parameters are constantly reviewed by Northern Data's management to ensure that they can be objectified. If there are significant changes in circumstances, the estimate is adjusted.

Northern Data exercises judgment in determining the timing of fair value measurements for non-cash consideration.

Discretion is used in assessing whether revenue from the products and services (hosting and provision of computing services) is to be recognized over time or at a point in time. In particular, it is taken into account whether the customer already has control and derives economic benefits from the product or service while it is being provided. At Northern Data, this applies in particular to hosting and engineering services.

In determining the timing, the Group applies a simplification principle (right to invoice), as monthly invoicing is performed and the Group is therefore entitled to the hours worked. Revenue is therefore recognized in the amount that the company is entitled to invoice.

Discretionary decisions and estimation uncertainties exist in the case of variable compensation. In this context, revenue is recognized when it is deemed to be reasonably certain.

Judgments and estimates related to revenue recognition can have an impact on the timing and amount of revenue to be recognized.

Purchase price allocation

For the purchase price allocation in the context of business combinations, assumptions must be made regarding the recognition and measurement of assets and liabilities. The determination of the fair value of the assets acquired and liabilities assumed at the time of acquisition, as well as the useful lives of the intangible assets and property, plant and equipment acquired, involves assumptions. The valuation of intangible assets is based to a large extent on projected cash flows and discount rates. Actual cash flows can differ significantly from the cash flows used in determining fair values, which can result in different values and impairment losses. At the time of preparation, it can be assumed that there is no significant risk with regard to estimation uncertainties or discretionary decisions that a material change in the carrying amounts will occur in the next reporting period.

Impairment of goodwill

In accordance with the accounting policy set out below, goodwill is tested for impairment at least once a year and additionally if there are indications of possible impairment. Goodwill is initially allocated to a cash-generating unit and tested for impairment on the basis of forward-looking assumptions. Details are provided in Notes 1.8.5 "Goodwill" and 4.1 "Goodwill and other intangible assets."

Financial instruments

Information on the respective judgments and estimation uncertainties can be found in the Notes to the Consolidated Financial Statements under 1.8.3.2 "Fair value" and in the Notes to the Consolidated Financial Statements under 5.2 "Disclosures on financial instruments."

Deferred tax assets

Deferred tax assets are recognized for all unused tax loss carryforwards to the extent that it is probable that future taxable profit will be available against which the loss carryforwards can be utilized. In determining the carrying amount of deferred tax assets, significant judgment is required by the Management Board with respect to the expected timing and amount of future taxable income. Further details are presented in Note 3.7 "Income taxes."

Relationships with related companies and persons

Discretionary decisions were made in the identification of related party relationships, in particular in the determination of significant influence between Northern Data and other companies, in fiscal year 2021.

1.7 Implications of Covid-19 and the war in Ukraine

1.7.1 Impact on management's judgments and estimates

Discretionary decisions and estimates (see Note 1.6 "Discretionary decisions and estimation uncertainties") can have an impact on the measurement and disclosure of assets and liabilities as well as on the income and expenses recognized for the reporting period. Due to the global impact of the ongoing Covid-19 pandemic, these management judgments and estimates remain subject to uncertainty.

The pandemic has had a major impact on supply chains, among other areas. Northern Data works mainly with Asian companies who specialize in the production of Whatsminer and GPU-based servers. In order to avoid future bottlenecks in the delivery of hardware, the main inventory of hardware has been gradually built up and put into operation since 2020. At the end of fiscal year 2021, further

purchase agreements were concluded for the servers that will be delivered in the period from 2022 to 2023. The Chinese zero-Covid strategy could lead to delivery delays.

Furthermore, they are also impacted by the outbreak of the war in Ukraine and the resulting global economic uncertainty. The Russian invasion of Ukraine and, as a result, the sanctions imposed on Russia by the EU and the US are having a significant impact on economic development. Above all, the energy sector in the European Union has been severely affected.

The energy-intensive provision of computing power in the context of cryptomining or in the HPC sector is essentially carried out in the data centers in Norway, Sweden, and North America. The Scandinavian data centers are powered using local hydropower as a re-generative energy source. Nonetheless, the shortage of energy is leading to rising prices. For detailed information on this, please refer to the Risk and Opportunity Report and the Forecast Report.

The actual amounts can differ from management's judgments and estimates. Changes in these judgments and estimates could have a material impact on the Consolidated Financial Statements. In the process of continually updating management's judgments and estimates, all available information regarding expected economic developments and governmental actions has been considered. This information was also included in the evaluation of the recoverability and collectability of assets and receivables.

As the pandemic continues, it remains challenging to predict its duration and the extent of its impact on the company's assets, liabilities, earnings position and cash flows. The Group has made the underlying estimates and assumptions based on the knowledge and best information available at the time and expects the situation with corona to basically improve as vaccines become available and studies continue. An end and the associated economic as well as geopolitical consequences are currently difficult to forecast or estimate due to the current initial situation. It is therefore difficult to estimate the extent of the impact on the asset, financial and earnings position.

1.7.2 General effects on the 2021 Consolidated Financial Statements

The impact of global supply bottlenecks and constraints in logistics on the Northern Data Group's hardware business persists, which has had an overall impact on deliveries and installation of hardware and thus led to delays compared to 2020. In the course of the second half of 2021, the schedules were essentially met.

Overall, the impact of the Covid-19 pandemic and the war in Ukraine on the Northern Data Group's Consolidated Financial Statements is insignificant.

1.8 Accounting and valuation principles

The main accounting and valuation principles are presented below.

1.8.1 Business combinations

Business combinations are accounted for using the purchase method at the date of transfer of control. Under this method, the assets, liabilities and contingent liabilities of the acquired company identified in accordance with the provisions of IFRS 3 are measured at fair value at the acquisition date and compared with the cost of the consideration transferred. Any goodwill is determined by the excess of the cost of the acquisition over the fair value of the identifiable assets acquired and liabilities assumed.

Goodwill is tested for impairment at least once a year and additionally if there are indications of potential impairment. Any impairment loss is recognized as an expense. The impairment test is performed in accordance with IAS 36.

Acquisition-related costs are expensed as incurred, with the exception of transaction costs in connection with the issue of new shares.

In the course of transactions in which shareholders of Northern Data contribute shares of third parties in exchange for equity instruments of Northern Data, the transaction is not accounted for in accordance with IFRS 3. In the course of initial consolidation, the net assets acquired are recognized at fair value and added to equity as a contribution. The difference between the fair value of the equity instruments issued and the fair value of the net assets acquired is not recognized.

1.8.2 Business transactions in foreign currency

Transactions in foreign currencies are translated into the respective functional currency of the Group companies at the spot rate on the date of the transaction. Non-monetary assets and liabilities measured at fair value in a foreign currency are translated at the exchange rate that applies on the date the fair value was determined on. Non-monetary items measured at historical cost in a foreign currency are translated using the exchange rate on the date of the transaction. Currency translation differences are generally recognized in profit or loss for the period and reported within financing expenses.

1.8.3 Financial instruments

A financial instrument is any contract that gives rise to a financial asset at one entity and a financial liability or equity instrument at another entity.

1.8.3.1 Comments on interest income and interest expense

Interest income and expenses are recognized in net interest income using the effective interest method.

The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial asset to the carrying amount of the financial asset or financial liability.

In determining the effective interest rate, all contractually agreed cash flows as well as all fees associated with the asset or liability that are an integral part of the effective interest rate, direct and incremental transaction costs and all other premiums and discounts are taken into account.

Interest income and expense are recognized by applying the effective interest rate to the gross carrying amount of the asset or to the carrying amount of the liability. If the asset is not impaired, interest income is calculated on the gross carrying amount. For financial assets that become credit-impaired after initial recognition, interest income is calculated on the net carrying amount.

1.8.3.2 Fair value

Fair value is the price that would be received to sell an asset or be paid to transfer a liability in an arm's length transaction on the measurement date. The fair value of assets traded in active markets is determined on the basis of quoted prices where these represent prices used in regular and current transactions. The fair value of a liability reflects the risk of non-performance.

Where quoted prices in an active market do not exist, Northern Data uses valuation techniques that maximize the use of relevant observable inputs and minimize the use of unobservable inputs. The valuation techniques used incorporate all factors that market participants would consider in pricing such a transaction.

The determination of fair values is subject to judgment and estimation uncertainty. Where available, Northern Data determines the fair value of financial assets and financial liabilities based on quoted prices in an active market for them. The estimates to be made are based on assumptions and parameters that are based on the appropriate exercise of judgment by management, particularly with regard to the appropriate selection and application of parameters, assumptions and modeling techniques in the valuation of financial instruments for which no market prices or market observable comparative parameters are available.

In determining fair value, Northern Data considers factors such as bid and ask spreads as well as counterparty and credit risks. Where the fair value of a financial asset or financial liability is derived from a modeling process, the parameters used in the model are generally based on an ask price (Note 5.2 "Disclosures on financial instruments").

If an asset or liability measured at fair value has a bid price and an ask price, Northern Data measures assets or long positions at the bid price and liabilities or short positions at the ask price.

The use of valuation techniques or models requires management to make assumptions and estimates, the extent of which depends on the transparency of the financial assets and financial liabilities and their markets, and the complexity of these assets and liabilities. If management decisions are required to a significant extent for value determinations, these are identified and documented. As part of the validation of the models and valuations used, subjectivity and estimation issues are assessed in particular. Valuations that are to be assigned to Level 1 generally do not take management estimates into account. In Level 2, or in the case of valuations using standard industry models and input parameters that are observable in active markets, the consideration of management estimates is rather limited. In Level 3, non-observable input parameters, including historical data, are also used in the context of measurement using standard industry models (in particular historical volatilities, historical spreads), which means that management estimates are incorporated to a greater extent. Generally, there is no trading activity for the financial assets and financial liabilities whose fair values are to be disclosed, so significant management judgment is involved in determining fair value and no FVTPL classification and measurement occurs. If Northern Data is able to access valuation results from multiple valuation techniques, management chooses the estimate within the range that best reflects fair value. In addition, valuation adjustments may be required by management to determine fair value. Valuation adjustments are part of the valuation process.

The best evidence of fair value at initial recognition of a financial asset or financial liability may be the transaction price, which is the fair value of the consideration transferred or received. If Northern Data determines that the fair value at initial recognition differs from the transaction price, Northern Data measures that financial asset or financial liability at fair value at initial recognition. The accounting for the resulting difference is presented in Note 4.8 "Financial liabilities."

If the difference identified is a gain, it is recognized in profit or loss on a systematic basis only to the extent that it arises from changes in factors (including time) that market participants would consider in pricing the liability, or over the expected life of the transaction. If the difference calculated represents a loss, this is recognized when it is probable that a loss has been incurred and the loss can be reliably estimated. Decisions on the recognition and accrual of differences require management decisions (see Note 4.8.2 "Day one gain or loss").

If no market values are available for the measurement of financial assets and financial liabilities, the fair values are determined using valuation models.

The choice of the model, the assumptions and procedures used as well as the input parameters are decided by expert estimation.

The inputs and price data are obtained from third-party sources, including stock exchanges. The sources of the input parameters used are reviewed and evaluated to ensure the quality of the fair value to be determined.

Where possible, the results are compared with actual transactions in the market to ensure that the model valuations are calibrated against market prices. If verification is not possible due to a lack of observable data, the estimated fair value is assessed for reasonableness using appropriate procedures.

IFRS 13 Fair Value

The fair value hierarchy of IFRS 13 is presented here:

Level 1: Quoted prices (unadjusted) in active markets for identical assets and liabilities.

Level 2: Valuation parameters that are not the quoted prices included in Level 1 but are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices).

Level 3: Valuation parameters for assets or liabilities that are not based on observable market data.

If inputs that can be assigned to different levels of the fair value hierarchy are used in determining the fair value of an asset or liability, the fair value measurement is assigned in its entirety to the level of the fair value hierarchy that corresponds to the lowest level input that is significant to the total fair value determined.

Reclassifications between the different levels of the fair value hierarchy are recognized by Northern Data at the end of the reporting period in which the change occurred.

For further information on the assumptions used in determining fair values, please refer to the following Note 5.2 "Disclosures on financial instruments" below.

Valuation techniques and significant unobservable inputs

The table below shows the valuation techniques used in determining Level 2 and Level 3 fair values and the significant unobservable inputs used.

As no comparable values are available for the financial assets and financial liabilities to be measured at fair value and thus fair values have to be determined using more complex modeling techniques, valuation techniques such as the DCF method, which take current market conditions for credit, interest rate, liquidity and other risks into account, are used. Income multiples can also be used in modeling techniques for equity securities.

Trade receivables and other receivables as well as trade payables and other payables are not shown in the following table as their carrying amounts represent reasonable approximations of fair value.

Industry standard modeling techniques	Input factors Level 2	Input factors Level 3
DCF models	estimated future cash flows	estimated future cash flows
CRR model (binomial model)	discount factors, market interest rates implied volatilities currency rates share prices forward electricity prices (future price of electricity)	historical volatilities beta factors spread premiums to reflect subordination, sector risks, country risks, electricity and country risks

The fair values of structured financial liabilities are calculated by discounting the contractual cash flows using the relevant credit risk-adjusted yield curve. The derivative components or derivatives associated with the host contract are measured using recognized DCF methods and option pricing models.

Northern Data discounts fixed-rate and variable-rate receivables with a remaining term of more than twelve months using an interest rate appropriate to the term, taking specific country risks, the individual creditworthiness of the customers and the risk structure of the financed project into account. Considering these aspects, Northern Data also determines the allowance for doubtful accounts on these receivables. The determination of the fair value of financial assets and liabilities is based as far as possible on prices as of the balance sheet date provided by stock exchanges.

Northern Data determines the fair value of liabilities to banks and other financial liabilities as well as other non-current financial liabilities by discounting the expected future cash flows at the interest rates currently applicable for financial liabilities with comparable terms and remaining maturities (Level 2). Loans that are structured products or have embedded derivatives are assigned to the Level 3 measurement hierarchy if the measurement uses inputs that are not observable in the market.

1.8.3.3 Impairment

For **financial assets** measured **at amortized cost** (other receivables, cash and cash equivalents, contract assets and trade receivables), the expected credit loss (ECL) model is used to determine impairment losses in accordance with IFRS 9.

The determination of risk provisions and impairment losses is subject to discretionary decisions and estimation uncertainties. Estimation uncertainties arise in connection with the recognition of provisions for risks when expected direct and indirect effects, such as a disruption to supply chains and the corona pandemic, are taken into account. Climate and environmental risks can have an impact on the individual risk types, in particular credit risk and risk provisioning (please refer to the Management Report for further information on environmental, social and governance (ESG) risks).

Expected credit loss is equal to the gross carrying amount, net of collateral, multiplied by the probability of default and a factor reflecting the loss given default. Expected credit losses are the probability-weighted estimates of credit losses. The determination of the allowance for loan losses represents a forward-looking assessment of future credit losses, which involves a significant degree of estimation. Credit losses are measured as the present value of defaults. The expected credit loss is to be discounted using the effective interest rate of the financial asset.

In accordance with IFRS 9, the need for risk provisioning is determined in three different stages, which differ with regard to the period under review, risk provisioning and interest recognition. As a rule, financial instruments are classified in the first level, unless they are already impaired at the time of acquisition.

Level 1: For financial assets for which there has been no significant increase in the risk of default at the reporting date since initial recognition, impairment losses are recognized in profit or loss using the expected 12-month credit loss.

Level 2: If a significant increase in the default risk is identified at the measurement date, the allowance for losses on loans and advances must be recognized for the remaining term of the receivable (lifetime expected credit loss). The expected loss is a probability-weighted estimate of credit losses. Interest income is recognized on the basis of the gross carrying amount.

Level 3: If there are objective indications of impairment, financial assets are assigned to Level 3. The allowance for losses is also calculated on the basis of the lifetime expected credit loss. Interest income is recognized on the basis of the gross carrying amount less the allowance for losses.

In particular, contractual and statutory termination rights are also taken into account when forecasting the exposure history over the entire term of the financial asset. The determination of whether the default risk of a financial asset has increased significantly since initial recognition is based on both quantitative and qualitative information and analyses, which are based on Northern Data's past experience and sound judgement, including forward-looking information. Significant weight is given to the past due status of a receivable. A significant increase in default risk is assumed if the internally determined probability of default based on company-specific ratings has deteriorated by at least one rating category since initial recognition (further disclosures on the allowance for credit losses on trade receivables are provided in Note 5.3.3 "Country risk and default risk"). There have been no significant changes in counterparty risk in the reporting period or since the initial recognition of the financial assets concerned. If there is objective evidence of an actual default, the transfer is made to Level 3. If external rating information is available, the expected credit loss is determined on the basis of this data. Otherwise, Northern Data determines the default rates on the basis of historical default rates, taking forward-looking information on economic developments into account.

Cash and cash equivalents are receivables due on demand or in the short term from banks domiciled in Germany, the USA and Canada. The Group generally selects banks with an investment grade rating (rating: A+, AA, A-). Due to the short-term nature of the receivables from banks with high credit ratings, Northern Data makes use of the low credit risk exception. Assets with an investment grade rating are always assigned to level 1.

Non-current assets and receivables relate in particular to security deposits paid for electricity supply contracts. Further information on impairment losses is provided in the next paragraph.

The expected credit losses for **trade receivables, receivables from finance leases and for contract balances** are determined using a simplified method, a risk matrix. The expected credit losses mainly result from the monitoring results of receivables management. This mainly involves determining the payment targets and overdue items. The expected credit losses from trade receivables and for other contract assets are determined on a collective basis, with the respective portfolio corresponding to a Group company. The standard provides for expected losses over the entire remaining term to be taken into account from the time the receivables are recognized. Expected credit losses over the term are expected credit losses resulting from all possible default events during the expected life of the financial instrument. This requires significant judgment regarding the extent to which expected credit losses are affected by changes in economic factors. This assessment is determined on the basis of weighted probabilities. Assumptions about future developments and in particular macroeconomic aspects are taken into account in the assessment.

Northern Data classifies a financial asset as "in default" when it is considered unlikely that the debtor will settle his obligation in full and Northern Data will have to resort to measures such as liquidation of collateral (if any).

Further supplementary disclosures relating to the allowance for losses on loans and counterparty risk are presented in the Notes to the Consolidated Financial Statements under Note 5.3.3 "Country risk and default risk."

Depreciation

The gross carrying amount of a financial asset is written down if Northern Data does not have a reasonable expectation that all or part of the financial asset will be recoverable. Northern Data writes down the gross carrying amount if the financial asset is past due, based on past experience in realizing such assets. Northern Data makes an individual assessment of the timing and amount of the write-down based on whether there is a reasonable expectation of recovery. Northern Data does not expect significant recovery of the amount written off.

1.8.3.4 Classification and evaluation

Financial assets

The classification and measurement of financial assets and liabilities is based on Northern Data's business model and the nature of the cash flows:

Financial assets measured at amortized cost

- › Financial assets at fair value through profit or loss (debt instruments)
- › Financial assets measured at fair value through other comprehensive income (equity instruments) and
- › Financial assets at fair value through profit or loss

Financial assets measured at amortized cost include:

- › Trade receivables and payables
- › Receivables from affiliated companies
- › Other receivables and assets
- › Cash and cash equivalents

Financial assets are classified at amortized cost if the purpose or business model of the asset is to be held, the contractual terms of which give rise to cash flows on specified dates that are solely repayments of principal and interest on principal outstanding and the contractual cash flows of which are to be collected.

Northern Data assesses the objectives of the business model in which the financial asset is held at an overall business level, as this best reflects the way in which the business is managed and information is provided to management. The information to be considered includes:

- › Management's stated strategy to realize the contractual cash flows
- › How the results are evaluated at the overall business level and reported to Group management
- › The risks that affect the results of the business model (and the financial assets held under that business model) and how those risks are managed

For purposes of determining whether the **contractual cash flows** represent **solely principal and interest payments**, Northern Data refers to the fact that:

- › The "principal amount" as the fair value of the financial asset at initial recognition and
- › The "interest" is defined as a charge for the time value of money and for the default risk associated with the principal outstanding over a period of time, as well as for other basic credit risks, liquidity risk, costs (administrative costs, for example), and a profit margin.

In assessing whether the contractual cash flows are solely payments of interest and principal on the principal amount, Northern Data considers the contractual terms of the financial asset. This includes an assessment of whether the financial asset contains a contractual arrangement that could change the timing or amount of the contractual cash flows so that they no longer meet those terms. In making the assessment, Northern Data considers, in particular, certain events that would change the amount or timing of the cash flows, terms that would adjust the interest rate, including variable interest rates, prepayment and extension options, and conditions that restrict Northern Data's right to receive cash flows from a specific asset (no recourse, for example).

An early redemption option is consistent with the interest-only and principal-only criterion if the amount of the early redemption includes, in substance, unpaid interest and principal on the principal outstanding, and may include an appropriate consideration for the early termination of the contract. In addition, a condition on a financial asset acquired at a premium or discount to the contractual principal amount that permits or requires it to be redeemed early for an amount that is substantially the contractual principal amount plus accrued (but unpaid) interest on the contract (which may include an appropriate consideration for early termination) is treated as complying with the criterion if the fair value of the early redemption option at inception is not significant.

All **financial assets not classified at amortized cost or at fair value through other comprehensive income** (FVOCI) or financial assets at fair value through profit or loss are subsequently measured at fair value. Net gains and losses, including any interest or dividend income, are recognized in profit or loss in the financial result.

Financial assets are not reclassified after initial recognition unless Northern Data changes its business model for managing financial assets. In this case, all financial assets affected by the change are reclassified on the first day of the reporting period. When financial assets are reclassified, a prospective adjustment is made from the date of reclassification. Previously recognized gains, losses (including impairment losses or income) or interest, are not adjusted.

Upon initial recognition, Northern Data may irrevocably elect to designate **financial assets** that otherwise qualify for measurement at amortized cost or at **fair value through** other comprehensive income as at fair value through profit or loss if doing so results in the elimination or significant reduction of accounting mismatches that would otherwise occur.

Financial assets classified as at amortized cost are measured at amortized cost using the effective interest method (see Note 1.8.3.2 "Fair value"; 3.6 "Financial result"; 5.2 "Disclosures on financial instruments"). Additions are measured at fair value (see Note 1.8.3.2 "Fair value"; 3.6 "Financial result"; 5.2 "Disclosures on financial instruments"). Amortized cost is reduced by impairment losses and repayments. Interest income, foreign exchange gains and losses, and impairment losses are recognized in profit or loss. A gain or loss on derecognition is recognized in profit or loss.

Financial assets classified at fair value through other comprehensive income (with recycling) are measured at fair value, with foreign exchange gains and losses and impairment losses recognized in profit or loss and other net gains or losses recognized in other comprehensive income. Upon derecognition, accumulated other comprehensive income is reclassified to profit or loss. Interest income is calculated using the effective interest method and is also recognized in the income statement.

Equity investments classified as at fair value through other comprehensive income (excluding recycling) are subsequently measured at fair value. Dividends are recognized as income in the income statement unless the dividend clearly represents coverage of part of the costs of the investment. Other net gains or losses are recognized in other comprehensive income, with no reclassification to the income statement.

Financial liabilities

Northern Data classifies financial liabilities according to:

- › Financial liabilities measured at fair value through profit or loss, and
- › Financial liabilities measured at amortized cost

Financial liabilities measured at amortized cost include:

- › Trade accounts payable
- › Liabilities to affiliated companies
- › Other liabilities
- › Financial liabilities

Some **structured financial liabilities (liabilities with embedded derivatives)** consist of both a derivative and a non-derivative component. The derivative component or the embedded derivatives are inseparably linked to the non-derivative component of the financial liability, the host contract. If the economic characteristics and risks of the embedded derivative are not closely related to those of the host contract and the structured financial liability concerned is not recognized at fair value, the embedded derivative is separated from the host contract and recognized at fair value, with changes in value recognized in profit or loss. The host contract of the financial liability is measured in accordance with the relevant accounting standard. The financial derivative is measured at fair value through profit or loss in accordance with the provisions of IFRS 9. If the conditions for using the fair value option are met for structured financial liabilities that must be accounted for separately (see Note 5.2 “Disclosures on financial instruments”), these structured financial liabilities are measured as a single liability at fair value through profit or loss.

Northern Data measures **financial liabilities** – with the exception of liabilities for which the **fair value option has been exercised – at amortized cost** using the effective interest method (Note 3.6 “Financial result” and 5.2 “Disclosures on financial instruments”). Interest expense and foreign currency translation differences are recognized in the income statement. Gains or losses on derecognition are also recognized in the income statement. **Financial liabilities** designated at fair value **through profit or loss upon exercise of the fair value option** are measured at fair value and net gains or losses, including interest expense, are recognized in the income statement. Changes in the fair value of financial liabilities classified at fair value resulting from the Group’s own credit risk are recognized directly in other comprehensive income (excluding recycling).

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Financial liabilities that consist of a spot instrument and several financial derivatives, which would have to be accounted for separately from the spot instrument under IFRS 9, are measured in their entirety as a **financial liability at fair value through profit or loss**. Northern Data uses the fair value option to reduce the complexity arising from the recognition of structured liabilities and to increase the reliability of the measurement in the item to be recognized in the Consolidated Statement of Financial Position. Northern Data allows classification as measured at fair value only for those financial liabilities for which the fair value can be reliably measured. Financial liabilities that are designated as at fair value through profit or loss due to multiple embedded derivatives in exercise of the fair value option (Note 4.8 "Financial liabilities") are measured as a single financial liability at fair value through profit or loss and are disclosed in 5.2 "Disclosures on financial instruments."

The following table provides an overview of the basic evaluation categories and their abbreviations.

IFRS 9 Measurement Category	Abbreviation
Financial Assets Measured at Amortized Cost	FAAC
Financial Liabilities Measured at Amortized Cost	FLAC
Financial Assets Measured at Fair Value Through Profit or Loss	FVTPL
Financial Liabilities Measured at Fair Value Through Profit or Loss	FVTPL
Financial Assets measured at Fair Value through OCI	FVOCI

1.8.3.5 Recognition and derecognition

A typical market purchase or sale of financial assets is to be recognized or derecognized either at the trade date or the settlement date. The method chosen must be applied consistently to all purchases and sales of financial assets classified in the same way under IFRS 9. Northern Data applies the trade date accounting method.

Northern Data derecognizes a **financial asset** when its contractual rights to receive cash flows from the financial asset expire or it transfers its rights to receive contractual cash flows in a transaction in which either substantially all the risks and rewards of ownership of the financial asset are transferred or Northern Data neither transfers nor retains substantially all the risks and rewards of ownership and does not retain control of the transferred asset. In these cases, the transferred assets are not derecognized. If the financial asset is transferred to a third party, derecognition also takes place only if the right to related cash flows is also transferred to the third party. Financial assets are derecognized when the contractual rights to the cash flows from the financial asset expire or the financial asset is transferred to a third party. Receivables, including the related impairment losses, are derecognized when they are classified as uncollectible.

Northern Data derecognizes a **financial liability** when the contractual obligations are discharged, cancelled or expire. Furthermore, Northern Data derecognizes a financial liability when its contractual terms are modified and the cash flows of the modified liability are significantly different. In this case, a new financial liability is recognized based on the adjusted terms at fair value. When a financial liability is derecognized, the difference between the carrying amount of the liability extinguished and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

1.8.3.6 Modifications of financial assets

If the contractual terms of **financial assets** are renegotiated or modified, but the modification does not result in derecognition, a gain or loss is recognized in profit or loss for the difference between the original contractual cash flows and the modified cash flows discounted at the original effective interest rate. Significant modifications or renegotiations result in derecognition of the recognized original agreement and recognition of a new financial asset in accordance with the renegotiated contractual terms. For credit risk-determined modifications, Northern Data assesses whether the modified contractual terms result in a significantly modified financial asset and therefore should be derecognized. This assessment includes a quantitative evaluation of the impact of the cash flow changes due to the modified contractual terms, taking into account qualitative aspects of the impact of modified contractual terms, if applicable. If there are modifications that result in the derecognition of the original financial asset and evidence of impairment of the new financial asset at initial recognition, the new financial asset is to be classified as a financial asset at risk of default in Level 3.

A substantial change in the contractual terms of a **financial liability** can also lead to derecognition of the original financial liability. A quantitative criterion that leads to a substantial change in the contractual terms exists if the discounted present value of the cash flows under the new contractual terms differs by at least 10 percent from the discounted present value of the remaining cash flows of the original debt instrument.

1.8.3.7 Offsetting

Financial assets and **liabilities** are offset and their net amount recognized in the balance sheet only when there is a legal right to do so and it is intended to settle on a net basis, or to realize the asset and settle the liability simultaneously.

1.8.3.8 Electricity supply contract to be classified as a financial instrument

Contracts that serve to procure and sell electricity or that are entered into and held for the purpose of receiving or delivering non-financial items in accordance with Northern Data's expected purchase, sale or usage requirements are classified as own-use contracts. They are not reflected as pending transactions in the financial statements in accordance with the regulations of IAS 37.

Contracts that provide for net settlement, as well as resales of quantities to be delivered in the future, are to be classified as financial instruments and thus measured at fair value through profit or loss in accordance with IFRS 9.

1.8.4 Intangible assets (excluding goodwill)

Intangible assets (excluding goodwill) are generally carried at amortized cost less straight-line amortization (except for assets with indefinite useful lives) and impairment losses.

Cryptocurrencies held long-term by the Northern Data Group are accounted for using the revaluation method. Initial measurement is at acquisition or production cost. These are recognized at the time of acquisition, i.e., trading on the respective trading platform. The average of the closing prices of Coinmarketcap, Coinbase and Binance on the date of addition is applied. After initial recognition, cryptocurrencies held on a long-term basis are carried forward at the revaluation amount. Valuation in subsequent periods is performed using the first-in, first-out method. If a revaluation results in an increase in the carrying amount, the increase in value is recognized in the revaluation reserve in equity. If a revaluation leads to a decrease in the carrying amount, the impairment loss is recognized in other expenses. A decrease is recognized directly in other comprehensive income to the extent that it does not exceed the credit balance in the revaluation reserve. Cryptocurrencies are subject to an indefinite useful life.

Internally generated intangible assets are capitalized if the criteria (technical feasibility, intention to complete, ability to use and sell, etc.) set out in IAS 38.57 are cumulatively met. If the criteria are not met, they are recognized as an expense.

The economic useful lives, residual carrying amounts and amortization methods of intangible assets are reviewed at least at each balance sheet date. The expected useful lives are as follows:

Asset	Useful life
Customer relationships	7–15 years
Other concessions, rights and licenses	3–10 years

If expectations differ from previous estimates, the corresponding changes are recognized as changes in accounting estimates in accordance with IAS 8.

Gains or losses on the disposal of intangible assets are determined as the difference between the proceeds on disposal and the carrying amount of the intangible assets and are recognized in the income statement under "Other income" in the case of a gain or under "Other expenses" in the case of a loss.

Cryptocurrencies held for the short term are reported under other assets and are measured using the cost model. Initial and subsequent measurement is based on the average of the closing prices of established crypto trading platforms. The valuation is performed using the first-in-first-out method.

1.8.5 Goodwill

Goodwill is tested for impairment annually or whenever events or changes in circumstances indicate that it may be impaired by comparing the carrying amount of the cash-generating unit or units with their recoverable amount. The recoverable amount is the higher of an asset's fair value less cost to sell and its value in use. The Group generally determines the fair value less cost to sell for this purpose.

If the carrying amount exceeds the recoverable amount, the asset is impaired and must be written down to the recoverable amount. If the fair value less costs to sell is higher than the carrying amount, it is not necessary to calculate the value in use; the asset is then not impaired. An appropriate valuation method is used to determine the fair value less costs to sell. This is based on discounted cash flow valuation models or the market data available (input factors) for the fair value. A subsequent reversal of an impairment loss recognized for goodwill due to the discontinuation of the reasons for the impairment loss is not permitted. Goodwill is recognized in the functional currency and translated at the closing rate.

1.8.6 Property, plant and equipment

Property, plant, and equipment are measured at amortized cost less straight-line depreciation and impairment losses, if any. Cost includes costs directly attributable to the acquisition as well as borrowing costs if the recognition criteria are met. Subsequent costs are recognized in the carrying amount of the item of property, plant and equipment when the costs are incurred if it is probable that future economic benefits associated with the item will flow to the entity and the cost of the item can be measured reliably.

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Repair and maintenance expenses are expensed as incurred. Plots of land and buildings are recognized separately. Land has an indefinite useful life and is not depreciated.

Asset	Useful life
Building	7–40 years
Server and other hardware	3–5 years

The depreciable amount of property, plant and equipment is determined after deducting the estimated residual value. The estimated residual values and useful lives are reviewed at each balance sheet date and adjusted if necessary. Property, plant and equipment are reviewed for impairment whenever events or changes in circumstances indicate that the asset may be impaired. An impairment loss is recognized in the amount by which the estimated residual value exceeds the recoverable amount. If necessary, the remaining useful life is adjusted accordingly.

If the reasons for a previously recognized impairment loss no longer apply, the impairment loss is reversed through profit or loss, with the reversal not exceeding the carrying amount that would have been determined had no impairment loss been recognized in prior periods.

Gains or losses on the disposal of property, plant and equipment are determined as the difference between the proceeds on disposal and the carrying amount of the item and are recognized in the income statement under “Other income” in the case of a gain or under “Other expenses” in the case of a loss.

1.8.7 Cash and cash equivalents

Cash equivalents comprise all near-cash assets with a remaining term of less than three months at the time of acquisition.

Cash and cash equivalents are measured at amortized cost, which due to their short-term maturity corresponds to their fair values as well as their nominal amounts.

1.8.8 Inventories

Inventories are measured at the lower of cost and net realizable value. The cost of inventories (with the exception of advance payments received) is generally based on the first-in-first-out method. Net realizable value is determined as the estimated selling price of inventories less estimated costs to sell.

1.8.9 Provisions

Provisions are recognized when the Group has a present obligation as a result of a past event and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. The amount of the provision is the best estimate of the settlement amount of the present obligation at the balance sheet date. Expected reimbursements from third parties are not netted but recognized as a separate asset if realization is virtually certain. If the effect of the time value of money is material, the provision is discounted at the pre-tax market rate of interest with matching maturities. Subsequent interest accretion is recognized as a financing expense.

Provisions for asset retirement obligations are recognized on the basis of contractual obligations which provide for the retirement of the respective assets and which Northern Data cannot avoid. The amount of the provision is the Group's best estimate of the settlement amount at the balance sheet date. Discounting is applied due to the material interest effect.

1.8.10 Contingent liabilities and unrecognized contractual obligations

Contingent liabilities and unrecognized contractual obligations based on present obligations are not recognized as liabilities in the Consolidated Financial Statements until utilization is probable.

However, in the context of a business combination, contingent liabilities are recognized in accordance with IFRS 3 if their fair value can be reliably measured.

1.8.11 Equity

Transaction costs relating to the issue of equity instruments are treated as a deduction from equity, taking the tax effects into account. The inflows received after deduction of directly attributable transaction costs are added to the share capital (nominal value) and the capital reserve.

1.8.12 Income taxes

Tax expense comprises current and deferred taxes. Current and deferred taxes are recognized in profit or loss, except to the extent that they relate to a business combination or to an item recognized directly in equity or in other comprehensive income.

The Group has determined that interest and penalties on income taxes, including uncertain tax items, do not meet the definition of income taxes and are therefore accounted for in accordance with IAS 37.

1.8.12.1 Actual taxes

Actual taxes are the expected tax payable or receivable on the taxable income or tax loss for the fiscal year, based on tax rates enacted or substantively enacted at the balance sheet date, and any adjustment to tax payable in respect of previous years. The amount of the expected tax liability or tax receivable reflects the best estimate, taking tax uncertainties, if there are any, into account. Current tax liabilities also include any tax liabilities arising as a result of the determination of dividends.

Current tax assets and liabilities are offset only under certain conditions.

1.8.12.2 Deferred taxes

Deferred taxes are recognized in respect of temporary differences between the carrying amounts of assets and liabilities for Group accounting purposes and the amounts used for tax purposes. Deferred taxes are not recognized for:

- › Temporary differences arising on initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting profit nor taxable profit.
- › Temporary differences associated with investments in subsidiaries, associates and jointly controlled entities, provided that the Group is able to control the timing of the reversal of the temporary differences and it is probable that they will not reverse in the foreseeable future.
- › Taxable temporary differences on initial recognition of goodwill.

A deferred tax asset is recognized for unused tax losses, unused tax credits and deductible temporary differences to the extent that it is probable that future taxable profit will be available against which they can be utilized. Future taxable profits are determined based on the reversal of taxable temporary differences. If the amount is not sufficient to fully capitalize deferred tax assets, future taxable profits – taking the reversal of temporary differences into account – are determined on the basis of the subsidiaries' individual business plans. Deferred tax assets are reviewed at each reporting date and reduced to the extent that it is no longer probable that the related tax benefit will be realized; reversals are made when the probability of future taxable profits improves.

Unrecognized deferred tax assets are reassessed at each reporting date and are recognized to the extent that it is probable that future taxable profit will allow them to be recovered. Deferred tax is measured at the tax rates that are expected to apply to temporary differences when they reverse, using tax rates enacted or substantively enacted at the balance sheet date. Deferred taxes reflect any uncertainty in income taxes. The measurement of deferred taxes reflects the tax consequences that would follow from the manner in which the Group expects to recover the carrying amounts of its assets or settle its liabilities at the reporting date. Deferred tax assets and deferred tax liabilities are offset if certain conditions are met.

1.8.13 Leasing

Northern Data assesses at contract inception whether the contract is, or contains, a lease in accordance with IFRS 16. IFRS 16 defines a lease as a contract that gives the right to control the use of an identified asset for a specified period of time in exchange for payment of a consideration. A lease conveys the right to control the use of an identified asset provided that the lessee has the right to obtain substantially all of the economic benefits from use of the identified asset throughout the period of use (for example, by having the exclusive right to use the asset during that period) and to direct the use of the identified asset during the period of use.

As a lessee, the rights and obligations arising from all leases must be recognized in the balance sheet as rights of use and lease liabilities. The lease liability is measured at the present value of the future lease payments at the time the lease is granted. These include fixed payments less any lease incentives to be received, variable lease payments linked to an index or (interest) rate, amounts expected to be paid by Northern Data under residual value guarantees, the exercise price of a purchase option if Northern Data is reasonably certain to exercise that option, and lease termination penalties if the lease term indicates that the lessee will exercise the termination option. The lease payments are discounted at the respective interest rate underlying the lease agreement. If this interest rate cannot be readily determined, Northern Data uses the incremental borrowing rate. Generally, Northern Data applies a marginal borrowing rate for discounting purposes, adjusted for country-specific risk, contract currency risk and the contract term. The right-of-use asset is measured at cost. The cost of the right-of-use asset comprises the amount of the initial measurement of the lease liability plus lease payments made at or before the date of origination plus initial direct costs and any asset retirement obligations, and less lease incentives received.

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The Group exercises the option not to apply the recognition and measurement requirements of IFRS 16 for leases where the underlying asset is of low value (up to EUR 5,000). Furthermore, use is made of the relief to classify leases with a term of less than 12 months as short-term leases. Both lease payments for assets of low value and short-term leases are recognized as expenses. The company does not make use of the option under IFRS 16.15 to account for lease and non-lease components uniformly in accordance with IFRS 16.

After the provision date, the lease payments are divided into principal and interest payments. The lease liability is subsequently measured by increasing the carrying amount by the interest cost of the lease liability using the effective interest rate and reducing the carrying amount by the lease payments made. The carrying amount of the lease liability is remeasured if there is a reassessment or modification of the lease (including a change in the assessment of whether it is probable that an option to renew or terminate the lease will be exercised). Subsequently, the right-of-use asset is measured at cost less accumulated depreciation and impairment losses and adjusted for certain revaluations of the lease liability. Generally, the right-of-use asset is amortized on a straight-line basis over the shorter of the lease term or the useful life of the leased asset.

Asset	Useful life
Rights of use for containers in the USA	1–10 years
Data center	10 years
Office space	0–7 years
Living space	Less than 1 year

Lease expenses represent depreciation expense on right-of-use assets and interest expense on lease liabilities.

As the lessor, leased products (operating leases) are measured at cost. Initial direct costs incurred in negotiating and concluding an operating lease, if applicable, are added to the carrying amount of the leased asset and depreciated together with it to its residual value over the term of the lease. In determining the term of a lease, extension periods are taken into account in addition to the non-cancelable basic term, provided that the exercise of the underlying extension options is deemed to be sufficiently certain.

1.8.14 Principles of revenue recognition

The following table provides information on the nature and timing of performance obligations under contracts with customers, including significant payment terms, and the related revenue recognition policies.

Sales class	Type and time of fulfillment of the performance obligation, including the main payment terms	Revenue recognition method
Provision of computing power for mining cryptocurrencies	The customer obtains control over the computing power at the exact moment he calls it up at. Invoices are issued at monthly intervals and must be paid within 10–20 days.	Revenue is recognized over a certain period of time. This depends on the respective contract structure. In the case of contracts under which the customer is guaranteed continuous provision of computing services and, in addition, remuneration can be derived from the kilowatt hours provided, among other things, the company makes use of the simplification rule and recognizes revenue upon invoicing. For all other contracts that do not result in a "stand ready obligation," revenue is recognized at a certain point in time, namely when the cryptocurrency is credited to the wallet, as all performance obligations have thus been fulfilled.
Hosting	The customer acquires the power of disposal continuously. Invoices are issued at monthly intervals and must be paid within 10–20 days.	Revenue is recognized over a certain period of time. Remuneration is based on hourly rates and the company therefore makes use of the simplification rule and recognizes revenue upon invoicing.
Hardware sales	Customers obtain control over hardware products when the goods are shipped from the Group's warehouse. At this point, invoices are issued and sales are recognized. Invoices are generally payable within 10–30 days.	Revenue for hardware products is recognized when the goods are shipped from the Group's warehouse or the manufacturer's warehouse.
Engineering	Invoices for consulting and construction are issued on a monthly basis and are generally payable within 60 days.	Revenue is recognized over a period of time. The stage of completion, according to which revenue is recognized, is determined on the basis of an appraisal of the work performed. Remuneration is based on hourly rates and the company therefore makes use of the simplification rule and recognizes revenue with invoicing.

A contract liability is recognized when the customer makes payment or payment becomes due before Northern Data transfers the respective goods or services to the customer and Northern Data has an unconditional right to receive specified consideration before transferring the goods or service to the customer. Contract liabilities are recognized as revenue when Northern Data satisfies its obligations under the contract or when control of the related goods or services is transferred to the customer.

A contract asset is recognized when Northern Data has recognized revenue for the performance of a contractual obligation before the customer has made a payment or, regardless of when due, before the conditions for an invoice to be issued and a receivable to be recognized have been met.

Supplementary explanations can be found in Note 3.1 "Sales revenues."

1.8.15 Financial income and financial expenses

The company's financial income and financial expenses comprise:

- › Net gains or losses on the disposal of investments in debt instruments measured at FVOCI.
- › Impairment losses (and reversals) on investments in debt instruments measured at amortized cost.
- › Impairment losses on financial assets and liabilities are recognized in net financial income/expense.

1.8.16 Earnings per share

Earnings per share are calculated as the Group's profit after tax attributable to the equity holders of the parent divided by the weighted average number of ordinary shares outstanding during the reporting period.

Diluted earnings per share are based on the assumption of the exercise of other contracts for the issue of ordinary shares such as stock options and the servicing of the convertible bond in shares.

1.8.17 Share-based payments

Under equity-settled share-based payment transactions, the fair value on the date share-based payment arrangements are granted to employees is recognized as an expense with a corresponding increase in equity over the period in which the employees become unconditionally entitled to the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the relevant service conditions and non-market performance conditions are expected to be satisfied, so that the final amount recognized as an expense is based on the number of awards that satisfy the relevant service conditions and non-market performance conditions at the end of the vesting period. For share-based payment awards with non-vesting conditions, the fair value is determined at the grant date taking these conditions into account. No adjustment is to be made for differences between expected and actual outcomes.

Business combinations

2

Merger with Northern Data Services (UK) Ltd. (Hydro66 UK Ltd.)

Based on the agreement dated February 23, 2021, Northern Data AG acquired all shares in Hydro66 UK Ltd., London, United Kingdom, and thus gained control over the company and its subsidiaries. The acquisition took place effective March 9, 2021, through the issuance of 338,273 treasury shares and a cash payment of EUR 1,752 thousand, which corresponds to an equivalent value of EUR 34,317 thousand based on the share price on the acquisition date. As part of the acquisition of Hydro66 UK Ltd., Northern Data AG also obtained control over the direct subsidiaries of Hydro66 UK Ltd., Hydro66 Property Services AB, Hydro66 Svenska AB and Hydro66 Services AB (all based in Boden, Sweden). As a result of the shareholders' resolution of July 5, 2021, Hydro66 UK Ltd. was renamed Northern Data Services (UK) Ltd.

Hydro Group operates an HPC data center in Boden, Sweden. It installs and operates infrastructure for various HPC applications such as crypto mining, artificial intelligence, blockchain or big data analytics.

The strategic goal of Northern Data with the Hydro Group merger is to develop suitable locations in regions with favorable climatic conditions, as well as access to renewable energy sources.

The following overview shows the consideration transferred as part of the acquisition of Hydro Group and the values of the assets identified and liabilities assumed as of the acquisition date:

EUR thousand	
Consideration	
Shares issued	32,565
Cash component	1,752
Total consideration	34,317
Fair value of the identified assets acquired and liabilities assumed on the acquisition date	
Trademark	849
Other intangible assets	101
Property, plant and equipment	10,456
Rights of use from leases	1,350
Other non-current assets	1,526
Cash and cash equivalents	370
Other current assets	942
Provisions	-1,996
Trade payables	-367
Contractual liabilities, deferred income	-1,309
Financial liabilities	-2,071
Other liabilities	-42
Deferred taxes from PPA	-263
Total identified net assets	9,546
Goodwill	24,771
Total	34,317

The acquired trade receivables comprise gross amounts of contractual receivables of EUR 84 thousand. On the acquisition date, none of these receivables were assessed as probably uncollectible.

The goodwill is attributable in particular to the location advantages, skills and know-how of the employees and the synergies expected from the integration of the acquired companies into the business of the Northern Data Group as a result of the acquisition.

Between the acquisition date and December 31, 2021, the acquired company and its subsidiaries contributed consolidated revenues totaling EUR 3,244 thousand and consolidated earnings of EUR -12,651 thousand to the Group's results. If the acquisition had already taken place on January 1, 2021, consolidated revenues of EUR 4,316 thousand and consolidated earnings before taxes of EUR -12,224 thousand would have been recognized in the Group's income statement.

The Group incurred costs of EUR 623 thousand for legal advice and due diligence in connection with the business combination. These costs are included in other expenses.

Disposal of Whinstone US, Inc.

Under the agreement dated April 8, 2021, Northern Data sold its U.S. subsidiary Whinstone US, Inc., Rockdale, Texas which operates the high-performance data center at the Rockdale/Texas site, to the U.S.-based company Riot Blockchain Inc., Castle Rock, Colorado effective May 26, 2021. The sale price consists of a cash payment in the amount of EUR 43,271 thousand and an additional 11.8 million common shares of Riot Blockchain Inc., Castle Rock, Colorado. Based on the share price of Riot Blockchain Inc. of USD 27.64, the total value of the shares on the transaction date corresponded to EUR 266,486 thousand. The total value of the consideration received, including future reimbursement by the electricity supplier, amounts to EUR 358,681 thousand. This results in a deconsolidation gain of EUR 159,451 thousand for the Group, which is reported under other income.

Merger with North Georgia Data LLC

Northern Data US Holdings, Inc. a subsidiary of Northern Data AG, acquired 100 percent of the shares in North Georgia Data LLC, Maysville, USA, on July 30, 2021, and thus gained control over the company.

North Georgia Data LLC owns and operates a high-performance data center on its own property in Maysville, Georgia, USA. The company uses the internally generated computing power for mining cryptocurrency. In addition, the company installs, operates and maintains the internal miners. At the time of the transaction, the data center of North Georgia Data LLC had a capacity of 7.5 MW.

The merger with North Georgia Data LLC took place as part of Northern Data AG's expansion course in the North American region. The strategic objective of the merger was the possibility of expanding capacity with the company's own mobile data centers at the Georgia location, as well as further potential capacity expansion through the acquisition of neighboring properties.

The merger with North Georgia Data LLC was effected by a cash payment of EUR 6,490 thousand.

The following overview summarizes the consideration transferred as part of the business combination and the values of the assets identified and liabilities assumed as of the acquisition date:

EUR thousand	
Consideration	
Cash payment	6,490
Total consideration	6,490
Fair value of the identified assets acquired and liabilities assumed on the acquisition date	
Property, plant and equipment	761
Other assets	18
Cash and cash equivalents	2
Other liabilities	-1
Deferred taxes from PPA	326
Total identified net assets	1,106
Goodwill	5,384
Total	6,490

No portion of the goodwill recognized is expected to be deductible for tax purposes. See Note 4.1 "Goodwill and other intangible assets" for changes in goodwill resulting from the acquisition of the company.

The acquired trade receivables comprise gross amounts of contractual receivables of EUR 16 thousand, none of which were assessed as probably uncollectible as of the acquisition date.

Goodwill is attributable to the advantages of North Georgia Data LLC in terms of the availability of data center capacity, which can be used to meet its own demand for capacity, the possibility of expanding this capacity and the reliable energy supply at the site.

Between the acquisition date and December 31, 2021, the acquired company contributed consolidated revenues of EUR 314 thousand and consolidated earnings of EUR -509 thousand to the Group's results. If the acquisition had already taken place on January 1, 2021, consolidated revenues of EUR 1,173 thousand and consolidated earnings before taxes of EUR -640 thousand would have been recognized in the Group's income statement.

Merger with Decentric Europe B.V.

Based on the agreement dated August 12, 2021, Northern Data AG acquired all shares in Decentric Europe B.V., Amsterdam, Netherlands, ("Decentric") and thus gained control over the company. The transaction includes a cash component, which was offset against previously existing liabilities of Northern Data and then deferred by Block.one as a related party in the form of a loan in the total amount of EUR 191,076 thousand. The loan is repayable within 12 months after closing. Furthermore, 2,306,294 shares in Northern Data AG were issued by way of a capital increase through contributions in kind with the exclusion of shareholders' subscription rights. At a market value of EUR 74 per share, this corresponded to an amount of EUR 170,668 thousand at the time the agreement was concluded. The capital increase was resolved on August 12, 2021.

Decentric specializes in the provision of computing power by means of GPU hardware, which had previously been supplied to Decentric by Northern Data in fiscal year 2020 as well as during fiscal year 2021 and was gradually put into operation. Decentric was already able to generate revenues from the provision of computing power for the mining of cryptocurrencies by the transaction date. A final contract for the operation of Decentric's hardware by Northern Data was not concluded, contrary to the original intention. In the third quarter of 2021, the company was finally acquired with the goal of entering the mining business and being able to participate in the overall profits from the provision of computing power. In particular, as part of the acquisition, Northern Data became the legal owner of more than 24,000 server systems previously supplied by Northern Data to Decentric, which serve to strategically build up the Northern Data Group's fixed assets in the area of high-performance servers. As a result of the Decentric acquisition, there was no revenue recognition on the part of Northern Data from the supply of mining hardware and the operation of the hardware in fiscal years 2020 and 2021. As the payments made by Decentric were not recognized under a contract within the meaning of IFRS 15, they were recognized as other liabilities until the transaction date.

Due to the aforementioned points, the acquisition of Decentric is not considered a business combination within the meaning of IFRS 3. Rather, it is an acquisition transaction with shareholders that includes, among other items, the issuance of treasury shares. As a result, after offsetting the payments previously made by Decentric and recognized as liabilities by the Group, in particular with the cash component of the transaction, the remaining difference is deducted from the equity of the Northern Data Group (EUR 165,718 thousand).

The Group incurred costs of EUR 1,292 thousand for legal advice and due diligence in connection with the business combination. These costs are included in other expenses.

Merger with Bitfield N.V.

With the signing of the contract on September 26, 2021, it was agreed that Northern Data AG would acquire 100 percent of the shares in Bitfield N.V., Amsterdam, Netherlands from Block.one as a related company. Already at the signing of the contract, 86.6 percent of the shareholders of Bitfield N.V. declared the acquisition of Northern Data shares in exchange for an exchange ratio and a fixed foreign currency rate determined at the signing of the contract. With the acquisition of the 88.6 percent of the shares in Bitfield N.V., Northern Data gained control effective October 20, 2021. Under the terms of the agreement dated September 26, 2021, the same exchange ratios and foreign currency exchange rate were determined for the remaining minority interest as for the shares in Bitfield already received. Northern Data had thus recognized the option to acquire the remaining minority interest as an equity instrument at the inception of the agreement. The remaining minority interests were converted on December 5, 2021, thus completing the 100 percent acquisition of Bitfield N.V. Thus, Northern Data has acquired the entirety of the shares by the end of 2021, increasing its equity interest to 100 percent. The transaction takes the form of a capital increase against contributions in kind in return for the issue of a total of 5,065,545 million shares in Northern Data AG, which corresponds to an equivalent value of EUR 302,742 thousand based on the share price specified in the share purchase and contribution agreement. Advance payments already made have been deducted. As part of the acquisition of Bitfield N.V., Northern Data AG also obtained control over the direct subsidiaries of Bitfield N.V.: 1277963 B.C. Ltd, Vancouver, Canada, and Minondo Ltd., Gibraltar, Gibraltar ("Bitfield" or "Bitfield Group").

Bitfield specializes in providing computing power by means of ASIC miners for the mining of Bitcoin, which had previously been delivered to Bitfield by Northern Data in fiscal year 2020 as well as in the course of fiscal year 2021 and successively put into operation. Bitfield was already able to generate revenues from the provision of computing power for the mining of Bitcoin by the transaction date. Bitfield Group was acquired in the third quarter of 2021 with the goal of entering the mining business and participating in the overall profits from the provision of computing power. In particular, as part of the acquisition, Northern Data became the legal owner of more than 6,600 server systems previously supplied by Northern Data to Bitfield, which serve to strategically build up the Northern Data Group's fixed assets in the area of high-performance servers. As a result of the acquisition of Bitfield, there was no recognition of revenue from the supply of mining hardware and the provision of other services, in particular the operation of the hardware, in fiscal years 2020 and 2021. As the payments made by Bitfield were not recognized under a contract as defined by IFRS 15, they were recognized as other liabilities until the transaction date.

Due to the aforementioned points, the acquisition of Bitfield is not considered a business combination within the meaning of IFRS 3. Rather, it is an acquisition transaction with shareholders that exclusively involves the issue of treasury shares. As a result, after offsetting the payments previously made by Bitfield and recognized as liabilities by the Group, the remaining difference is deducted from the equity of the Northern Data Group (EUR 253,869 thousand).

The Group incurred costs of EUR 1,323 thousand for legal advice and due diligence in connection with the business combination. These costs are included in other expenses.

Disclosures on the income statement

3

3.1 Sales revenues

The Group currently generates the majority of its sales revenue from the mining of crypto assets and plans to further expand its infrastructure in the future. In the fiscal year, the company was able to generate significant income and cash inflows from this.

The following section provides comprehensive and supplementary information on customer contracts. In particular, this includes explanations of how the Northern Data Group recognizes revenue and information on the allocation of revenue to trade receivables and, where applicable, customer-related obligations.

Sales revenues were generated from Europe and the U.S. mainly from the provision of computing power for mining cryptocurrencies, hardware sales, hosting and colocation services. In addition, revenues were generated from the consulting and engineering business in Canada.

Breakdown of sales revenue

The following table shows the breakdown of sales by main geographical markets.

EUR thousand	12/31/2021	12/31/2020
Germany	97,923	–
Europe	36,871	9
North America	55,066	16,368
Total	189,860	16,377

The following table shows the breakdown of sales by sales class. A reconciliation to the reportable segments is provided in Note 5.7 "Segment reporting."

EUR thousand	12/31/2021	12/31/2020
Provision of computing power for mining cryptocurrencies	110,657	–
Hardware sales	52,113	–
Hosting and colocation	12,512	11,339
Engineering	14,330	4,743
Other	248	295
Total	189,860	16,377

With the exception of "Provision of computing power for mining cryptocurrencies," the revenue classes are allocated exclusively to the "Hardware & Other" segment. The revenue classes presented show external revenues only. Supplementary disclosures can be found in Note 5.7 "Segment reporting."

3.1.1 Outstanding performance obligations

The portion of the transaction price of a customer contract that is allocated to performance obligations still outstanding represents the revenue from the contract that has not yet been recognized. Both the amounts recognized as contract liabilities and the amounts contractually agreed but not yet due are included here.

As permitted by IFRS 15, no information is provided on the remaining benefit obligations as of December 31, 2021, or December 31, 2020, that have an expected original maturity of one year or less.

3.1.2 Contract assets and contract liabilities

The following table provides information on receivables and contract liabilities arising from contracts with customers.

EUR thousand	12/31/2021	12/31/2020
Receivables included in trade receivables	5,254	2,293
Contract assets (current)	2,684	–
Contractual liabilities	21,063	4,004

Trade receivables exclusively comprise receivables from customers for services rendered up to the respective reporting date.

Contract liabilities relate to advance payments received from customers for future engineering services and hosting services that will be realized in the subsequent accounting period (the following month). The inventories of contract liabilities from the 2020 reporting period mainly originated from the US company that was sold. The revenue from the performance obligations recognized in the reporting period amounted to EUR 622 thousand.

The allowance for losses on financial assets is presented in detail in Note 5.3.1 "Credit risk" in the Notes to the Consolidated Financial Statements.

Agreements were concluded with Decentric Europe B.V., Amsterdam, Netherlands (hereinafter "Decentric") and Bitfield N.V., Amsterdam, Netherlands (formerly Bitfield AG, Hofheim am Taunus) (hereinafter "Bitfield"), as of the end of fiscal year 2020. In addition to hosting services, these also include agreements relating to the supply of hardware to be installed over the course of 2021. Northern Data acquired the aforementioned companies in fiscal year 2021. Since, in the company's assessment, the agreements did not meet the criteria for a contract within the meaning of IFRS 15.9 as of December 31, 2020, and there was no transfer of economic control, no revenue was recognized in respect of these companies in 2020 (see 2020 Annual Report). As a contract within the meaning of IFRS 15.9 did not come into existence as a result of the acquisitions of the companies in 2021 either, there will be no revenue recognition in respect of these companies in fiscal year 2021 either. As the payments received from these companies in fiscal year 2020 were made in the expectation that a contract within the meaning of IFRS 15.9 would ultimately be concluded, the payments received were reported in cash flow from operating activities in the cash flow statement for fiscal year 2020. As the payments were not received under a contract within the meaning of IFRS 15.9, they were recognized in the balance sheet as other liabilities (see Note 2 "Business combinations," 4.9 "Other liabilities," and the explanations on transactions with related parties under Note 5.4.1 "Related parties").

3.2 Other income

Other income breaks down as follows:

EUR thousand	2021	2020
Income from deconsolidation of subsidiaries	159,451	–
Income from refunds from electricity contracts	104,453	–
Income from currency translation	27,379	1,991
Income from exchange rate differences on cryptocurrencies	10,444	–
Government grants	145	327
Other	1,089	83
Total	302,961	2,401

Other income in the reporting period mainly includes the deconsolidation result of Whinstone US, Inc. (EUR 159,451 thousand) and refunds from electricity contracts of Whinstone US, Inc. (EUR 104,453 thousand) attributable to weather-related power outages in February 2021.

Government assistance has been granted to the Group. The government grants received in fiscal year 2021 arose as part of corona aid in Germany and Canada. They amounted to EUR 145 thousand and related to governmental wage and salary assistance. These grants were recognized in other income when the entitlement arose.

3.3 Cost of materials

Cost of materials in the amount of EUR 76,319 thousand (previous year: EUR 10,285 thousand) in fiscal year 2021 mainly resulted from the purchase of electricity for data centers, procurement of hardware and other expenses for mining and hashing. The increase in cost of materials compared to the previous year is mainly due to the change in the business model and additional business activities in Germany and abroad.

3.4 Personnel expenses and number of employees

Personnel expenses break down as follows:

EUR thousand	2021	2020
Wages and salaries	10,965	4,337
thereof pension plans	308	105
Social security contributions	1,713	506
thereof pension plans	290	71
Share-based payments	5,356	704
Other profit and profit sharing	55	–
Benefits on the occasion of termination of employment	975	–
Benefits after termination of employment	89	–
Other	16	–
Total	19,169	5,547

The average number of employees breaks down as follows:

Number of employees	2021	2020
Salaried	144	113
thereof senior executives	6	8

The average number of employees in the previous year and in the fiscal year was distributed among the regions as follows:

2021	Germany	Other countries in Europe	North America
as of March 31	45	12	121
as of June 30	54	21	26
as of September 30	64	29	42
as of December 31	72	32	58
Average number	59	23	62

2020	Germany	Other countries in Europe	North America
as of March 31	8	–	69
as of June 30	8	–	107
as of September 30	18	–	83
as of December 31	28	1	128
Average number	16	0	97

The total number of employees in the Group at the end of the fiscal year was 162, of which six are senior executives. Please refer to Note 5.5 "Share-based payments" for expenses and further information on share-based payments and to Note 5.6 "Employee benefits" for company pension plans.

3.5 Other expenses

Other expenses are composed as follows:

EUR thousand	2021	2020
Legal and consulting fees	26,244	5,647
Impairment of other receivables	21,840	–
Expenses from currency translation	8,354	5,068
Losses on receivables from the sale of cryptocurrencies	3,885	–
Reporting date valuation of cryptocurrencies (inventories)	1,282	–
Shipping costs and outgoing freight	2,269	111
Third-party work	1,372	165
Advertising costs	1,139	416
Travel and representation expenses	1,094	232
Incidental costs from rent and lease, other occupancy costs	932	1,539
Other	8,864	2,113
Total	77,275	15,291

Other expenses in the reporting period include in particular the addition to a provision for sales tax risks of a subsidiary (EUR 2,496 thousand). The impairment of other receivables relates to receivables from an electricity supply contract.

3.6 Financial result

EUR thousand	2021	2020
Financial income, net	89,765	16
of which interest and similar income	55	16
of which changes and disposals from financial liabilities measured at FVTPL – electricity supply contract classified as a derivative	28,109	–
of which gains on disposal of current financial assets	61,521	–
of which repayment of convertible bond	80	–
Financial expenses, net	–7,170	–53,252
of which interest and similar expenses	–4,884	–1,912
of which repayment of a financial liability classified as FVTPL	–2,075	–50,870
of which interest expense from leases	–181	–470
of which allowance for losses on financial assets	–30	–
Financial result	82,595	–53,236

Interest and similar expenses mainly result from two short-term shareholder loans and the interest repaid on these. One shareholder loan was repaid in fiscal year 2021 and thus completely redeemed.

The profit/loss from financial instruments in the FVTPL category only includes valuation gains/losses and gains/losses on disposal. Expenses and income are presented on a net basis. The FVTPL category includes the convertible bond (see Note 5.2 "Disclosures on financial instruments") for which the fair value option was exercised for its classification. The electricity supply contract, which is to be classified as a financial instrument, had to be categorized as FVTPL under IFRS. In this case, certain quantities of electricity were purchased under a forward contract. The electricity quantities not used were sold at the spot price. Expenses and income are presented as net amounts.

Financial risks and possible impairments resulting from the financial result are explained in the Notes to the Consolidated Financial Statements under 5.3 "Disclosures on financial risks and risk provisioning."

3.7 Income taxes

Income taxes include current taxes paid or owed by the consolidated companies as well as deferred taxes.

EUR thousand	2021	2020
Current tax expense on profits for the period	-41,933	-7,025
Current tax expense/income from previous years	-	-
Total current tax expense	-41,933	-7,025
Deferred tax expense/income due to temporary differences	-6,764	4,285
Deferred tax expense/income due to tax loss carryforwards	-865	2,193
Total deferred tax expense/income	-7,629	6,478
Total	-49,562	-547

Deferred tax expense due to temporary differences in fiscal year 2021 includes deferred tax liabilities mainly from income from the amortization of disclosed hidden reserves totaling EUR 1,410 thousand. The nominal tax rate applicable to Northern Data AG was 31.9 percent in the fiscal year (previous year: 27.4 percent). The change in the tax rate resulted from the relocation of Northern Data AG.

The following overview presents the reasons for the difference between the expected and the reported tax expense in the Group:

	2021	2020
Tax rate of the parent company in percent	31.9	27.4
In EUR thousand		
Consolidated profit before income taxes	336,721	-83,712
= Expected tax expense/income	129,978	-22,916
Deviating tax rates of the subsidiaries	-13,703	2,018
Tax-exempt income	-79,726	-44
Non-deductible expenses	712	9,799
Additions from trade tax	162	-14
Change in tax rates	3	-3,839
Permanent differences	1,710	175
Change in valuation of deferred tax assets	-	0
Effect from temporary differences and losses for which no deferred taxes were recognized	40,792	18,128
Effect of the change in temporary differences and losses and utilization of tax loss carryforwards	-28,450	2,760
Other effects	-1,915	-
Total income taxes	49,562	547

The tax liabilities reported in the Consolidated Statement of Financial Position result from the income taxes of the companies included in the Consolidated Financial Statements for fiscal year 2021 and partly for the previous year. The companies are subject to the respective tax laws of their countries. When assessing tax assets and tax liabilities, the interpretation of tax legislation may be subject to uncertainties, and a divergent view of the respective tax authority cannot be ruled out. Changes in assumptions about the correct interpretation of tax regulations are reflected in the recognition of uncertain income tax assets and liabilities. Uncertain income tax items are recognized at the most probable value.

Deferred taxes were recognized on temporary differences between the carrying amounts in the IFRS balance sheets of the Group companies, including disclosed hidden reserves, and the tax balance sheets, as well as on tax loss carryforwards that are expected to be utilized. Deferred tax assets and liabilities are measured using tax rates that are expected to apply to the period when the asset is realized or the liability is settled. The tax rates and tax regulations used are those that are enacted or substantively enacted on the balance sheet date.

Deferred tax assets are based on the following temporary differences and tax loss carryforwards:

EUR thousand	12/31/2021	12/31/2020
Intangible assets	-	-
Property, plant and equipment	8,259	-
Rights of use from leasing agreements	-	96
Trade receivables/due from affiliated companies	-	4,047
Inventories	17	-
Other assets	-	312
Cash and cash equivalents (mainly currency translation)	21	169
Trade payables/due to affiliated companies	806	4,512
Financial liabilities	1,059	3,680
Contract liabilities, deferred revenue	-	26,122
Provisions	14	-
Other accruals	140	34
Tax loss carryforwards	2	6,442
Total	10,318	45,414
Netting (per consolidation unit)	-1,917	-24,942
Recognition of deferred tax assets not exceeding the amount of deferred tax liabilities (per consolidation unit)	-	-20,472
Balance sheet item	8,401	-

Deferred tax assets on property, plant and equipment are recognized at the level of the Consolidated Financial Statements due to the different accounting assessment.

Deferred tax liabilities result from the following temporary differences:

EUR thousand	12/31/2021	12/31/2020
Intangible assets	1,136	19,669
Property, plant and equipment	675	13,415
Inventories	1	–
Trade receivables and payables	926	376
Cash and cash equivalents (mainly currency translation)	4,360	–
Transaction costs from capital procurement measures	2,525	910
Trade payables/due to affiliated companies	–	4,584
Financial liabilities (loans)	–	51
Other accruals	427	16
Contract liabilities, deferred revenue	–	275
Total	10,050	39,296
Netting (per consolidation unit)	–1,917	–24,942
Balance sheet item	8,133	14,354

Deferred tax liabilities mainly result from currency translation and from temporary differences in connection with the recognition of expenses relating to equity procurement measures.

The income and expenses from deferred taxes recognized in profit or loss in the fiscal year relate to the following temporary differences and tax loss carryforwards:

EUR thousand	2021	2020
Intangible assets	1,393	1,784
Property, plant and equipment	20,695	-13,589
Rights of use from leasing agreements	-97	102
Inventories	16	-
Trade receivables/due from affiliated companies	-4,597	3,671
Other assets	-312	312
Cash and cash equivalents	-4,508	169
Transaction costs from capital procurement measures	-1,615	-910
Trade payables/due to affiliated companies	878	-72
Financial liabilities (loans)	-2,614	3,741
Contract liabilities, deferred revenue	-25,712	26,342
Provisions	14	-
Other accruals	-441	29
Tax loss carryforwards	-4,692	5,371
Total (gross amount)	-21,591	26,950
Recognition of deferred tax assets not exceeding the amount of deferred tax liabilities (per consolidation unit)	13,962	-20,472
Total deferred tax expense/income	-7,629	6,478

3.8 Earnings per share

The following table shows the calculation of undiluted and diluted earnings per ordinary share attributable to shareholders of the parent company:

		2021	2020
Profit attributable to shareholders of the parent company	EUR thousand	287,159	-84,258
Weighted average number of shares for the calculation of earnings per share			
Undiluted	Number	17,652,871	11,411,172
Diluted	Number	23,815,514	14,789,684
Earnings per share			
Undiluted	EUR	16.27	-7.38
Diluted	EUR	12.06	-5.70

4 Balance sheet disclosures

4.1 Goodwill and other intangible assets

EUR thousand	Goodwill	Customer base	Paid acquired licenses and other rights	Similar rights and assets	Crypto currencies	Total
Acquisition and production costs						
Balance on 12/31/2020	43,479	99,839	3,027	66	-	146,411
Additions to the scope of consolidation	30,155	-	906	89	-	31,150
Disposals from the scope of consolidation	-42,471	-96,901	-	-	-	-139,372
Additions	-	-	528	-	66,948	67,476
Disposals	-	-	-79	-	-	-79
Net translation differences	-	613	112	8	-	733
Balance on 12/31/2021	31,163	3,551	4,494	163	66,948	106,319
Accumulated depreciation and impairments						
Balance on 12/31/2020	-	8,065	179	4	-	8,248
Additions to the scope of consolidation	-	-	3	-	-	3
Disposals from the scope of consolidation	-	-13,843	-	-	-	-13,843
Additions (scheduled depreciation)	-	6,208	536	109	-	6,853
Additions impairments	11,065	-	847	-	-	11,912
Additions impairments from revaluation	-	-	-	-	7,529	7,529
Net translation differences	-	-48	26	3	-	-19
Balance on 12/31/2021	11,065	382	1,591	116	7,529	20,683
Carrying amounts						
Balance on 12/31/2020	43,479	91,774	2,848	62	-	138,163
Balance on 12/31/2021	20,098	3,169	2,903	47	59,419	85,636

Research and development costs amounted to EUR 2,775 thousand in fiscal year 2021 (previous year: EUR 195 thousand).

Cryptocurrencies of Northern Data Group held for the long term are accounted for using the revaluation model. The reporting date for the revaluation is December 31, 2021. The carrying amount of the revalued cryptocurrencies is EUR 59,419 thousand. The useful life of cryptocurrencies can be considered unlimited due to their characteristics.

Impairment test

Intangible assets mainly comprise goodwill and customer bases acquired in the course of the acquisitions of North Georgia Data LLC, US, Hydro66, Svenska AB and Kelvin Emtech Group. Details on the acquisition of the companies can be found in Note 2 "Business combinations."

The determination of the cash-generating units (CGU) is generally based on the locations of the data centers. This results in the following CGUs with the designation "Sweden-Mining," "Sweden-HPC," "USA-Georgia" and "Canada – Kelvin Emtech."

Goodwill is not amortized but rather tested for impairment at least once a year in accordance with IAS 36 on the basis of fair value less costs to sell. The corresponding cash-generating unit is tested for impairment in the same way as described in Note 1.8.3.3 "Impairment." The value in use was determined as the recoverable amount.

Goodwill in the amount of EUR 24,771 thousand for the acquisition of Hydro66 UK Ltd was allocated 46 percent to the CGU "Sweden-Mining" and the remainder to the CGU "Sweden-HPC." The goodwill of the other two acquired CGUs was allocated 100 percent to each of the respective CGUs.

For the initial goodwill impairment tests as of December 31, 2021, an after-tax capitalization rate (WACC) was used for the CGUs "Sweden-Mining" and "Sweden-HPC" as well as "USA-Georgia." No prior-year figures are available due to the first-time implementation, with the exception of the CGU "Canada – Kelvin Emtech", as an impairment test was already carried out here in the previous year on an identical basis.

The following table shows the allocation of the carrying amounts for goodwill as of December 31, 2021, after impairment.

Figures in EUR thousand	Goodwill as of Dec. 31, 2021
CGU Sweden-Mining	5,714
CGU Sweden-HPC	13,376
CGU USA-Georgia	–
CGU Canada – Kelvin Emtech	1,008
Total	20,098

Sweden-Mining

A WACC of 11.0 percent (pre-tax 13.9 percent) was calculated for the Sweden-Mining CGU. The discount rate is based on a prime rate of 0.6 percent and a market risk premium of 3.9 percent. Furthermore, a beta factor derived from a peer group, a debt spread and a typified capital structure are taken into account.

The impairment test is based on the current planning status of Northern Data. The planning covers the years 2022 to 2026. The detailed planning period for 2022 is subject to the company's planning approved by management and released by the Supervisory Board; the detailed planning for 2022 to 2026 is based on the multi-year planning approved by the Management Board. The recoverable amount as of December 31, 2021, EUR 32,425 thousand is determined on the basis of a value in use using cash flow forecasts.

Only the investments in miners already paid in fiscal year 2021 and the miner portfolio at the end of 2021 were included in the impairment test. Due to the market development in mining, no perpetual annuity was considered for the purpose of the impairment test and thus no reinvestment in miners was assumed. Only a cycle assuming an economic useful life of the miners of five years was depicted. Furthermore, the management assumes declining revenues due to lower cryptocurrency prices and a lower EBITDA margin due to rising energy prices, in particular electricity.

On the basis of the initial impairment test in accordance with IAS 36, the goodwill for the CGU "Sweden-Mining" was impaired by EUR 5,681 thousand as of the reporting date December 31, 2021. Due to the fact that an impairment test was carried out for the first time, no information is provided on previous comparative values.

Sweden-HPC

A WACC of 15.5 percent (pre-tax 19.5 percent) was calculated for the "Sweden-HPC" CGU. The discount rate is based on a prime rate of 1.9 percent and a market risk premium of 3.9 percent. Furthermore, a beta factor derived from a peer group, a debt spread and a typified capital structure are taken into account. A growth rate of 1.0 percent was assumed on the basis of technological and overall business developments.

Furthermore, management assumes that revenues will increase as a result of the new HPC concept, so that EBITDA margins would increase. The detailed planning period is five years and is subject to the company planning adopted by management and approved by the Supervisory Board for 2022; the detailed planning for 2023 to 2026 is based on the multi-year planning approved by the Management Board. Only the investments in computers already paid for in fiscal year 2021 and the inventory at the end of 2021 were included in the impairment test. Sustainable reinvestments based on annuities were taken into account to determine the "terminal value." The recoverable amount as of December 31, 2021, of EUR 131,751 thousand is determined on the basis of a value in use using cash flow forecasts. There was therefore no impairment as of December 31, 2021.

USA-Georgia

For the first impairment test of the goodwill of the CGU "Georgia" as of December 31, 2021, a post-tax capitalization rate (WACC) of 10.9 percent (pre-tax 14.6 percent) was applied. The discount rate is based on a prime rate of 0.6 percent and a market risk premium of 3.9 percent. The recoverable amount as of December 31, 2021, EUR 0 thousand is determined on the basis of a value in use using cash flow forecasts. On the basis of the initial impairment test in accordance with IAS 36, an impairment loss of EUR 11,665 thousand was recognized for the "Georgia" CGU as of the balance sheet date December 31, 2021, of which EUR 5,384 thousand relates to goodwill. As required by IAS 36, the remaining impairment loss would need to be allocated to the other assets. As of the balance sheet date, there are no indications that the fair value of the hardware has fallen below its carrying amount, however, so that no further impairment is carried out. Due to the fact that an impairment test was carried out for the first time, no information is provided on previous comparative values. Other property, plant and equipment consists mainly of land and buildings.

Furthermore, management assumes increasing revenues for 2022 due to the new HPC concept, so that EBITDA margins will increase. However, a slight economic decline is expected from 2023 on. The detailed planning period is five years and is subject to the company planning adopted by management and approved by the Supervisory Board for 2022; the detailed planning for 2023 to 2026 is based on the multi-year planning approved by the Management Board.

Canada – Kelvin Emtech

For the impairment test of the goodwill of Kelvin Emtech Group as of December 31, 2021, the companies of Kelvin Emtech Group were combined into one cash-generating unit. The goodwill was fully allocated to this cash-generating unit. A post-tax discount rate (WACC) of 5.9 percent (pre-tax 8 percent) was applied. The discount rate is based on a base interest rate of 1.9 percent and a market risk premium of 3.9 percent.

The recoverable amount of the cash-generating unit of EUR 5,622 thousand was determined on the basis of value in use from discounting free cash flows using EBIT forecasts based on the Management Board's approved planning for the years 2022 to 2026. The cash flow forecasts include specific estimates for five years and an estimated terminal value thereafter.

4.2 Property, plant and equipment

EUR thousand	Plots of land and buildings	Data centers: servers, accessories, operating equipment	Office and other business equipment	Advance payments made and assets under construction	Total
Acquisition and Production costs					
Balance on 12/31/2020	10,119	37,646	2,247	191,284	241,296
Additions to the scope of consolidation	9,222	1,889	154	396	11,661
Disposals from the scope of consolidation	-9,548	-34,767	-2,671	-10,886	-57,872
Additions	15,002	37,719	14,606	133,078	200,405
Disposals	-	-5,286	0	-	-5,286
Reclassifications	48	163,960	-11,876	-152,132	-
Net translation differences	-51	-194	23	939	717
Balance on 12/31/2021	24,792	200,967	2,483	162,679	390,921
Accumulated depreciation and impairments					
Balance on 12/31/2020	98	6,559	438	-	7,095
Additions (scheduled depreciation)	1,750	34,927	872	-	37,549
Impairment	-	173	-	-	173
Disposals from the scope of consolidation	-186	-2,665	-1,022	-	-3,873
Disposals	-	-4,708	-	-	-4,708
Reclassifications	-	60	-60	-	-
Net translation differences	-1	93	20	-	112
Balance on 12/31/2021	1,661	34,439	248	-	36,348
Carrying amounts					
Balance on 01/01/2020	-	5,004	13	-	5,017
Balance on 12/31/2020	10,021	31,088	1,809	191,284	234,201
Balance on 12/31/2021	23,131	166,528	2,235	162,679	354,573

4.3 Leasing

Leases as lessee

The current leases mainly relate to the rental of office space and other operating and office equipment. The term of the leases is typically at least two years with an option to extend. The lease agreements can generally be renewed at the end of the lease term. Lease payments are renegotiated at irregular intervals to reflect market developments in an agile manner.

Northern Data leases various smaller office premises with contractual terms of less than one year. Northern Data has decided not to recognize either rights of use or lease liabilities for these leases. Expenses for short-term leases amounted to EUR 214 thousand in fiscal year 2021 (previous year: EUR 113 thousand). Expenses for low-value lease liabilities amounted to EUR 113 thousand (prior year: EUR 586 thousand).

i. Rights of use

EUR thousand	Plots of land and buildings	Operating equipment	Total
Acquisition and production costs			
Balance on 12/31/2020	58	13,404	13,462
Additions to the scope of consolidation	103	1,225	1,328
Disposals from the scope of consolidation	-41	-14,464	-14,505
Additions	5,603	3,340	8,943
Net translation differences	5	1,286	1,291
Balance on 12/31/2021	5,728	4,791	10,519
Accumulated depreciation and impairments			
Balance on 12/31/2020	21	491	512
Disposals from the scope of consolidation	-31	-2,021	-2,052
Additions (scheduled depreciation)	216	1,701	1,917
Disposals	-	-	-
Translation differences	0	1,234	1,234
Balance on 12/31/2021	206	1,405	1,611
Carrying amounts			
Balance on 01/01/2020	-	3,371	3,371
Balance on 12/31/2020	37	12,913	12,950
Balance on 12/31/2021, (current and non-current)	5,522	3,386	8,908

ii. Amounts recognized in the income statement

EUR thousand	2021	2020
Interest expenses	181	470
Expenses for short-term leases	214	168
Expenses for low-value leases	113	757
Expenses for variable lease payments not included in the measurement of lease liabilities	–	5

iii. Amounts recognized in the cash flow statement

EUR thousand	2021	2020
Total cash outflows for leases	1,744	5,143

iv. Extension options

Some real estate leases contain renewal options that are exercisable by the company up to one year prior to the expiration of the non-cancelable lease term. The renewal options are exercisable only by the company and not by the lessor. The Group assesses on the commitment date whether the exercise of renewal options is reasonably certain. The Group reassesses whether the exercise of a renewal option is reasonably certain upon the occurrence of a significant event or a significant change in circumstances that the event or change is within its control. Currently, no renewal options have been determined by the company to be reasonably certain.

Information on the remaining terms of the lease liabilities is provided in the table in Note 4.8.1 "Composition and remaining terms."

Leases as lessor

The Northern Data Group provided servers to customers under an operating lease in fiscal year 2021. The income generated from this amounts to EUR 2,573 thousand.

The table in the section on property, plant and equipment (4.2 "Property, plant and equipment") includes information on the operating leases for hardware. The hardware with acquisition costs of EUR 6,295 thousand and depreciation of EUR 521 thousand in fiscal year 2021 has a residual carrying amount of EUR 5,770 thousand as of December 31, taking currency effects into account.

4.4 Inventories

Inventories of EUR 4,689 thousand (previous year: EUR 11,875 thousand) mainly relate to hardware inventories held for sale.

4.5 Other assets

The following are reported as other assets in the Consolidated Statement of Financial Position:

EUR thousand	12/31/2021	12/31/2020
Financial assets non-current		
Deposits	1,707	20,814
Other receivables	1	–
Total	1,708	20,814
Total non-current	1,708	20,814
Financial assets current		
Deposits	980	6
Advance payments	8,187	400
Loans to employees	5	330
Creditors with debit balances	302	39
Other receivables	53,776	5
Total	63,250	780
Non-financial assets current		
Taxes that are not income taxes	20,176	5,913
Short-term held cryptocurrencies	18,799	–
Other current assets	259	9
Total	39,234	5,922
Total current	102,484	6,702

The security deposits relate primarily to agreements with electricity suppliers and long-term rental agreements. The decrease in deposits or security deposits is attributable to the security deposits to be paid for a electricity supply contract. Advance payments in financial assets (current) are mainly prepaid expenses. Other receivables mainly consist of receivables related to the sale of Whinstone. Taxes other than income taxes relate to sales taxes.

4.6 Equity

4.6.1 Principles and objectives of capital management

The main objective of the Northern Data Group with regard to capital management is to ensure a solid capital and liquidity base for the Group's operating activities and sustainable growth. In this context, shareholder confidence and return expectations are also to be safeguarded and stakeholder interests taken into account.

As a young and growing group of companies, Northern Data monitors capital using the equity ratio and the ratio of EBITDA to equity (return on equity). There is no externally defined target for the ratio of equity to debt.

In order to meet growth targets and secure the capital and liquidity base, capital increases and the issue of new shares are carried out as part of mergers with other companies. In addition, procurement transactions are pre-financed by means of advance payments from customers as part of operating activities by means of appropriate contractual arrangements. In order to enable balanced equity and debt financing in the future, the Group is considering concluding financing agreements with various credit institutions.

No dividends were paid. There are therefore no tax consequences.

The key figures used to monitor capital are as follows:

	12/31/2021	12/31/2020
Equity ratio (percent)	76.3	35.1

	2021	2020
Return on equity (percent) ¹	53.4	-7

¹ Return on equity is defined as the ratio of EBITDA to shareholders' equity.

4.6.2 Notes to equity

The subscribed capital amounts to EUR 23,815,514 as of the reporting date (previous year: EUR 14,639,684) and is divided into 23,815,514 shares with a nominal value of EUR 1 per share.

Using part of the Authorized Capital 2020/II resolved by the Annual General Meeting on November 10, 2020, and entered in the commercial register on December 8, 2020, a capital increase against cash contributions of EUR 900,000 was initiated in December 2020 and completed in January 2021. It was filed with the Local Court of Frankfurt/Main on December 23, 2020, and entered in the commercial register on January 6, 2021. The gross proceeds from the capital increase already received in December 2020 amounted to approximately EUR 52,470 thousand. The amount was reported in equity as of December 31, 2020, under the item "Contributions made to implement the resolved capital increase." Upon entry in the commercial register on January 6, 2021, a transfer was made to subscribed capital, and the remaining amount of EUR 51,570 thousand was transferred to the capital reserve.

Based on the conditional increase of the share capital resolved on August 30, 2019, as amended by the resolution of the Annual General Meeting on December 30, 2019 (Conditional Capital 2019/I), subscription shares with a nominal value of EUR 1,750 were issued in January 2021 in connection with the servicing of the convertible bond. As a result, the share capital of Northern Data AG increased to EUR 15,541,434. The difference between the nominal value of the shares issued and the value of the convertible bond attributable to them (total EUR 12 thousand) was transferred to the capital reserve.

As part of the merger with Northern Data Services (UK) Limited (Hydro66 UK Ltd.), a non-cash capital increase was carried out in March 2021. Based on the authorization granted by the Annual General

Meeting on November 10, 2020, the share capital was increased by EUR 338,273 to EUR 15,879,707 by issuing 338,273 no-par value bearer shares, each with a notional share of EUR 1.00 in the share capital. The shareholders of Hydro66 UK Ltd. were admitted to subscribe against contribution of their respective shares in Hydro66 UK Ltd. The capital increase was completed in the first quarter of 2021 in the full amount of EUR 338,273 against contributions in kind. The contributions in kind were made by transferring all shares to Northern Data AG with entry in the commercial register on March 9, 2021. The difference between the fair value (stock market price) at the time of the transaction and the nominal value of the shares issued (totaling EUR 32,227 thousand) was transferred to the capital reserve.

Making partial use of the Authorized Capital 2020/II resolved by the Annual General Meeting on November 10, 2020, and entered in the commercial register on December 8, 2020, a capital increase against a cash contribution of EUR 563,968 to EUR 16,443,675 was implemented in April 2021. The gross proceeds from the capital increase amounted to approximately EUR 58,575 thousand. The amount exceeding the nominal value of the issued shares (totaling EUR 58,011 thousand) was transferred to the capital reserve.

A capital increase against contributions in kind was carried out in August 2021 as part of the merger with Decentric Europe B.V. By making partial use of the Authorized Capital 2021 resolved by the Annual General Meeting on April 28, 2021, and entered in the commercial register on July 26, 2021, a capital increase against contributions in kind of EUR 2,306,294 to EUR 18,749,969 was carried out in August 2021 by issuing 2,306,294 no-par value bearer shares, each with a notional interest in the share capital of EUR 1.00. The shareholder of Decentric Europe B.V., Block.one was admitted to subscribe in return for the contribution of its shares in Decentric Europe B.V. The contribution in kind was made by transferring all shares to Northern Data AG with entry in the commercial register on September 14, 2021. The difference between the fair value (stock market price) at the time of the transaction and the nominal value of the shares issued (totaling EUR 165,131 thousand) was transferred to the capital reserve. In the course of the accounting for the acquisition of Decentric Europe B.V., the additional paid-in capital was reduced by EUR 165,718 thousand (see Note 2 "Business combinations").

As part of the merger with Bitfield N.V., two capital increases against contributions in kind were carried out in the period from October to December 2021. Making partial use of the Authorized Capital 2021 resolved by the Annual General Meeting on April 28, 2021, and entered in the commercial register on July 26, 2021, a capital increase against contributions in kind of EUR 4,490,142 to EUR 23,240,111 was carried out on October 19, 2021, by issuing 4,490,142 no-par value bearer shares, each with a notional share in the share capital of EUR 1.00. The shareholders of Bitfield N.V., among others Block.one were admitted to subscribe in return for the contribution of their shares in Bitfield N.V. The contributions in kind were made by transferring all shares to Northern Data AG with entry in the commercial register on November 2, 2021. Furthermore, a share capital increase of EUR 575,403 to EUR 23,815,514 was carried out on December 6, 2021, using part of the Authorized Capital 2021 resolved by the Annual General Meeting on April 28, 2021, and entered in the commercial register on July 26, 2021, by issuing 575,403 no-par value bearer shares, each with a notional interest in the share capital of EUR 1.00. The shareholders of Bitfield N.V. were admitted to subscribe against contribution of their shares in Bitfield N.V. The contributions in kind were made by transferring all shares to Northern Data AG with entry in the commercial register on December 15, 2021. The difference between the fair value (stock market price) at the time of the transaction and the nominal value of the shares issued (totaling EUR 297,677 thousand) arising from the aforementioned capital increases was

transferred to the capital reserve. In the course of the accounting of the transaction, the additional paid-in capital was reduced by EUR 253,869 thousand (see Note 2 "Business combinations").

Cumulative effects from the valuation of the convertible bond are also recognized in equity (see Note 5.2 "Disclosures on financial instruments"). Transaction costs incurred in connection with the capital procurement measures were deducted directly from additional paid-in capital.

The translation differences resulted from the translation of the financial Statements of Group companies not based in the eurozone.

4.7 Provisions

EUR thousand	Balance on 01/01/2021	Addition	Consumption	Reversal	Accumulation/discounting	Change in the scope of consolidation	Balance on 12/31/2021
Financial statements and audit	550	1,162	-763	-	-	-	949
Retention requirements	5	-	-	-	-	-	5
Tax provisions	-	2,042	-	-	-58	1,567	3,551
Other	349	1,387	-	-	-	-1,736	-
Total	904	4,591	-763	0	-58	-169	4,505

EUR thousand	Balance on 01/01/2020	Addition	Consumption	Reversal	Accumulation/discounting	Change in the scope of consolidation	Balance on 12/31/2020
Financial statements and audit	25	550	-25	-	-	-	550
Restoration obligations	19	-	-	-20	1	-	-
Retention requirements	5	-	-	-	-	-	5
Other	-	349	-	-	-	-	349
Total	49	899	-25	-20	1	-	904

4.8 Financial liabilities

4.8.1 Composition and remaining terms

Contractual maturities

EUR thousand	< 1 year	1–5 years	> 5 years	12/31/2021
Trade payables	20,410	–	–	20,410
Loan liabilities	76,891	–	–	76,891
Leasing liabilities	1,997	5,446	1,603	9,046
Other financial liabilities				
Total	99,298	5,446	1,603	106,347

Contractual maturities

EUR thousand	< 1 year	1–5 years	> 5 years	12/31/2020
Trade payables	20,246	–	–	20,246
Loan liabilities	10,633	16,933	–	27,566
Leasing liabilities	896	2,563	11,311	14,770
Convertible bond	–	176	–	176
Derivatives from electricity contracts	16,925 ¹	–	–	16,925
Other financial liabilities	1	–	–	1
Total	31,776	19,672	28,237	79,684

¹ Corrected maturity statement; see Note 1.1 "Reporting entity"

The liabilities shown in the previous table (convertible bond, loan), which are not traded on an active market, are valued using the method described in Note 1.8.3 "Financial instruments" in the Notes to the Consolidated Financial Statements.

The shareholder loan was paid out in full on August 12, 2021 (EUR 114,780 thousand). Based on the agreed interest rates of the shareholder loan, an effective interest rate was determined, on the basis of which the transaction costs of the tranches are amortized over the term. No collateral was provided under the shareholder loan. The loan is subject to a fixed interest rate with a nominal interest rate of 7.5 percent. The leasing liabilities mainly stem from rental and lease agreements.

4.8.2 Day one gain or loss

Differences arose between the transaction price at the time of initial recognition of the liabilities and the fair value determined using the valuation method described under Note 1.8.3 "Financial instruments."

The differences from the convertible bond in the previous year still to be recognized in profit or loss amounted to EUR 708 thousand. With the exercise of the clean-up call, these differences were recognized in the financial result (see Note 3.6 "Financial result").

4.9 Other liabilities

EUR thousand	12/31/2021	12/31/2020
Current other liabilities		
Liabilities to third parties	4,535	213,346
Deposits	5,030	–
Liabilities from sales tax	1,903	3,525
Miscellaneous other liabilities	1,029	1,067
Total other current liabilities	12,497	217,938
Non-current other liabilities		
Deposits	353	2,037
Total other non-current liabilities	353	2,037

Other current liabilities to third parties include mainly personnel liabilities as well as liabilities from other taxes. The decrease in other current liabilities to third parties is due to the consolidation of Decentric and Bitfield Group.

5 Other explanatory notes

5.1 Notes to the Consolidated Statement of Cash Flows

The Consolidated Statement of Cash Flows shows how cash and cash equivalents have changed during the fiscal year. In accordance with IAS 7 "Statements of Cash Flows," a distinction is made between changes in cash and cash equivalents resulting from operating, investing and financing activities.

The changes in liabilities from financing activities in fiscal year 2021 are as follows:

EUR thousand	Balance on 01/01/2021	cash- effective		non-cash-effective			Balance on 12/31/2021
		Other cash flows for financing	Change in the scope of consoli- dation	Change in fair value	Exchange rate changes	Other	
Loan liabilities	27,565	-120,658	164,410	4,934	466	174	76,891
Leasing liabilities	14,771	-1,810	-12,858	-	2	8,941	9,046
Convertible bond	176	-82	-	-80	-	-14	-
Derivatives from electricity contracts	16,925	-	10,716	-28,118	477	-	-
Other financial liabilities	1	-	-	-	-	-1	-
Total	59,438	-122,550	162,268	-23,264	945	9,100	85,937

The changes in liabilities from financing activities in fiscal year 2020 are as follows:

EUR thousand	Balance on 01/01/2020	cash- effective		non-cash-effective			Balance on 12/31/2020
		Other cash flows for financing	Change in the scope of consoli- dation	Change in fair value	Exchange rate changes	Other	
Loan liabilities	4,547	-2,500	27,113	159	-2,808	1,054	27,565
Leasing liabilities	3,405	-4,578	17,266	-	-1,685	363	14,771
Convertible bond	11,041	4,657	-	2,220	-	-17,742	176
Derivatives from electricity contracts	-	-	-	16,925	-	-	16,925
Other financial liabilities	-	1	-	-	-	-	1
Total	18,993	-2,420	44,379	19,304	-4,493	-16,325	59,438

5.2 Disclosures on financial instruments

The table below shows the carrying amounts and fair values of the financial assets and financial liabilities, including their levels in the fair value hierarchy. This table does not show fair values for financial assets and financial liabilities if their carrying amount is a reasonable approximation of fair value.

EUR thousand 12/31/2021	Measure- ment category according to IFRS 9	Carrying amount on 12/31/2021	Amortized acquisition costs	At fair value through other com- prehensive income	At fair value through profit or loss	Total carrying amount on 12/31/2021	Fair value on 12/31/2021	Level within the fair value hierarchy
Assets								
Cash and cash equivalents	FAAC	221,597	221,597			221,597	n/a	
Trade receivables	FAAC	5,254	5,254			5,254	n/a	
Shares in other companies	FVOCI	1,450	-	1,450		1,450	1,450	3
Equity and liabilities								
Trade payables	FLAC	20,410	20,410			20,410	n/a	
Financial liabilities								
Shareholder loan	FLAC	76,891	76,891			76,891		2

The table below shows the inventories for fiscal year 2020:

EUR thousand 12/31/2020	Measure- ment category according to IFRS 9	Carrying amount on 12/31/2020	Amortized acquisition costs	At fair value through other com- prehensive income	At fair value through profit or loss	Total carrying amount on 12/31/2020	Fair value on 12/31/2020	Level within the fair value hierarchy
Assets								
Cash and cash equivalents	FAAC	73,862	73,862	-	-	73,862	n/a	
Trade receivables	FAAC	2,293	2,293	-	-	2,293	n/a	
Shares in other companies	FVOCI	1,451	-	1,451	-	1,451	1,451	3
Equity and liabilities								
Trade payables	FLAC	20,246	-	-	-	20,246	-	-
Financial liabilities								
Loans from customers	FLAC	26,401 ¹	26,401	-	-	26,401	-	-
Shareholder loan	FLAC	1,164	-	-	-	1,164	-	-
Convertible bond	FVTPL	176	-	-	176	176	176	3
Derivatives from electricity contracts	FVTPL	16,925	-	-	16,925	16,925	16,925	2

¹ Corrected prior-year figure; see Note 1.1 "Reporting company"

Cash and cash equivalents, trade receivables and other current financial assets and liabilities have short remaining terms. Therefore, their carrying amounts as of the reporting date approximate their fair values. The carrying amount of current financial liabilities approximates their fair values due to their maturity on the reporting date.

Northern Data's maximum credit exposure is equal to the carrying amount of assets subject to credit risk.

The table below shows the reconciliation of the opening balance to the closing balance for Level 3 fair values in exercise of the fair value option.

EUR thousand	Total	of which gains and losses recognized in "other comprehensive income"	of which gains and losses recognized in the item "financial expense"
Balance at the beginning of the fiscal year (asset amount)	1,275	–	–
Disposal of shares in affiliated companies – net change in fair value	–2	–	–
Convertible bond – net change in fair value	+176	–	82
Balance at the end of the fiscal year (asset amount)	1,449	–	82

Further explanatory notes to the table showing the change in Level 3 fair values: The decrease in financial liabilities measured at fair value upon exercise of the fair value option is attributable to the issuer's exercise of the clean-up call on the convertible bond.

In the second half of the reporting period, the Group took out a shareholder loan that was paid out at nominal value. A fixed interest rate equivalent to the market interest rate at the time the loan was issued was agreed as the loan interest rate for the entire term of the loan. As a result, the loan amount received or the transaction price is almost equal to the fair value on the date of addition. The fair value of the loan was determined using a DCF method. The loan is a subordinated loan liability that must be repaid from future proceeds at any time, but no later than August 31, 2022.

Convertible bond

The convertible bond issued by Northern Data was placed in the nominal amount of EUR 10,450 thousand in fiscal year 2019 and the remaining EUR 9,550 thousand at the beginning of fiscal year 2020. Due to the terms and conditions of the convertible bond, investors exercised their conversion rights for a conversion volume of EUR 19,395 thousand at the first time they were able to exercise their conversion rights. Northern Data exercised the convertible bond issuer's right in the first conversion

period until June 30, 2020, to the extent that the Group settled part of the conversion in 2,214,250 shares and paid EUR 4,412 thousand in cash. In the second half of 2020, additional investors exercised their conversion rights, so that Northern Data settled EUR 509 thousand of the conversion volume exclusively in shares. For the nominal amount of EUR 82 thousand remaining on December 31, 2020, Northern Data, as the issuer, exercised its right to draw the clean-up call.

Electricity contract

The risks resulting from rising energy prices (see supplementary Note 5.3.5 "Electricity price change risk") are limited by structured procurement on the electricity market and by concluding long-term electricity contracts. The contracts existing as of December 31, 2021 fall under the so-called "own use exemption" and are therefore not classified and measured as derivative financial instruments.

5.3 Disclosures on financial risks and risk provisioning

Northern Data is exposed to a number of different financial risks, which are explained in the Management Report as electricity price risk, liquidity risk, country risk, currency risk and interest rate risk. Risk management is carried out by the Group Finance department. The Group Finance department identifies, assesses and hedges financial risks in close cooperation with the Group's operating units. Changes in the risk situation are responded to by implementing appropriate measures. The goal of risk management is to reduce financial risks by taking planned measures.

5.3.1 Credit risk

Credit risks are managed at the Group level. Credit risks arise from cash and cash equivalents, current financial assets, trade receivables and other receivables. Customer risks are systematically recorded, analyzed and managed at the respective subsidiary, using both internal and external sources of information (for further information, please refer to the Notes to the Consolidated Financial Statements, Note 1.8.3.3 "Impairment"). The maximum default risk was reflected by the carrying amounts of the financial assets recognized in the balance sheet. There was no collateral or other credit enhancements that would reduce the default risk from financial assets.

The Group considers a financial asset to be in default if it is unlikely that the debtor will be able to pay his credit obligation in full to the Group without the Group having to resort to measures such as liquidation of collateral (if any). This is mainly the case if the debtor is more than 180 days past due.

Credit risks arise in connection with trade receivables and other receivables, as well as contract assets. As the Group's business model is based on a selected customer base, the risk and thus a significant default on receivables is considered to be low. To the extent that default risks are identifiable, they are countered by active receivables management and by conducting credit checks on customers.

Indicators that a financial asset is credit-impaired include the following observable inputs:

- › significant financial difficulties of customers
- › a breach of contract, such as a default or overdue payment of more than 90 days;
- › the likelihood of customers entering bankruptcy or other reorganization proceedings;

5.3.2 Currency risk

The Group is exposed to currency risks which are only of minor significance. Sales are mainly generated in US dollars. Translation risks from the conversion of assets and liabilities of foreign subsidiaries into the reporting currency are generally not hedged.

A hypothetical change of +/-5 percent in the U.S. dollar exchange rate as of the balance sheet date would result in a theoretical change of EUR 1,000 thousand in the Group's EBITDA forecast for 2022, with the exchange rate fluctuation having a hypothetical impact on sales of EUR 11,000 thousand.

Due to the Group-wide cash management system, intercompany receivables and payables are denominated in euros. As a result, those subsidiaries of Northern Data whose functional currency is not the euro may incur effects in the income statement from exchange rate fluctuations. Furthermore, the cash and cash equivalents of the Group companies can include foreign currencies.

5.3.3 Country risk and default risk

Country and default risk is the risk of financial loss if a customer or counterparty to a financial instrument fails to meet his contractual obligations. Default risk arises principally from trade receivables.

The carrying amounts of financial assets and contract assets correspond to the maximum default risk.

The risk provision for financial assets in the reporting period 2021 was recognized in the amount of EUR 18 thousand in the financial result (see Note 3.6 "Financial result"). The risk provision for contract assets (see Note 3.1.2 "Contract assets and contract liabilities") was recognized in the amount of EUR 13 thousand.

Trade receivables

The Group's default risk is mainly influenced by the individual characteristics of each customer. However, the Northern Data Group's risk management also takes the factors that can affect the default risk of the customer base into account, including the default risk of the industries, countries and regions in which the customers operate. Detailed information on the concentration of revenues in specific areas is provided in Note 3.1 "Revenue."

In cooperation with Receivables Management, Risk Management has introduced a system by which new customers are first analyzed individually with regard to their creditworthiness before Northern Data offers standardized or essentially customized delivery and payment terms. This analysis includes external ratings, where available, information from credit agencies and industry information.

The Group limits its default risk on trade receivables by setting a maximum payment term of one month.

The majority of customers maintain an ongoing business relationship with the Group. No amounts have been derecognized or impaired credit ratings have been identified for any of these customers. For the purpose of monitoring default risk, customers are classified into groups according to their creditworthiness. In principle, a geographical distinction is made due to the small number of customers. The industry, age structure, and occurrence and duration of payment problems are also taken into account.

The Group monitors the economic conditions in the US, Canada, and Europe.

The Group does not require collateral for trade and other receivables. The Group has no trade receivables or contract assets for which no impairment losses have been recognized due to collateral. The default risk or risk provisions for December 31, 2021, amounted to EUR 14 thousand and resulted mainly from the Canadian engineering business.

5.3.4 Liquidity risk

Liquidity risk is the risk that the Group may not be able to settle its financial liabilities as contractually required by delivering cash or another financial asset. The Group's objective in managing liquidity is to ensure that, as far as possible, sufficient cash and cash equivalents are available at all times to meet payment obligations when they fall due under both normal and stressed conditions without incurring unacceptable losses or damage to the Group's reputation.

Liquidity risks are monitored and controlled centrally for the entire Group by Northern Data's operational cash management. The risk of any liquidity shortage is monitored by means of periodic liquidity planning and monthly cash flow analyses.

The maturities of financial liabilities are shown in the Notes to the Consolidated Financial Statements under Note 4.8.1 "Composition and residual terms."

5.3.5 Electricity price change risk

Electricity price change risk is the risk to which the Group is exposed due to higher or lower electricity prices on the market. In fiscal year 2021, this risk was generally assessed as moderate due to the current contracts. Electricity price risk is generally monitored centrally by finance and contract management. No further measures for targeted electricity price hedging are taken into account.

A hypothetical change in the electricity price of +/- 5 percent as of the balance sheet date would result in a theoretical change of EUR 4,406 thousand in the Group's EBITDA forecast for 2022.

5.4 Business transactions with related parties

Related parties as defined by IAS 24 are natural persons or entities that can be influenced by Northern Data that can exert an influence on Northern Data or that are under the influence of another party related to Northern Data.

5.4.1 Related companies

As of the balance sheet date and throughout the past fiscal year, no party was able to exercise a controlling influence over Northern Data AG. A significant influence could be exercised by the Block.one Group.

Besides Block.one Group, related parties are non-consolidated subsidiaries. Northern Data maintains relationships with some of its non-consolidated subsidiaries in the ordinary course of doing business. Transactions with such Group companies are disclosed below. The transactions relate to calls on cash and cash equivalents or settlements under the Group's internal credit facility agreements.

EUR thousand	12/31/2021	12/31/2020
Receivables		
Northern eCloud ehf. DRÖG	76	41
Northern Data NOR AS	-	226
Total	76	267

EUR thousand	12/31/2021	12/31/2020
Liabilities		
Northern Data Real Estate II AS	18	-
Northern Data Alberta Ltd.	-	-
Total	18	-

The open balances at the end of the reporting period are unsecured and settled by cash payment or netting of receivables and payables.

In December 2020, Northern Data AG concluded hardware supply and service agreements with the companies Decentric and Bitfield.

Decentric was a wholly owned subsidiary of the Block.one Group. As of the reporting date December 31, 2020, Bitfield was 27.1 percent held by the Block.one Group, 13.0 percent by Apeiron Investment Group Limited, which belongs to Christian Angermayer, and 2.9 percent held directly by Marco Beckmann and 12.9 percent by Beckmann Capital GmbH, which belongs to Marco Beckmann. As of December 31, 2020, Christian Angermayer and Marco Beckmann held 16.7 percent and 19.9 percent, respectively, of the Northern Data Group through Apeiron Investment Gruppe Limited and Cryptology Asset Gruppe P.L.C. and BlackMars GmbH and Singularity AG.

The companies Bitfield and Decentric were acquired by Northern Data AG in the third quarter of 2021. Reference is made to the explanations in section 2. "Business combinations", according to which the transactions were carried out, among other things, in the form of a capital increase through contributions in kind against the issue of shares in Northern Data AG.

In the course of the acquisition of Decentric Europe B.V. (see section 2. "Business combinations"), Block.one issued a shareholder loan in the amount of USD 130 million, which will be repaid by Northern Data by the third quarter of 2022. As of December 31, 2021, the remaining debt amounted to EUR 76,891 thousand (see section 4.8.1 "Composition of remaining term").

There are no guarantees for receivables from and payables to related companies. There were no valuation allowances on receivables from related companies.

5.4.2 Related persons

Related parties are those persons who have significant influence over the financial and operating policies of Northern Data, including their close family members. These include the members of the Management Board and Supervisory Board of Northern Data.

Management Board

During the past fiscal year, Northern Data's Management Board included the following individuals:

- › Aroosh Thillainathan, Chief Executive Officer, Frankfurt/Main.
- › Dr. Mathias Dähn, Chief Financial Officer, Frankfurt/Main; until February 28, 2022.
- › Stefan Sickenberger, Chief Operating Officer, Frankfurt/Main.

The members of the Management Board held the following internal Group mandates:

- › Aroosh Thillainathan, Chief Executive Officer, Whinstone US. Inc., Rockdale Texas, until the deconsolidation of the company
- › Aroosh Thillainathan, Managing Director, Northern Data Software GmbH, Frankfurt
- › Aroosh Thillainathan, President, Northern Data US Inc., Reston, Virginia
- › Aroosh Thillainathan, President, Northern Data US Holdings Inc., Reston, Virginia
- › Aroosh Thillainathan, President, Northern Data Alberta Ltd., Calgary, Alberta
- › Aroosh Thillainathan, President, Northern Data CA Ltd., Montreal, Quebec
- › Aroosh Thillainathan, President, Northern Data Quebec Ltd., Montreal, Quebec
- › Stefan Sickenberger, Managing Director, Northern Data Software GmbH, Frankfurt
- › Stefan Sickenberger, Managing Director, Northern Data NL BV, Eysgelshoven

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- › Stefan Sickenberger, Managing Director, Northern Data NOR AS, Notodden
- › Stefan Sickenberger, Managing Director, Northern Data Real Estate 1 AG, Notodden
- › Stefan Sickenberger, Managing Director, Hydro66 Property Services AB, Boden
- › Stefan Sickenberger, Managing Director, Hydro66 Svenska AB, Boden
- › Stefan Sickenberger, Managing Director, Hydro66 Services AB, Boden

The total compensation of the Management Board is as follows:

EUR thousand	2021	2020
Short-term benefits (emoluments)	2,181	1,107
Share-based payment	2,945	337
Total	5,126	1,444

Additional disclosures on share-based payment programs in the context of Management Board remuneration:

In thousand options	
Number of shares 12/31/2020	300
Exercisable shares 12/31/2020	–
Average remaining waiting period	4 years
Issued in 2021	515
Exercised in 2021	–
Expired in 2021	–
Number of shares 12/31/2021	815
Exercisable shares 12/31/2021	–
Average remaining waiting period	3 years

Supervisory Board

Name Function	Profession practiced	Member since	Appointed until/stepped down on	Further mandates in 2021 (during the term of office)
Dr. Bernd Hartmann	Managing Director	07/25/2014	2023	Shareholder and Managing Director of Roskos & Meier OHG
Dr. Tom Oliver Schorling	Independent Lawyer	11/10/2020	2023	Deputy Chairman of the Supervisory Board of Exaloan AG, Frankfurt Chairman of the Supervisory Board of Dioscure Therapeutics SE, Bonn
Hermann-Josef Lamberti	Entrepreneur	11/10/2020	2023	Member of the Board of Trustees of the Frankfurt Institute for Advanced Studies (FIAS)

The remuneration of the Supervisory Board in the past fiscal year amounted to EUR 270 thousand (previous year: EUR 143 thousand). In addition to reimbursement of their expenses, each regular member of the company's Supervisory Board receives fixed annual compensation of EUR 60 thousand. The Chairman of the Supervisory Board receives fixed annual compensation of EUR 120 thousand and his deputy EUR 90 thousand.

5.4.3 Directors' Dealings

Pursuant to Art.19 (1) of the Market Abuse Regulation (Regulation (EU) No. 596/2014), the members of the Management Board and Supervisory Board as well as certain relatives must immediately disclose all sales and purchases of Northern Data shares and other rights related thereto if the threshold of EUR 20,000 is exceeded within the calendar year.

The following table shows a list of the transactions published in fiscal year 2021:

Notifiable	Communication from	Date of Transaction	Type of business	Price in Euro (aggregated)	Volume in EUR thousand (aggregated)
Dr. Tom Oliver Schorling	11/12/2021	11/09/2021	Purchase	77.33	155
Herman-Josef Lamberti	12/08/2021	12/06/2021	Acquisition of shares in the context of a capital increase with contributions in kind in execution of an agreement under the law of obligations dated November 4, 2021, by CHInvestProperty185 AG	69.39	854
Stefan Sickenberger	12/08/2021	12/06/2021	Acquisition of shares in the context of a capital increase with contributions in kind in execution of an agreement under the law of obligations dated November 15, 2021, by Sickenberger Holding UG (haftungsbeschränkt)	69.39	221
Dr. Tom Oliver Schorling	12/08/2021	12/06/2021	Acquisition of shares in the context of a capital increase with contributions in kind in execution of an agreement under the law of obligations dated November 12, 2021, by Liebling Kronberg Capital GmbH	69.39	301

5.5 Share-based payments

5.5.1 Description of the share-based payment arrangement

Since December 31, 2021, the Group has had the share-based payment agreements Stock Option Program 2020 ("SOP 2020") and Stock Option Program 2021 ("SOP 2021"), which provide for compensation through equity instruments.

Under the stock option programs, members of the Management Board and employees of the company as well as members of the management bodies and employees of affiliated companies are entitled to acquire shares in Northern Data AG. In this context, the holders of exercisable options have the right, under certain conditions, to acquire shares at the strike price (corresponds to the unweighted arithmetic mean of the prices determined in the closing auction in XETRA® trading or

a comparable successor system or successor price during the last ten stock market trading days prior to the date on which the option is granted).

All options are to be settled by physical delivery of the shares. However, the company is entitled, at its own discretion, to settle the option by granting a cash settlement. The cash settlement to be granted is calculated as the difference between the strike price and the unweighted arithmetic mean of the prices of the shares of Northern Data AG determined in the closing auction in XETRA® trading or a comparable successor system or successor price during the last ten stock market trading days prior to exercise of the option.

In fiscal years 2020 and 2021, a total of 1,555,953 stock options were issued to members of the Management Board and employees of the company as well as members of the management bodies and employees of affiliated companies. The options, with the exception of those that have lapsed in the meantime, can be exercised for the first time after the expiry of a holding period of four years from the respective issue date. Furthermore, the terms and conditions of exercise stipulate that option holders may only exercise the options if the option holder remains in principle with the company for more than three years (vesting period) and the compound annual growth rate (CAGR) of the Group's sales in the reference period is at least 25 percent.

5.5.2 Determination of fair values

The fair values of the SOP 2020 and the SOP 2021 were determined using the Black-Scholes formula. Service and non-market performance conditions associated with the transactions were not considered in determining fair value.

The parameters used in determining the fair values at the grant date of the 2020 SOP include, in particular:

- › the share price on the respective grant date (average share price: EUR 50.92), the price also corresponds to the average exercise price of the options
- › expected volatility: 54.6 percent, based on 180-day volatility from an appropriate peer group, as Northern Data had very high non-representative volatility due to its business performance in fiscal year 2020.
- › expected term: 4.0 years (weighted average)
- › expected dividends: 0.0 percent of share price
- › risk-free interest rate: –0.5 percent

The parameters used in determining the fair values at the grant date of the 2021 SOP include, in particular:

- › the share price on the respective grant date (average share price: EUR 59.44), the price also corresponds to the average exercise price of the options

- › expected volatility depending on grant date between 42.5 and 94.4 percent, based on 180-day volatility of the Northern Data share
- › expected term: 4.3 years (weighted average)
- › expected dividends: 0.0 percent of share price
- › risk-free interest rate: –0.5 percent

The expected term of the instruments is based in each case on the general behavior of the option holders. The first opportunity to exercise the options is four years after the grant date. The option holder subsequently has the right to exercise the options over a period of five years. For the purpose of assessing the value of the options, it is assumed that the option holders will exercise the right to subscribe to the shares immediately after four years.

5.5.3 Reconciliation of outstanding stock options

The number of stock options under the SOP 2020 and the SOP 2021 developed as follows:

In thousand options	2021	2020
Outstanding as of January 1	629	–
Expired during the year	–127	–
Exercised during the year	–	–
Committed during the year	927	629
Outstanding as of December 31	1,429	629
Exercisable as of December 31	–	–

5.5.4 Expenses recognized in profit or loss

Expenses of EUR 5,356 thousand (previous year: EUR 704 thousand) were recognized in personnel expenses in fiscal year 2021 in connection with the share-based payment agreement.

5.6 Employee benefits

The Group operates company pension plans in the form of defined contribution plans.

Defined contribution plans take the form of retirement, disability and surviving dependents' benefits, the amount of which is based on length of service and salary. The employer's contributions to the statutory pension insurance to be paid in Germany are to be regarded as such defined contribution plans. In the Group, payments to defined contribution plans relate predominantly to contributions to the statutory pension insurance scheme in Germany. In the reporting period, expenses in connection with defined contribution plans amounted to EUR 598 thousand (prior year: EUR 176 thousand).

5.7 Segment reporting

In accordance with IFRS 8, operating segments are defined on the basis of the Group's internal management and reporting. The organizational and reporting structure of the Northern Data Group is based on management by business unit. Based on the reporting system it has established, the Management Board, as the chief operating decision maker, assesses the performance of the various segments and the allocation of resources. The segmentation is as follows:

Mining

The Mining business unit comprises the provision of computing power for crypto mining.

Hardware & Other

The Other business unit comprises in particular the provision of the necessary hardware for crypto mining activities as well as the expansion of stationary and mobile data centers and hosting services.

The accounting policies of the segments are basically the same as those applied for external financial reporting. For details, please refer to Note 1.8 "Accounting policies." The most important financial targets and performance indicators for the Northern Data Group are revenue and EBITDA. Transactions between the segments take place to an insignificant extent.

Information regarding the results of each reportable segment is presented below:

EUR thousand	Reportable segments			Other companies and Group functions	Reconciliation Consolidation	Group
	Mining	Hardware & Other	Total			
Revenues	135,541	198,534	334,075	381	-144,596	189,860
thereof external sales	135,541	54,319	189,860	-	-	189,860
thereof inter-company sales	-	144,216	144,216	381	-144,597	-
EBITDA	310,798	70,102	380,900	-1,788	-59,054	320,058
Depreciation, amortization, and impairment	-33,029	-32,856	-65,885	-47	-	-65,933
thereof impairments	-13,210	-6,404	-19,614	-	-	-19,614
EBIT	277,769	37,246	315,015	-1,835	-59,054	254,125

The reconciliation column includes the effects resulting from consolidation procedures as well as the amounts resulting from the different definition of the contents of the segment items compared to the corresponding Group items.

The eliminated sales of the segments generated with other segments that are also consolidated can be seen in the reconciliation column to sales.

The amounts in the reconciliation column to Group EBIT include the effects of consolidation adjustments recognized in profit or loss, in which income and expenses at two partners do not offset each other in the same amount or the same period.

In the following, information is provided at company level in accordance with IFRS 8.31 et seq.

The Northern Data Group's external sales break down by geographical region (location of the companies included) as follows.

EUR thousand	2021	2020
Domestic	97,923	–
Abroad	91,937	16,377
thereof USA	50,929	
Total	189,860	16,377

The carrying amounts of non-current assets break down as follows.

EUR thousand	12/31/2021	12/31/2020
Domestic	125,379	192,091
Abroad	292,863	193,207
thereof Netherlands	185,915	–
thereof Canada	52,551	–
thereof Norway	24,068	–
thereof Sweden	17,519	–
thereof USA	12,810	193,207
Total	418,241	385,298

For the presentation of information on geographical regions, sales, and non-current assets are stated according to the location of the respective Northern Data company. Non-current assets by region comprise non-current assets less deferred tax assets, shares in other companies, and other financial assets. Due to the exchange of services within the Group, sales are in some cases recognized differently from the geographical location of the non-current assets.

Revenues from two customers in the Mining segment account for approximately EUR 132,652 thousand (previous year: EUR 0 thousand) of the Group's total revenues.

5.8 Other financial obligations

As of the reporting date, other financial obligations amounted to EUR 254,588 thousand (previous year: EUR 133,701 thousand). Other financial obligations include, in particular, short-term purchase commitments arising from hardware contracts. In addition, there are financial obligations from low-value or short-term rental and lease agreements with a remaining term of up to one year amounting

to EUR 354 thousand (previous year: EUR 205 thousand) and with a remaining term of one to five years amounting to EUR 972 thousand (previous year: EUR 399 thousand). For financial obligations arising from rental and lease agreements, reference is also made to Note 4.8 "Financial liabilities."

5.9 Other matters

The Frankfurt a.M. public prosecutor's office examined a suspicious activity report filed by the German Federal Financial Supervisory Authority (BaFin) on February 10, 2021 for alleged market manipulation. After reviewing the report and the company's statement, the public prosecutor's office discontinued the preliminary investigation on November 26, 2021 due to a lack of initial suspicion of criminal conduct.

In a letter dated November 26, 2021, BaFin issued a further statement in which it reiterated its allegations and stated that it had identified "indications of further market manipulation". The public prosecutor's office has again examined this new submission, without affirming any initial suspicion to date. It is up to the public prosecutor's office to decide whether investigations are to be commenced at all or whether the statement is also to be dismissed.

The company is of the opinion that the aforementioned facts do not give rise to any initial suspicion of criminal conduct and that, moreover, there is no sufficient likelihood of sanctions being imposed. Accordingly, no provision has been recognized in respect of these matters as of December 31, 2021.

5.10 Fees and services of the auditor

Pursuant to Section 315e (1) of the German Commercial Code (HGB) in conjunction with Section 314 (1) No. 9 HGB, the following fees and services for the auditor of the Consolidated Financial Statements are to be disclosed as follows:

EUR thousand	2021	2020
Final audit	430	406
Other confirmation services	0	110
Total	430	516

The fee for audit services provided by KPMG AG Wirtschaftsprüfungsgesellschaft related to the audit of the Consolidated Financial Statements and the annual financial statements of the company, as well as various audits of the annual financial statements of its subsidiaries.

5.11 List of shareholdings of Northern Data AG pursuant to Sec. 313 (2) no.1 to 4 of the German Commercial Code (HGB)

Subsidiary	Seat	Share in percent	Full consolidation (V) Participation (B) 12/31/2021	Equity EUR 12/31/2021	Result EUR 12/31/2021
Groupe Kelvin Emtech Inc.	Montreal (Canada)	100	V	5,512,228	1,407,539
Kelvin Emtech Inc.	Montreal (Canada)	100	V	284,303	1,261,769
KE Technologies Inc.	Montreal (Canada)	100	V	69	1,344,999
CEDTECH Construction Inc.	Montreal (Canada)	100	V	695	-256,429
Le Groupe Berman Inc. ¹	Montreal (Canada)	100	V	-	-
Northern Data CA Ltd.	Ontario (Canada)	100	V	-1,632,356	-890,772
Northern Data NL BV	Eygelshoven (Netherlands)	100	V	-9,097	44,336
Northern Data NOR AS	Notodden (Norway)	100	V	5,228,714	5,135,987
ND Real Estate 1 AS	Notodden (Norway)	100	V	17,608	14,901
Northern Data Software GmbH ²	Frankfurt (Main)	100	V	-61,467,982	-25,071,583
Northern Data US Holdings, Inc.	Delaware (USA)	100	V	-1,855,057	-1,776,476
Northern Data US, Inc.	Delaware (USA)	100	V	-162,043	-155,179
Northern Data NY, LLC	Delaware (USA)	100	V	2,295,168	2,197,942
Northern Data ND, LLC	Delaware (USA)	100	V	89,239	85,459
Northern Data PA, LLC	Delaware (USA)	100	V	-917,553	-878,687
North Georgia Data, LLC	Delaware (USA)	100	V	1,527,978	376,441
Northern Data Services Limited	London (Great Britain)	100	V	8,045,281	-1,159,239
Hydro66 Property Services AB	Boden (Sweden)	100	V	2,156	-99
Hydro66 Svenska AB	Boden (Sweden)	100	V	6,783,518	-1,741,634
Hydro66 Services AB	Boden (Sweden)	100	V	110,643	3,894
Decentric Europe B.V.	Amsterdam (Netherlands)	100	V	26,166,294	24,824,406
Bitfield N.V.	Amsterdam (Netherlands)	100	V	-14,963,618	18,544,539
1277963 B.C. Ltd.	Vancouver (Canada)	100	V	59,581,695	13,285,601
Minondo Ltd.	Gibraltar (Gibraltar)	100	V	31,063,316	6,497,033
Northern Data Quebec Ltd.	Calgary (Canada)	100	V	-42,900	-41,648
Lancium Technologies Corp.	Houston (USA)	7.01	B	129,848,469	-6,008,641
ND Real Estate 2 AS	Notodden (Norway)	100	B	2,277	-166
Northern eCloud ehf. DRÖG	Reykjavik (Iceland)	100	B	-101,930	-45,789
Northern Data NE, LLC ³	Delaware (USA)	100	B	-	-
Northern Data HK Ltd.	Hong Kong (Hong Kong)	100	B	-233,881	-223,984
Northern Data Alberta Ltd. ³	Calgary (Canada)	100	B	-	-

¹ No data, as Le Groupe Berman Inc. is fully part of Kelvin Emtech Inc. as of 2020

² Northern Data Software GmbH has made use of the exemption provision pursuant to Section 264 (3) of the German Commercial Code (HGB) for the fiscal year 2021 and has submitted the declarations required for this purpose in the electronic Federal Gazette for publication.

³ No data, as company in formation

5.12 Events after the balance sheet date

February 2022

Northern Data announced on February 21, 2022, that Dr. Mathias Dähn will step down as Chief Financial Officer at the end of February 2022. Christopher Yoshida took over as Chief Financial Officer, alongside his role as President of the North American business.

March 2022

Northern Data entered into a cooperation with the state of Oklahoma and other partners in March 2022 to establish another data center site in North America. A site with a capacity of up to 250 megawatts is planned to serve the HPC sector. It is expected to be fully operational by 2024.

The subsequent disclosures have no effect on the Consolidated Financial Statements. There are no other known significant Group-specific events or developments after the reporting date of the Consolidated Financial Statements that would have resulted in a material change in the recognition or measurement of the individual assets or liabilities as of December 31, 2021.

May 2022

Due to the falling prices on the cryptocurrency market since December 2021, the Management Board decided to sell the entire cryptocurrency portfolio in May 2022. Since then, the compensation earned in cryptocurrency for the computing services provided has been converted on a daily basis with the goal of ensuring that the liquidity reserve is kept stable and cash and cost management is always monitored.

5.13 Release date of publication

The Consolidated Financial Statements were approved for publication and forwarding to the Supervisory Board by the Management Board on August 29, 2022. The Supervisory Board approved the Consolidated Financial Statements that same day.

5.14 Assurance of the legal representatives

To the best of our knowledge, and in accordance with the applicable reporting principles, the Consolidated Financial Statements give a true and fair view of the assets, liabilities, financial and earnings position of the Group, and the Group Management Report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group.

Frankfurt/Main, August 29, 2022



Aroosh Thillainathan

Chairman of the
Management Board



Stefan Sickenberger

Member of the
Management Board

Independent Auditor's Report

To Northern Data AG, Frankfurt am Main

Opinions

We have audited the consolidated financial statements of Northern Data AG, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2021, and the consolidated statement of profit or loss and other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the financial year from 1 January to 31 December 2021, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of Northern Data AG for the financial year from 1 January to 31 December 2021.

In our opinion, on the basis of the knowledge obtained in the audit,

- › the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Section 315e (1) HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at 31 December 2021, and of its financial performance for the financial year from 1 January to 31 December 2021, and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development.

Pursuant to Section 322 (3) sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and the group management report.

Basis for the Opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with Section 317 HGB and the German Generally Accepted Standards of Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are

further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the group management report.

Material Uncertainty about the Group's Ability to Continue as a Going Concern

We refer to Section "3.4 Going concern basis" in the notes to the consolidated financial statements as well as to the disclosures under Section "Opportunities, risk and forecast report" of the group management report, in which management describes that Northern Data expects a balanced liquidity position in its liquidity planning for the forecast period. However, this is contingent on the occurrence of a series of assumptions on which the Group's liquidity planning is based. Since Northern Data generates a significant portion of its revenue through the mining of cryptocurrencies, the Group is affected by the declines in the prices of cryptocurrencies that occurred in the first half of 2022, in particular for Bitcoin and Ethereum, and the associated decline in mining profitability. The Company planned to finance its further infrastructure expansion largely through further inflows generated from mining activities and at the same time to retain a portion of its Ethereum assets generated through mining on a long-term basis. Given the decline in mining profitability in the first half of 2022, the current conditions mean that the planned further expansion of the infrastructure is dependent on obtaining external financing. If external financing cannot be realised, the Company's and the Group's ability to cover future payments for mining business operations will – given current mining profitability – depend on the planned further expansion of the infrastructure being partly postponed to a later point in time or, if necessary, being discontinued. Furthermore, it will depend on there being no further reduction in mining profitability – including, for example, as a result of a possible shift of the Ethereum consensus algorithm from proof-of-work (PoW) to proof-of-stake (PoS) – to the extent that even postponing the expansion of the infrastructure would be insufficient to cover operating expenses. As presented in Section "3.4 Going concern basis" in the notes to the consolidated financial statements and in Section "Opportunities, risk and forecast report" in the group management report, these events and circumstances indicate uncertainty that could cast significant doubt on the Group's ability to continue its business activities and which represent a going-concern risk within the meaning of Section 322 (2) sentence 3 HGB. Our opinions have not been modified with respect to this matter..

Other Information

Management and/or the Supervisory Board are/is responsible for the other information. The other information comprises the annual report. The other information does not include the consolidated financial statements, the group management report information audited for content and our auditor's report thereon.

Our opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- › is materially inconsistent with the consolidated financial statements, with the group management report information audited for content or our knowledge obtained in the audit, or

- › otherwise appears to be materially misstated.

Responsibilities of Management and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

Management is responsible for the preparation of consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition, management is responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, management is responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, management is responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Section 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- › Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls.
- › Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.
- › Evaluate the appropriateness of accounting policies used by management and the reasonableness of estimates made by management and related disclosures.

- › Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- › Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB.
- › Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.
- › Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.
- › Perform audit procedures on the prospective information presented by management in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by management as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Mannheim, August 29, 2022

KPMG AG
Wirtschaftsprüfungsgesellschaft

[Original German version signed by:]

Rackwitz

Wirtschaftsprüfer

[German Public Auditor]

Forstreuter

Wirtschaftsprüfer

[German Public Auditor]

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Disclaimer

This report contains forward-looking statements that do not describe past or present facts. It includes assumptions and expectations based on current plans, estimates and forecasts as well as information available to Northern Data AG at the time of completion of this report and these are not to be understood as guarantees of the future developments and results contained therein. Rather, they depend on a variety of factors and are subject to various risks and uncertainties (in particular those described in the section "Report on Opportunities, Risks and Forecast Report") and are based on assumptions that may not prove to be accurate. It is possible that actual developments and results may differ from the forward-looking statements made in this report. Northern Data AG does not undertake any obligation to update the forward-looking statements contained in this report beyond what is required by law. If Northern Data AG updates one or more forward-looking statements, it cannot be concluded that the affected or other forward-looking statements will be updated on an ongoing basis.

In addition to the measures prepared in accordance with IFRS, Northern Data presents alternative performance measures, e.g. EBITDA, adjusted EBITDA, EBIT, adjusted EBIT, which are not part of the financial reporting framework. These measures are intended to supplement, but not replace, the disclosures prepared in accordance with IFRS. Alternative performance measures are not subject to IFRS or other generally accepted accounting principles. Other companies may use different definitions of these terms.

The figures in this report have been rounded in accordance with standard commercial practice. This may mean that individual amounts do not add up exactly to the totals shown.

Gender-neutral language

For reasons of better readability, gender-neutral differentiation is largely dispensed with in this report. In the interests of equal treatment, the corresponding terms apply to all genders. The abbreviated form of language does not imply any judgement.

Translation

The 2021 Annual Report is a publication of Northern Data AG and is also available in English. In case of doubt, the German version takes precedence.

