ATON 2 GmbH, Munich

GROUP MANAGEMENT REPORT AS OF 31 DECEMBER 2022

(Translation – the German text is authoritative)

Contents

I. GROUP PROFILE

1. Business segments

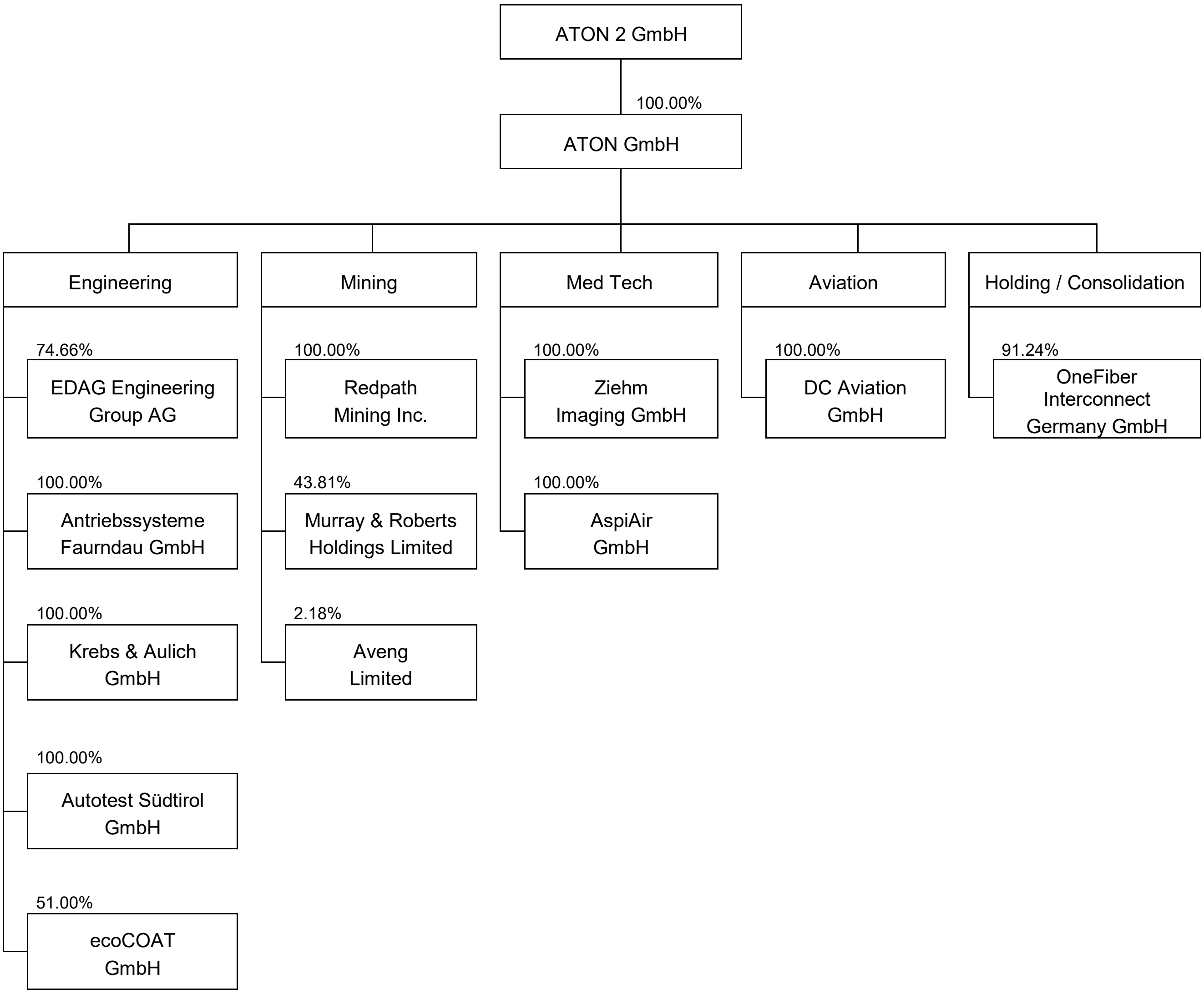
The ATON Group is a group of internationally operating companies in the business segments Engineering, Mining, Med Tech and Aviation.

The ATON Group comprises the ATON 2 GmbH, a corporation established under German law, and the following investments:

	31.12.2022	31.12.2021
Subsidiaries	92	92
thereof consolidated	85	85
Joint Ventures	23	24
thereof consolidated using the equity method	23	24
Investments in associates and investments measured at fair value	8	6
thereof consolidated using the equity method	3	3
Total	**123**	**122**
thereof consolidated	**111**	**112**

The ATON Group focuses on the development of the core competencies in the individual business segments. Strategic investments, the merging of similar activities and the use of synergies as well as the disposal of non-core activities shall enhance the companies' competitive advantage, optimise the use of existing resources and thus increase value added.

The organisational structure of the ATON Group with the operating units allocated to the relevant business segments is as follows as of 31 December 2022:



The range of services offered by the **segment Engineering** includes in particular the areas of engineering and plant construction for the automotive industry, along with other sectors of the mobility industry. In addition, this segment develops and offers innovative and complex components, high-performance electric motors and new high-tech solutions for innovative products, primarily through the application of metallic coatings to virtually all surfaces.

EDAG Group is one of the largest independent engineering partners to the automotive industry for the development of vehicles, derivatives, modules and production facilities. The business is organised in the following divisions: Vehicle Engineering, Electrics / Electronics and Production Solutions. EDAG's focus is on the automotive and commercial vehicle industries. In addition, further potential is seen in the industrial and smart city environment. Thanks to its global network, EDAG has a local presence at its customers' premises almost everywhere.

EDAG works according to the principle of production-optimised solutions, which means that development results are always in line with current production requirements. This comprehensive expertise allows EDAG, as an independent engineering expert, to support its customers from the initial idea to design, through production development and prototyping, to turnkey production systems. In addition, as a technology and innovation leader, the Group operates competence centres for pioneering future technologies in the automotive industry, including the areas of digitalisation, safe mobility, sustainable vehicle development and drive and storage technologies. The organisation and the technological focus areas are permanently adapted in order to continue to sustainably develop the appropriate solutions for the dynamic market environment of the mobility industry.

Antriebssysteme Faurndau GmbH's core competencies are the development, manufacturing and sale of standard and customised special drives with high dynamics, maximum rotational acceleration and low mass moments of inertia in synchronous and asynchronous technology (high-performance electric motors). In addition, associated services are offered, which include worldwide customer service, spare parts sales, maintenance and repair of motors, converters, power converters and encoder systems as well as electrically rotating systems of all types. On the customer side, the focus is on the automotive sector (test stand technology), the plastics, packaging and paper industries, and general mechanical engineering.

Krebs & Aulich GmbH is calculating, designing, constructing and building electrical machines with the highest efficiencies and for special requirements for more than 20 years and, like Antriebssysteme Faurndau GmbH, is active in the field of high-performance electric motors. On the product side, the focus is on the areas of test stand engines for the automotive industry and generators in the field of hydroelectric power. In the field of servo motors the company also provides small batch series of engines for primary flight control actuators as well as built-in engines for machine tools and servo motors for the aerospace industry.

Autotest Südtirol GmbH develops and manufactures components for the international automotive industry. As a company specialised in this field, technical plastic and metal components are realised for vehicles of well-known car brands. The company also supervises the manufacturing of the necessary tools throughout the entire development process, coordinates the sampling and brings the tools to series production readiness. The company was acquired by ATON GmbH at the beginning of April 2022 and is fully consolidated since then.

As part of a further capital increase in the first quarter of 2022, ATON GmbH has now acquired a majority stake of 51.0 % and thus control over **ecoCOAT GmbH**. The company develops new high-tech solutions for innovative products and thereby specialises in a coating technology that can be used to bond metals and polymers to almost any surface. The first products, that have been launched in the meantime are cleaning pads for floor care and maintenance under the brand FloorZilla.

The **segment Mining** offers mining and shaft-sinking services and products worldwide.

The **Redpath** Group is a global mining contractor, providing full services to the mining industry, including shaft sinking, shaft equipment repair and rehabilitation, underground mine development and construction, contract mining, surface plant construction, raiseboring, mechanised raising and technical services supporting the design management and construction of all underground mine infrastructure. Redpath Group continues to develop its core services of shaft sinking and mine development, expanding its raisebore fleet, which now includes all relevant sizes, putting the Group in a very strong competitive position in the global raisebore market. In addition, Redpath is pursuing the development of mining equipment automation to apply this technology to projects.

The **Murray & Roberts** Group, in which ATON holds a 43.81 % stake, is a globally operating group for engineering, construction and underground mining services. The range of services covers the areas of oil & gas, underground mining and power & water. The Group applies its capabilities throughout the project life cycle to optimise its clients' fixed capital investments. The Group achieves this by focusing its expertise and capacity on delivering sustainable solutions for project engineering, procurement, construction, commissioning, operations and maintenance. The investment is accounted for using the equity method.

The **segment Med Tech** offers solutions for the healthcare market in the fields of surgery and diagnostics, with a focus on X-ray diagnostics on the one hand and products for the pharmaceuticals industry and hospitals on the other hand.

The **Ziehm** Group specialises in the development, production and worldwide marketing of mobile X-ray-based system solutions for imaging (so-called C-arms). Essentially, this involves two main products. Firstly, these are the Ziehm full size C-arm systems, which are used in spine surgery, orthopaedics, traumatology, vascular surgery, interventional radiology, cardiology and cardiac surgery as well as other clinical applications. The focus on intraoperative imaging and innovative X-ray technologies is consistently implemented through high investments in research. The available hardware and software features, which have also been further enhanced through the acquisition of Therenva SAS, support easy communication and improve process efficiency in the OR. The second main product is the Orthoscan mini C-arm systems, where innovative product solutions for orthopaedic imaging are developed, manufactured, distributed and services are offered to our customers worldwide. The mini C-arm is used for fluoroscopic imaging of the extremities in orthopaedic surgery and for digital diagnostic imaging in medical practices.

AspiAir GmbH is focused on the development of inhalation therapies.

The **segment Aviation** comprises mainly business aviation and charter flights.

DC Aviation GmbH, as operator and charter provider including aircraft technology, concentrates on the premium segment of private jets, particularly for medium and long-haul flights. In addition to the company headquarters in Stuttgart with its own terminal and hangar, another hangar with an exclusive VIP lounge has been opened in Oberpfaffenhofen near Munich in mid-2022. The international presence is strengthened by a subsidiary in Malta and a 49.0 % joint venture in Dubai (DC Aviation Al Futtaim LLC) with local infrastructure at Dubai World Central airport. The second business field, which is steadily growing in importance, is the maintenance, repair and technical modification of the business jets operated by DC Aviation as well as the maintenance of third-party aircraft not operated by DC Aviation.

OneFiber Interconnect Germany GmbH, held by ATON Digital Services GmbH, plans to build a widespread, homogeneous and resilient high-performance fibre optic network along the German rail network (i.e. on federally owned land). This will create a technologically completely new and future-proof digital infrastructure with over 8,000 access points in a resilient ring structure, not only for cities but also for rural areas. Key customer segments are all areas of public administration and business, which require high bandwidths with reliable and secure connectivity and networking options for increasingly data-intensive applications in the context of digitalisation. The company is currently still presented within the segment Holding / Consolidation.

2. Management

ATON 2 GmbH is a strategic holding company with extensive competencies regarding strategy and financing. The management of the individual subsidiaries assumes direct operative responsibility and acts to the extent agreed with the management of ATON 2 GmbH in order to achieve the financial and strategic objectives. There is a permanent exchange between the managing directors of the subsidiaries and the holding company as part of a monthly reporting.

3. Research and development

The majority of the Group's companies operate in technological fields that are constantly evolving. These include in particular the Ziehm Group, the EDAG Group and the Redpath Group. AspiAir GmbH and ecoCOAT GmbH should also be mentioned here. In order to differentiate from competitors and to keep up with the latest technological developments, these companies individually operate research and development as well as application development departments. Permanent development and enhancement of the product portfolio is of great strategic importance in the respective industries. Research and development costs recognised in the income statement amount to EUR 20.8 million (previous year: EUR 13.6 million). The increase compared to the previous year can be mainly traced back to the Engineering segment. In addition, there are capitalised development costs of EUR 4.0 million (previous year: EUR 4.0 million) for new and further development of products and technologies.

II. MACROECONOMIC DEVELOPMENT

Russia’s war against Ukraine has pushed up prices substantially, especially for energy, adding to inflationary pressures at a time when the cost of living was already rising rapidly around the world. Global financial conditions have tightened considerably in recent months as central banks have consistently and gradually raised policy rates, weighing on interest-sensitive spending and also adding to the pressures faced by many emerging-market economies. Labour market conditions generally remain tight, but wage increases have not kept up with price inflation, weakening real incomes despite the actions taken by governments to cushion the impact of higher food and energy prices on households and businesses. In 2022, disruptions in global supply chains declined, but supply bottlenecks, especially in the semiconductor sector, still had a significant impact on economic development (refer to OECD Economic Outlook from November 2022).

After a robust recovery in 2021, global economic growth roughly halved to 3.0 % in the reporting period compared to the previous year (6.0%) due to the situation described above.

The following overview presents the development of the gross domestic product (GDP) in the individual economic regions:

in %	2022	2021	2020	2019	2018
World	3.0	6.0	- 31.0	2.6	3.3
Europe	3.6	5.8	- 6.0	1.7	2.1
Germany	1.9	2.6	- 4.1	1.1	1.1
North America	2.2	5.9	- 2.9	2.3	2.9
South America	3.7	6.8	- 6.5	0.8	1.6
Asia/Pacific	3.2	6.4	- 0.8	3.9	4.9
China	2.8	8.4	2.2	6.0	6.7
Middle East	6.8	4.3	- 4.7	1.3	1.6
Africa	3.8	5.7	- 2.5	2.2	3.1

Source: Global Insight World Overview as of 17 January 2023.

In Europe, which was particularly hit hard by the rise in energy costs, the economy still grew by 3.6 % (previous year: 5.8%). In the first half of the year 2022, the catch-up effects of the Covid-19 pandemic had a positive impact on the service sector in particular and especially on tourism in the traditional European holiday destinations. With an increase of 1.9 %, the growth of the German economy was significantly lower than the European average (previous year: 2.6 %). German industrial production declined by 2.2 % overall, and in the energy-intensive industry production even fell by 19.6 % compared to the previous year due to the drastic increase in energy prices (refer to press release no. 49 of the Federal Statistical Office of 7 February 2023).

In the United States and in North America as a whole, the gross domestic product fell in the first two quarters of 2022 compared to the second half of 2021. Goods consumption and residential investment declined. Foreign trade also had a strong negative impact on growth in the first quarter. In contrast, the consumption of services had a positive contribution throughout. In the second half of the year, the US economy picked up, mainly due to a stronger foreign trade surplus and solid private consumption. Overall, economic growth in North America thus declined to 2.2 % in 2022 (previous year: 5.9 %).

In China, the strict zero-covid strategy repeatedly caused the government to stop economic activities through lockdowns until December. In addition, China was hit by a real estate crisis that weighed on the country's construction sector and financial system. China also suffers from high debt and weak domestic demand. As a consequence, with growth of only 2.8 %, China has clearly missed its self-given growth target of 5.5 %. This development affects the entire economic region Asia / Pacific, where economic growth was only at 3.2 % in 2022 after 6.4 % in 2021.

The rate of inflation picked up significantly in the reporting year. At the end of the year, it averaged 9.7 % worldwide (previous year: 5.7 %). The rate of inflation was 9.2 % in Europe and 8.6 % in Germany. In the United States, the annual average inflation rate of about 8 % was the highest since the beginning of the 1980s. In response to the high inflation levels, the US Federal Reserve raised its base rate seven times in the reporting year. It had reached 4.5 % at the end of 2022. The European Central Bank likewise raised its base rate four times, ending the reporting year at 2.5 %.

The Euro lost value against most main currencies on average over the course of the year. The average exchange rate against the US Dollar was 11 % lower than in the previous year. Against the Chinese Renminbi and the Swiss Franc the Euro fell by 7 %. Against the British Pound the Euro depreciated only slightly by 1 %. Against the Japanese Yen the Euro appreciated by 6% on average (Source: Federal Bank of Germany).

As a result of Russia's war against Ukraine, the shortage of oil further worsened in the 2022 financial year. With prices between USD 76.10 per barrel and USD 127.98 per barrel, the average for 2022 was USD 99.03 per barrel, which is 40 % higher than in the previous year (previous year: USD 70.92 per barrel). Towards the end of the reporting year, the price fell again significantly due to the drop in demand for gas. On 31 December 2022, a barrel of Brent Crude oil cost USD 85.91 (year-end 2021: USD 77.78) (Source: www.statista.com).

III. DEVELOPMENT OF THE BUSINESS SEGMENTS

The following comments explain the development of the gross revenue and results attributable to the particular segments.

1. Engineering

The gross revenue of this business segment is mainly generated by the EDAG Group. The Group's customers are predominantly from the automotive sector. This also applies to Antriebssysteme Faurndau GmbH, Krebs & Aulich GmbH and Autotest Südtirol GmbH. Insofar, the development of the automotive industry has a significant impact on this segment. However, even in economically weak times, manufacturers need to work on long-term development projects for new vehicles and technologies and the associated investments in new production facilities for new types of vehicles require a longer lead time.

The international automotive markets were characterised by very different dynamics in 2022. While the markets in Europe, Japan and the USA lagged behind the previous year's level, sales in China increased significantly. In particular, the shortage of primary products and raw materials, the significant increase in prices for energy and logistics, and the uncertainty triggered by the Russian war of aggression prevented a better result on the international automotive markets. Overall, the global passenger car market in 2022 remained at the previous year's level. 71.2 million passenger cars were sold (see VDA publication as of 18 January 2023: International automotive markets 2022: Europe, Japan and USA with declines).

According to the German Association of the Automotive Industry (VDA), 11.3 million new vehicles were registered in the European passenger car market in 2022, around 4 % fewer than in previous year. This means that the recovery from the pandemic-related declines of the previous two years failed to materialise last year. Compared to the pre-crisis year 2019, sales in the past year were down by 29 %. In December, the European passenger car market grew by 15 % to 1.1 million newly registered passenger cars compared to the same month of the previous year. However, even this year-end spurt could not prevent the negative annual result.

In the Chinese passenger car market, 23.2 million new vehicles were sold last year. This is 10 % more than in the previous year. The declines from the spring, when lockdowns in important sales regions caused severely restricted business, were made up for in the second half of the year, also thanks to a tax reduction on a large part of the vehicles sold.

In the US, light-vehicle sales in 2022 were down 8 % from 2021 to 13.7 million vehicles. Compared to the pre-crisis year 2019, the market declined just over 3.2 million vehicles.

According to the 2022 study "The Market for Engineering Services in Germany" by Lünendonk & Hossenfelder, the automotive industry, one of the most important customer industries for engineering service providers, is currently facing numerous new and changing challenges. These range from the electrification of drive components to the digitalisation of production, sales channels and the actual product to the networking of vehicles. For manufacturers, the user experience in the vehicle, autonomous driving and the establishment of new business models are increasingly becoming drivers in this market segment. EDAG has consistently geared its range of products and services to these requirements and, among other things, has bundled its existing competences in software and digitalisation in the cross-segment unit with the same name.

The gross revenue and the EBIT of this business segment developed as follows compared to the previous year's period:

in EUR '000	2022	2021	Change
Gross revenue	849,925	702,886	147,039
EBITDA	101,706	68,605	33,101
EBITDA margin in %	12.0	9.8	2.2
EBIT	28,646	- 4,824	33,470
EBIT margin in %	3.4	- 0.7	4.1

The following comments on the individual companies of the segment are based on unconsolidated figures.

EDAG Group's gross revenue rose by 15.8 % from EUR 688.4 million in the previous year to EUR 797.1 million, thus recording the highest revenue in EDAG's history at EUR 795.1 million. In addition to increasing R&D budgets of customers and better contract margins the financial year 2022, this development is also due to the fact that the previous year was burdened both by the ongoing challenges in connection with the Covid-19 pandemic and by the cyberattack with its associated adverse effects on the operating business. It is pleasing that all three divisions of EDAG Group were able to increase their revenue compared to the previous year. EBIT also improved significantly to EUR 48.1 million (previous year: EUR 20.9 million), which corresponds to an EBIT margin of 6.0 % (previous year 3.0 %). From a Group perspective, it must be taken into account that the EDAG Group's EBIT is burdened by amortisation effects on hidden reserves from the purchase price allocation at ATON Group level in the amount of EUR 26.1 million (previous year EUR 26.9 million). In 2022, EDAG Group recorded the highest order intake in the history, so that the order backlog as at 31 December 2022 also increased to EUR 401.2 million (as at 31 December 2021: EUR 348.9 million). However, the order backlog still does not include potential call-offs from framework agreements and call-offs from series orders.

Antriebssysteme Faurndau GmbH is part of the ATON Group since mid-2021. In 2022, the company contributes a gross revenue of EUR 16.6 million (previous year: EUR 8.2 million) and an EBIT of EUR 2.4 million (previous year: EUR 1.7 million) to the ATON Group for the first time for a full financial year, which is why the comparison with the previous year is limited. At Group level, amortisation effects from hidden reserves from the purchase price allocation burden the EBIT by EUR 1.2 million (previous year: EUR 0.7 million). Due to the very good order intake, the order backlog increased significantly to EUR 6.4 million as of the reporting date (as of 31 December 2021: EUR 4.0 million).

Krebs & Aulich GmbH is also part of the ATON Group since mid-2021. In 2022, the company contributes a gross revenue of EUR 12.5 million (previous year: EUR 6.2 million) and an EBIT of EUR 1.1 million (previous year: EUR 0.5 million) to the ATON Group for the first time for a full financial year, which is why the comparison with the previous year is limited. The amortisation effects at Group level from hidden reserves from the purchase price allocation burden the EBIT by EUR 0.5 million (previous year: EUR 0.3 million). As of 31 December 2022, the order backlog increased to EUR 8.8 million (as of 31 December 2021: EUR 6.6 million).

Autotest Südtirol GmbH was acquired 100 % at the beginning of April 2022 and is fully consolidated since then. In the nine months since consolidation, the company generates a gross revenue of EUR 23.3 million (previous year: -) and contributes to the consolidated financial statements an EBIT of EUR 0.2 million (previous year: -) in a still very challenging market environment. The amortisation effects at Group level from hidden reserves from the purchase price allocation burden the EBIT by EUR 0.2 million (previous year: -). As of 31 December 2022, the company has a very good order backlog of EUR 177.9 million (as of 31 December 2021: -), as a large number of new projects could be won in the past financial year.

The interest in ecoCOAT GmbH was increased from 45.65 % to 51.0 % as part of a capital increase in the first quarter of 2022, whereby ATON acquired control and the company is therefore fully consolidated. In 2022, the company contributed a gross revenue of EUR 0.3 million (previous year: -) and an EBIT of EUR -1.0 million (previous year: -) to the ATON Group. The amortisation effects at Group level from hidden reserves from the purchase price allocation burden the EBIT by EUR 0.2 million (previous year: -).

2. Mining

The gross revenue of this segment is generated exclusively by the Redpath Group. In addition, the Murray & Roberts Group, as an associated company, contributes to the financial result of the segment.

The most important factor influencing Redpath's business worldwide is commodity prices. Based on the Bloomberg Commodity Index, which reflects the development of commodity prices, prices for raw materials rose sharply until the end of August 2022, but have since declined again. From a full-year perspective, this means still an increase of around 16 %. However, the increase in the Bloomberg Commodity Index is mainly due to higher energy prices. High inflation and the gloomier economic environment are dampening commodity demand, which led to the decline in prices until end of the year. However, the price trend is mixed.

Among the industrial metals, the price of nickel in particular was up by 53.8 % compared to previous year. The price of lead remained largely stable (+0.3 %). In contrast, the prices for copper (-12.2 %), aluminium (-6.8 %) and zinc (-1.3 %) declined (based on 1-month futures contracts according to "DEKA Macro Research – Economy Commodities" from December 2022).

Among the precious metals, most prices fluctuate around previous year’s end level, such as silver (+1.0 %), gold (+0.2 %) and palladium (-0.7 %). The price of platinum, on the other hand, is 6.5 % above the previous year's level (based on 1-month futures contracts according to "DEKA Macro Research – Economy Commodities" from December 2022).

The price of potash rose by 132.5 % in 2022 (refer to the spot price development for potassium chloride at https://ycharts.com).

The key performance indicators of the segment developed as follows compared to the previous year's period:

in EUR '000	2022	2021	Change
Gross revenue	774,736	686,655	88,081
EBITDA	80,029	90,611	- 10,582
EBITDA margin in %	10.3	13.2	- 2.9
EBIT	16,697	28,535	- 11,838
EBIT margin in %	2.2	4.2	- 2.0

The following comments on the individual companies of the segment are based on unconsolidated figures.

Redpath's gross revenue increased by EUR 88.1 million or 12.8 % to EUR 774.7 million in 2022. The increase is largely the result of currency translation. In Canadian dollars, the increase in gross revenue was only 4.2 %. The business development of the Redpath Group varies from region to region. The main increase in revenue results from the regions America and Australia. Africa also saw an increase in revenue in 2022 compared to 2021, while Europe saw a decrease due to the early termination of the Slavkaliy project (Belarus) in 2021 and the Woodsmith, UK, project not starting until mid-2022 (only 6 months of revenue in the financial year 2022).

The increase in sales volume did unfortunately not correspond with the Group's profitability, as problems in individual projects and the cost increase due to inflation had a negative impact on project margins. In this environment, EBIT fell overall to EUR 16.7 million (previous year: EUR 28.5 million). The EBIT margin consequently declined to 2.2 % (previous year: 4.2 %). However, due to a very strong order intake in 2022, the order backlog as of 31 December 2022 could be increased significantly to EUR 1,320.4 million (as of 31 December 2021: EUR 876.8 million).

The investment in the Murray & Roberts Group, which is accounted for using the equity method, made a negative contribution of EUR -98.8 million to the financial result in the reporting period (previous year: income of EUR 58.5 million), due to the impairment based on the development of the company's equity and the stock market price.

3. Med Tech

The Med Tech segment consists of the Ziehm Group and AspiAir GmbH.

Between 2014 and 2019, global healthcare spending increased by an average of 2.8 % annually. In 2020, however, due to the Covid-19 pandemic and the resulting restrictions on public life, it fell by 2.6 % year-on-year to around USD 8.2 trillion (refer to "Deloitte - 2021 Global Health Care Outlook"). In the meantime, spending has risen again significantly and is expected to have reached approx. USD 10.0 trillion in 2022 (refer to "Global healthcare market 2022" by HID Global Corporation).

After the Covid-19-induced slump in 2020, the size of the global medical technology market has already recovered rapidly in 2021 and in 2022 is back at around USD 554 billion and thus significantly above the pre-Covid-19 level. Current forecasts assume that the market will grow at an average annual rate of 4.9% in the coming years from 2023 to 2027 and will reach a value of approximately USD 702 billion in 2027 (see "Medical Devices Market Size - Medical Technology Worldwide", December 2022, Statista Market Forecast).

Diagnostic imaging, the market segment in whose sub-segment "mobile C-arms", served by Ziehm Group, is the third largest market segment of the medical technology market after in-vitro diagnostics and cardiology. This market segment had a size of approximately USD 40 billion in 2021 and is expected to reach a size of just over USD 46 billion in 2023. In the coming years, this segment is expected to grow at an average of 4.8 % per year, so that a volume of approximately USD 56 billion is forecast for 2027 (see "Medical Devices Market Size - Diagnostic Imaging Devices", December 2022, Statista Market Forecast). The volume of the mobile C-arms sub-segment is currently estimated to be at around USD 0.9 billion.

The gross revenue and the EBIT of this segment developed as follows compared to previous year’s period:

in EUR '000	**2022**	**2021**	**Change**
Gross revenue	214,056	206,594	7,462
EBITDA	32,079	38,764	- 6,685
EBITDA margin in %	15.0	18.8	- 3.8
EBIT	21,968	28,703	- 6,735
EBIT margin in %	10.3	13.9	- 3.6

The following comments on the individual companies of the segment are based on unconsolidated figures.

The Ziehm Group achieved a gross revenue of EUR 214.1 million in the reporting period, which represents a further increase of 3.6 % compared to the already high gross revenue level of the previous year (EUR 206.6 million). The significant problems in the supply chains that occurred in 2021 persisted in the business year 2022. This is due in particular to the fact that production capacities were reduced in the upstream supply chains during the Covid-19 pandemic and now cannot be ramped-up again as quickly as necessary to meet the rising (pent-up) demand. In particular, the supply shortage of semiconductors led to material bottlenecks at Ziehm, especially in the area of CMOS flat panels. In addition to the prevailing inflation, the shortage of materials is also leading to significant cost increases in general. Consequently, the EBIT of EUR 24.1 million is below the previous year's level (EUR 29.8 million) and the EBIT margin is down to 11.2 % (previous year 14.4 %). In order to maintain the ability to deliver, the C-arms were largely pre-produced, so that when the missing parts were delivered towards the end of the year, the units could be completed and delivered with a strong year’s finish. As the order intake remained unchanged at a high level in 2022, the order backlog increased to EUR 32.7 million as of 31 December 2022 (as of 31 December 2021: EUR 24.4 million).

AspiAir GmbH, which was newly founded towards the end of 2019, is developing inhaled therapies and is still in the research and development phase and therefore does not generate any revenue or gross revenue to date. EBIT amounts to EUR -2.1 million (previous year: EUR -1.1 million) and results primarily from research and development activities not yet eligible for capitalisation.

4. Aviation

The year 2022 started with a very robust demand for individual air travel after the Covid-19 pandemic had largely subsided and due to significant travel catch-up effects. After a relatively short period of shock following Russia's attack on Ukraine, this trend continued and air travel shifted to regions not directly affected by the war in Eastern Europe. The broad geographical and functional positioning enables DC Aviation to react very flexibly to changing demands for management, charter, hangarisation, storage and maintenance services.

Regionally, a permanently increased demand for charter flights manifested itself as a result of the aforementioned catch-up effects, especially in transatlantic traffic. As a result of the massive capacity bottlenecks of security and handling staff at the airport gates, which repeatedly led to the cancellation of scheduled flights, the charter segment attracted new customer groups, who came to appreciate the increased handling comfort in terms of security, hygiene and reliability. Air traffic that took place between Russia and Central and Southern Europe before the outbreak of the war in Ukraine have increasingly shifted to the United Arab Emirates since March. The location Dubai, where DC Aviation is represented by the joint venture with the Al Futtaim Group, developed within a very short time into the new hub of the business aviation world. It is assumed that this development will continue unabated in the coming years.

In 2022, DC Aviation successfully bid for a handling licence at Nice Côte d'Azur Airport. The airport is one of the three most important business aviation airports in Europe and the busiest in the summer half-year. DC Aviation, together with its French joint venture partner G-OPS, is operating here since January 2023. This will help us to take our market position, perception in the industry and customer contact opportunities to a new level.

In order to ensure long-term capacity utilisation at the home base in Stuttgart, a long-term flight readiness contract could be concluded with a major customer. In addition, DC Aviation opened a new hangar at Oberpfaffenhofen airport in July 2022, where parking, handling and management services for aircraft owners in the greater Munich area are offered since then.

The gross revenue and the EBIT of this segment, which exclusively consists of the DC Aviation, developed as follows compared to the previous year’s period:

in EUR '000	2022	2021	Change
Gross revenue	126,682	85,523	41,159
EBITDA	7,598	3,262	4,336
EBITDA margin in %	6.0	3.8	2.2
EBIT	4,253	806	3,447
EBIT margin in %	3.4	0.9	2.5

In 2022, DC Aviation completed 7,659 flight hours, 13 % more than in the previous year (2021: 6,801 flight hours), and reported gross revenue of EUR 126.7 million, of which slightly more than EUR 20 million of revenue was attributable to aircraft trading. Around EUR 26.3 million resulted from third-party charters, i.e. aircraft were marketed to non-owner aircraft. Gross revenue is thus 48.1 % higher than in the same period last year (EUR 85.5 million). As of 31 December 2022, DC Aviation achieved an operating result (EBIT) of EUR 4.3 million (previous year: EUR 0.8 million), which is significantly above budget. Additionally, the joint venture DC Aviation Al Futtaim

LLC Dubai, which is accounted for using the equity method, has a positive contribution of EUR 1.4 million to the financial result and thus to the EAT in the financial year.

As of 31 December 2022, a total of 30 aircraft (previous year: 29 aircraft) are operated within the DC Aviation fleet.

IV. RESULTS OF OPERATIONS, FINANCIAL AND NET ASSETS POSITION

The business development of the ATON Group, which results from the sum of the segments presented above as well as the ATON 2 GmbH and the other companies within the ATON Group, is explained below.

The key financial performance indicators are gross revenue, earnings before interest and taxes (EBIT) and earnings after taxes (EAT).

1. Results of operations

The following overview presents the Group's results of operations, whereby the items of income and expense are grouped from an economic perspective:

in EUR '000	2022		2021		Change	
Revenue	1,950,440	99.2%	1,679,023	99.5%	271,417	16.2%
Gross revenue	**1,965,596**	**100.0%**	**1,686,926**	**100.0%**	**278,670**	**16.5%**
Cost of materials	- 470,935	- 24.0%	- 354,423	- 21.0%	- 116,512	32.9%
Gross profit	**1,494,661**	**76.0%**	**1,332,503**	**79.0%**	**162,158**	**12.2%**
Personnel expenses	- 1,055,115	- 53.7%	- 940,294	- 55.7%	- 114,821	12.2%
Impairment losses / reversal of impairment losses on financial assets	12,537	0.6%	- 79,479	- 4.7%	92,016	- 115.8%
Other operating expenses / income	- 223,186	- 11.4%	- 157,518	- 9.3%	- 65,668	41.7%
EBITDA	**228,897**	**11.6%**	**155,212**	**9.2%**	**73,685**	**47.5%**
Depreciation and amortisation	- 145,344	- 7.4%	- 146,530	- 8.7%	1,186	- 0.8%
Impairment losses	- 5,132	- 0.3%	- 2,053	- 0.1%	- 3,079	150.0%
EBIT	**78,421**	**4.0%**	**6,629**	**0.4%**	**71,792**	**1,083.0%**
Net interest expense	- 9,173	- 0.5%	- 8,375	- 0.5%	- 798	9.5%
Other financial result	- 112,877	- 5.7%	76,771	4.6%	- 189,648	- 247.0%
Net financial result	**- 122,050**	**- 6.2%**	**68,396**	**4.1%**	**- 190,446**	**- 278.4%**
Income taxes	2,736	0.1%	- 19,278	- 1.1%	22,014	- 114.2%
Consolidated earnings after taxes (EAT)	**- 40,893**	**- 2.1%**	**55,747**	**3.3%**	**- 96,640**	**- 173.4%**
EAT attributable to non-controlling interest	- 3,761	- 0.2%	- 4,088	- 0.2%	327	- 8.0%
EAT attributable to owners of the parent	**- 37,132**	**- 1.9%**	**59,835**	**3.5%**	**- 96,967**	**- 162.1%**

Gross revenue is EUR 278.7 million or 16.5 % higher than in previous year. This reflects the continued recovery from the Covid-19 pandemic. The increase is reflected in all segments. In the Engineering segment, gross revenue rose by 20.9 % to EUR 849.9 million, mainly due to the EDAG Group, but also because of the acquisition of Autotest Südtirol GmbH, Antriebssysteme Faurndau GmbH and Krebs & Aulich GmbH to the Group. In the Mining segment, Redpath recorded an increase of 12.8 % to EUR 774.7 million, partly due to foreign currency effects. Gross revenue in the Med Tech segment could be increased slightly by 3.6 % to EUR 214.1 million after the record year 2021. Gross revenue in the segment Aviation also increased by 48.1 % to EUR 126.7 million due to strong demand for third-party charters and aircraft brokering. The forecast of a stable gross revenue in previous year's consolidated financial statements was thus clearly exceeded.

The cost of materials ratio increased from 21.0 % to 24.0 %. This reflects the sharp cost increases due to inflation in all segments. In the Engineering segment, the ratio increased from 12.8 % to 15.5 %, which can be attributed on the one hand to a higher external procurement of services at EDAG Group, but also to the more cost-intensive companies newly added to the Group, which are more cost intensive in terms of materials. The Mining segment also had to face an increase from 17.4 % to 20.7 %. In the Med Tech segment, cost increases in the semiconductor sector in particular led to an increase in the ratio from 40.6 % to 41.8 %. The higher capacity utilisation and thus the increased number of flights as well as aircraft brokering caused the ratio in the Aviation segment to rise from 65.3 % to 70.7 %.

As a consequence, gross profit increased by EUR 162.2 million or 12.2 % to EUR 1,494.7 million. However, the gross profit margin declined from 79.0 % in the previous year to 76.0 % in the reporting period due to the cost increases.

Although personnel expenses rose by EUR 114.8 million in absolute terms, the personnel expense ratio of 53.7 % is slightly below the level of the same period in the previous year (55.7 %).

The net amount of other operating expenses / income deteriorated by EUR 65.7 million from EUR -157.5 million in previous year to EUR -223.2 million, which is mainly due to the significant increase of EUR 62.1 million in other operating expenses in a number of cost items and, in particular, to a significant resurgence in travel activities. However, other operating income also declined by EUR 3.6 million, which is mainly due to the Mining segment and the significantly lower income from foreign currency translation there. This was partly offset by the badwill from the first-time consolidation of Autotest Südtirol GmbH recognised as income (+ EUR 6.2 million).

Impairment losses / reversal of impairment losses on financial assets in the reporting period represent a net income of EUR 12.5 million, which is mainly due to the reversal of risk allowances on loans to related parties.

As a result of the effects described above, EBITDA rose by EUR 73.7 million to EUR 228.9 million.

Compared to the previous year, depreciation and amortisation decreased by EUR 1.9 million to EUR 150.5 million. This increase is reflected in almost all segments (Mining EUR +1.2 million, Aviation EUR +0.9 million). In the Engineering segment, EDAG shows a decline of EUR -3.0 million, although this is largely offset by the newly added companies.

EBIT could be improved by a total of EUR 71.8 million to EUR 78.4 million (previous year: EUR 6.6 million), which is reflected in an increase in the EBIT margin to 4.0 % (previous year: 0.4 %) and is in line with the forecast of a significant increase in EBIT for the financial year in previous year's management report. The main contributors to this improvement are the Engineering segment with a margin of 3.4 % (previous year: -0.7 %) and the Aviation segment with a margin of 3.4 % (previous year: 0.9 %), where the higher utilisation of aircrafts and aircraft brokering increased the contribution to earnings. In the Med Tech segment, the margin declined from 13.9 % to 10.3 % due to the aforementioned problems in the supply chains and the associated price increases. The Mining segment had to struggle particularly with the decline in margins, which fell from 4.2 % to only 2.2 %, mainly due to problems in individual projects.

The net interest result is negative at EUR -9.2 million, a slight deterioration by EUR 0.8 million compared to previous year.

The other financial result deteriorated from EUR 76.8 million in the comparative period to EUR -112.9 million in the reporting period. While in the previous year, the result from investments accounted for using the equity method and (net) write-ups on the investment in the Murray & Roberts Group to the stock market price of EUR 58.5 million could be reported, in the reporting period there was a (net) expense of EUR -98.8 million. In addition, the result from investments in securities of EUR -15.0 million in the reporting period is EUR 25.0 million lower than in the previous year (EUR 10.0 million).

With earnings before income taxes (EBT) of EUR -43.6 million, there is a tax income of EUR 2.7 million. This results in a tax rate of 6.3 % (previous year: 25.7 %). This is mainly due to non-taxable components of the income statement such as the impairment of the investment in Murray & Roberts to the stock market price, other losses on securities and the composition of results in the Group, as no deferred taxes are recognised for losses in the individual companies if the probable future usability is not given. In addition, tax losses carried forward in the segment Holding / Consolidation, that were previously not considered usable, are expected to be usable again and thus deferred tax assets of EUR 22.4 million are recognised. Adjusted for these components, the Group's tax rate is 29.8 %, which is roughly in line with expectations.

The consolidated earnings after taxes (EAT) deteriorated by a total of EUR 96.6 million to EUR -40.9 million due to the valuation effects within the financial result. Adjusting for the income statement contributions of Murray & Roberts in the financial result in the previous year and in the reporting period, the significant increase in the adjusted consolidated earnings after taxes (EAT), that was forecast in the previous year, is also evident here. This can be attributed, among other things, to the economic recovery after the Covid-19 pandemic. However, the strongly negative valuation effects in the financial result lead to a clearly declining, negative Group EAT.

After deduction of EAT attributable to non-controlling interest, the EAT attributable to owners of the parent amounts to EUR -37.1 million (previous year's period: EUR 59.8 million).

2. Financial position

The statement of cash flows presents the Group's cash flows from operating, investing and financing activities, as well as the resulting change in cash and cash equivalents. The following overview reflects a condensed cash flow statement:

in EUR '000	2022	2021	Change	
Cash and cash equivalents at the beginning of the period	**529,100**	**669,773**	**- 140,673**	**- 21.0%**
Earnings before interest, dividends and income taxes	- 37,008	81,069	- 118,077	
Depreciation and amortisation / write-ups of assets	195,098	162,801	32,297	
Result from the disposal of property, plant and equipment and securities	- 1,593	115	- 1,708	
Result from the disposal / deconsolidation of consolidated subsidiaries	- 32	-	- 32	
Change in provisions	2,582	5,169	- 2,587	
Other non-cash transactions	52,776	- 11,468	64,244	
Gross cash flow	**211,823**	**237,686**	**- 25,863**	**- 10.9%**
Interest, dividends and income taxes paid / received	- 26,513	- 29,946	3,433	
Changes in trade working capital	- 105,769	- 89,271	- 16,498	
Changes in other working capital	14,867	18,562	- 3,695	
Cash flow from operating activities	**94,408**	**137,031**	**- 42,623**	**- 31.1%**
Investments in / proceeds from the disposal of intangible assets and property, plant and equipment	- 74,521	- 66,151	- 8,370	
Investments in / proceeds from the disposal of financial assets / associates	45,397	- 61,866	107,263	
Proceeds from the disposal of / payments for the acquisition of consolidated subsidiaries	- 3,892	- 30,211	26,319	
Cash flow from investing activities	**- 33,016**	**- 158,228**	**125,212**	**- 79.1%**
Proceeds from shareholder	19,000	-	19,000	
Payments to shareholders	- 137,827	- 98,940	- 38,887	
Proceeds from / repayments of loans and leases liabilities	- 88,739	- 7,156	- 81,583	
Cash flow from financing activities	**- 207,566**	**- 106,096**	**- 101,470**	**95.6%**
Effect of changes in exchange rates	531	- 13,380	13,911	
Cash and cash equivalents at the end of the period	**383,457**	**529,100**	**- 145,643**	**- 27.5%**

The cash flow from operating activities decreased by EUR 42.6 million compared to previous year's period. This is mainly caused by the EUR 118.1 million lower earnings before interest, dividends and income taxes, which was strongly negatively influenced in the reporting period by the result from investments accounted for using the equity method. Since this is non-cash, the non-cash transactions to be corrected also increase to EUR 52.8 million. Furthermore, non-cash depreciation and amortisation increased by EUR 32.3 million. In contrast, provisions decreased by EUR 2.6 million reducing cash flow, which stands for a decline of EUR 2.6 million compared to previous year's period. At EUR 211.8 million, gross cash flow is EUR 25.9 million below previous year's level.

Due to the increase in business activity, but also due to invoicing for and advance payments received for long-term projects, the build-up of trade working capital in the reporting period is EUR 105.8 million (previous year's period: EUR 89.3 million), which means that cash flow from operating activities is EUR 16.5 million lower than in the previous year. In contrast, other working capital decreased by EUR 14.9 million, which nevertheless means a EUR 3.7 million decrease in cash flow of compared to the previous year. Thus, the net increase in working capital in the reporting period had a negative impact of EUR 90.9 million on the development of cash flow from operating activities. The net payments for interest, dividends and income taxes also led to a cash outflow of EUR 26.5 million in the reporting period (previous year's period: cash outflow of EUR 29.9 million).

The cash flow from investing activities shows a cash outflow of EUR 33.0 million in the reporting period (previous year's period: cash outflow of EUR 158.2 million). Net investments in property, plant and equipment and intangible assets increased by EUR 8.4 million to EUR 74.5 million. The net cash inflows from financial assets and shares in associated companies is EUR 45.4 million in the reporting period (previous year's period: net cash outflow of EUR 61.9 million). The cash inflows mainly result from the net repayment of loans (primarily from related companies) in the amount of EUR 43,8 million and net proceeds from the sale / acquisition of securities in the amount of EUR 3.4 million. In addition, the acquisition of shares in Autotest Südtirol GmbH and ecoCOAT GmbH as well as the payment of the contingent purchase price for Therenva SAS, acquired in 2020, led to a net cash outflow of EUR 3.9 million in the reporting period.

The cash flow from financing activities shows a total cash outflow of EUR 207.6 million (previous year's period: cash outflow of EUR 106.1 million). The cash flow from financing activities is mainly due to the net payments to shareholders amounting to EUR 118.8 million (previous year's period: EUR 98.9 million) as well as the net repayment of bank loans and lease liabilities in the amount of EUR 88.7 million (previous year's period: EUR 7.2 million).

Taking into account the effect of changes in currency exchange rates of EUR 0.5 million (previous year's period: EUR -13.4 million), cash and cash equivalents decreased by a total of EUR 145.6 million in the reporting period. Accordingly, cash and cash equivalents decreased from EUR 529.1 million at the beginning of the reporting period to EUR 383.5 million at the end of the reporting period.

3. Net assets position

in TEUR	31.12.2022		31.12.2021		Veränderung	
Aktiva						
Immaterielle Vermögenswerte	358.307	15,8%	379.056	15,6%	- 20.749	- 5,5%
Sachanlagen	554.329	24,5%	483.265	19,8%	71.064	14,7%
Sonstige finanzielle Vermögenswerte und At-Equity-Beteiligungen	300.982	13,3%	468.510	19,2%	- 167.528	- 35,8%
Vorräte	131.963	5,8%	111.619	4,6%	20.344	18,2%
Forderungen aus Lieferungen und Leistungen und sonstige Forderungen	398.370	17,6%	358.599	14,7%	39.771	11,1%
Aktive latente Steuern	41.557	1,8%	26.466	1,1%	15.091	57,0%
Zahlungsmittel und Zahlungsmitteläquivalente	383.457	16,9%	529.100	21,7%	- 145.643	- 27,5%
Vertragsvermögenswerte	75.317	3,3%	68.092	2,8%	7.225	10,6%
Sonstige Aktiva	19.150	0,8%	12.781	0,5%	6.369	49,8%
Gesamt Aktiva	**2.263.432**	**100,0%**	**2.437.488**	**100,0%**	**- 174.056**	**- 7,1%**
Passiva						
Eigenkapital	1.243.738	54,9%	1.393.860	57,2%	- 150.122	- 10,8%
Rückstellungen	89.437	4,0%	94.475	3,9%	- 5.038	- 5,3%
Finanzielle Verbindlichkeiten	513.947	22,7%	501.514	20,6%	12.433	2,5%
Verbindlichkeiten aus Lieferungen und Leistungen und sonstige Verbindlichkeiten	266.254	11,8%	227.871	9,3%	38.383	16,8%
Passive latente Steuern	42.755	1,9%	56.396	2,3%	- 13.641	- 24,2%
Vertragsverbindlichkeiten	88.739	3,9%	156.635	6,4%	- 67.896	- 43,3%
Sonstige Passiva	18.562	0,8%	6.737	0,3%	11.825	175,5%
Gesamt Passiva	**2.263.432**	**100,0%**	**2.437.488**	**100,0%**	**- 174.056**	**- 7,1%**

The balance sheet total decreased by EUR 174.1 million compared to 31 December 2021.

The decrease of intangible assets by EUR 20.7 million is mainly due to scheduled amortisation of EUR 39.8 million, which relates in particular to the customer base. This is offset by additions in the reporting period in the amount of EUR 11.6 million and additions from changes in the scope of consolidation in the amount of EUR 7.5 million from the acquisition of ecoCOAT GmbH and Autotest Südtirol GmbH.

Property, plant and equipment increased by EUR 71.1 million. This is primarily due to additions of EUR 179.7 million in the reporting period, in particular from new leases at the EDAG Group, the Redpath Group, DC Aviation GmbH and Autotest Südtirol GmbH. Changes in the scope of consolidation resulting from company acquisitions also led to an addition of EUR 9.6 million. This is offset by net depreciation and amortisation of EUR 109.6 million and disposals of EUR 9.3 million.

Other financial assets and at-equity-investments decreased by EUR 167.5 million. This is mainly due to the net decrease of EUR 25.3 million in loans to related parties reported under non-current and current other financial assets. Securities measured at fair value through profit and loss also decreased by EUR 26.7 million. In addition, there is a net decrease in the shares in Murray & Roberts Holdings Ltd. amounting to EUR 122.2 million (carrying amount after at-equity valuation or impairment to the stock market price: EUR 36.7 million). Other investments accounted for using the equity method increased by EUR 6.0 million.

Inventories increased by EUR 20.3 million, mainly due to the Ziehm Group, DC Aviation GmbH and Autotest Südtirol GmbH, a new addition to the Group.

Trade and other receivables increased by EUR 39.8 million. This is mainly due to the EUR 36.1 million increase in net trade receivables, which is largely attributable to the Redpath Group and the EDAG Group. Other receivables also increased by EUR 3.7 million.

Cash and cash equivalents decreased by EUR 145.6 million. For further information on the change in cash and cash equivalents, please refer to section **IV.2. Financial position**.

Contract assets increased by EUR 7.2 million, mainly due to an increase of EUR 4.7 million at EDAG Group, and EUR 3.8 million at Autotest Südtirol GmbH. In contrast, the contract assets of the Redpath Group decreased by EUR 1.3 million.

Other assets, which increased by EUR 6.4 million to EUR 19.2 million, include income tax receivables of EUR 18.8 million (previous year: EUR 11.2 million) and aircraft spare parts of EUR 0.3 million (previous year: EUR 0.4 million). In the previous year, this line included assets held for sale in the amount of EUR 1.2 million from the planned sale of an EDAG subsidiary, which took place in January 2022.

The equity ratio fell from 57.2 % at the end of the previous year to 54.9 % as of the balance sheet date, with equity decreasing by EUR 150.1 million in absolute terms. This is mainly due to the reduction in share capital of EUR 100.0 million carried out at the end of May 2022 and the negative consolidated earnings after tax of EUR -40.9 million in the reporting period. Other comprehensive income decreased by a net amount of EUR 10.4 million, primarily due to currency translation effects and offsetting actuarial gains from the valuation of pension provisions as of the reporting date.

Provisions decreased by EUR 5.0 million. This is mainly due to the EUR 16.0 million decrease in pension provisions as a result of the significant increase in the interest rate. In contrast, income tax provisions increased by EUR 6.2 million. Other provisions also increased by EUR 4.7 million, mainly due to a EUR 12.9 million increase in provisions for onerous contracts and a EUR 5.2 million decrease in personnel provisions and a EUR 3.5 million decrease in other provisions.

Financial liabilities increased by EUR 12.4 million. This is mainly due to an increase in lease liabilities of EUR 59.3 million, which is mainly attributable to the EDAG Group, the Redpath Group, DC Aviation GmbH and Autotest Südtirol GmbH. In addition, liabilities to companies accounted for using the equity method increased by EUR 2.3 million. On the other hand, liabilities to banks decreased by EUR 32.4 million. Liabilities to shareholders also decreased by EUR 15.7 million.

Trade and other payables increased by EUR 38.4 million. This is largely due to the increase in trade payables (EUR +22.5 million), liabilities to employees (EUR +12.1 million), VAT and other tax liabilities (EUR +7.4 million), advance payments received on account of orders (EUR +4.2 million) and liabilities from deferred income (EUR +0.8 million). In the opposite direction, liabilities to associates (EUR -3.8 million), other liabilities (EUR -1.8 million), liabilities from social security contributions (EUR -1.6 million) and liabilities from business combinations (EUR -1.3 Mio) decreased.

Contract liabilities decreased by EUR 67.9 million. This balance sheet item essentially results from the fact that customers have (partially) paid the consideration before the Group has provided the service over a certain period of time. While contract liabilities fell by EUR 70.7 million in the EDAG Group due to the processing of advance payments received from customers, this item increased by EUR 1.5 million in the Ziehm Group, mainly due to the increase in invoiced service contracts, and by EUR 1.3 million in the Redpath Group compared to the previous year's balance sheet date.

Other liabilities increased by EUR 11.8 million to EUR 18.6 million and exclusively include income tax liabilities as of the balance sheet date, which increased by EUR 13.1 million compared to the previous year. In contrast, the liabilities in connection with assets held for sale in the amount of EUR 1.3 million reported in the previous year due to the planned sale of an EDAG subsidiary were disposed with the actual sale in January 2022.

Working capital increased by a total of EUR 96.9 million, which is primarily due to the increase in trade and other receivables by EUR 39.8 million, inventories by EUR 20.3 million and contract assets by EUR 7.2 million, as explained above. On the other hand, trade payables and other liabilities also increased by EUR 38.4 million, but overall less than the assets. In contrast, contract liabilities fell by EUR 67.9 million.

The following overview presents assets and capital according to maturity:

in EUR '000	31.12.2022		31.12.2021	
Non-current assets				
Intangible assets and property, plant and equipment	912,636	40.3%	862,321	35.4%
Financial assets	178,290	7.9%	304,450	12.5%
Other assets	48,162	2.1%	33,127	1.4%
	1,139,088	**50.3%**	**1,199,898**	**49.2%**
Current assets				
Inventories	131,963	5.8%	111,619	4.6%
Receivables and contract assets	467,414	20.7%	420,415	17.2%
Other financial assets	122,692	5.4%	164,060	6.7%
Cash and cash equivalents	383,457	16.9%	529,100	21.7%
Other assets	18,818	0.8%	12,396	0.5%
	1,124,344	**49.7%**	**1,237,590**	**50.8%**
Non-current capital				
Equity	1,243,738	54.9%	1,393,860	57.2%
Financial liabilities	355,742	15.7%	376,623	15.5%
Provisions, other liabilities, trade payables and contract liabilities	62,317	2.8%	84,398	3.5%
Other liabilities	42,755	1.9%	56,396	2.3%
	1,704,552	**75.3%**	**1,911,277**	**78.4%**
Current capital				
Financial liabilities	158,205	7.0%	124,891	5.1%
Provisions, other liabilities, trade payables and contract liabilities	382,113	16.9%	394,583	16.2%
Other liabilities	18,562	0.8%	6,737	0.3%
	558,880	**24.7%**	**526,211**	**21.6%**

Non-current assets of EUR 1,139.1 million are financed to 149.6 % (previous year: 159.3 %) by non-current capital. Including current financial liabilities from loans from related parties in the amount of EUR 17.6 million (previous year: EUR 34.0 million), which are made available to the Group as basic funding, the coverage ratio amounts to 151.2 % (previous year: 162.1 %). Furthermore, 50.3 % (previous year: 57.5 %) of current assets are financed by non-current capital.

The following overview presents the graduated coverage ratio of current assets and capital:

in EUR '000	31.12.2022	Share in total assets	31.12.2021	Share in total assets
Current assets	1,124,344	50%	1,237,590	51%
Current capital	558,880	25%	526,211	22%
Surplus cover or Coverage ratio	**565,464**	**201%**	**711,379**	**235%**

The coverage ratio shows that the Group continues to have extremely solid financing as of 31 December 2022. Current capital can be repaid at any time by liquidation of current assets.

Net cash position as of 31 December 2022 is as follows:

in EUR '000	31.12.2022	31.12.2021	Change
Cash and cash equivalents	383,457	529,100	- 145,643
Short-term securities	77,480	81,436	- 3,956
Short-term loans	45,032	82,623	- 37,591
Financial liabilities	- 513,947	- 501,514	- 12,433
Net Debt (-) / Net Cash (+)	**- 7,978**	**191,645**	**- 199,623**

The net debt position decreased by EUR 199.6 million compared to the previous year's balance sheet date (previous year: net cash of EUR 191.6 million). As of the reporting date, net financial debt amounted to EUR 8.0 million. In addition to the decrease in cash and cash equivalents of EUR 145.6 million, short-term loans decreased by EUR 37.6 million due to net loan repayments from related parties. At the same time, financial liabilities increased by a net EUR 12.4 million, mainly due to an increase in lease liabilities of EUR 59.3 million, in particular at the EDAG Group, the Redpath Group and DC Aviation GmbH due to newly concluded long-term lease agreements. In contrast, liabilities to banks were reduced by a net amount of EUR 32.4 million and shareholder loans by EUR 15.7 million.

V. EMPLOYEES

The expertise of qualified employees is our main asset. Qualified and highly motivated employees are essential to the success and future competitive advantage of our companies. In selected training programmes, our employees are continuously developed in the area of professional, methodological and social skills. Furthermore, the Group promotes consistent professional development and prepares young employees to take on management responsibilities.

With initial vocational training and dual study opportunities in commercial and technical professions, the company offers young professionals a broad selection of opportunities for starting a career. The promotion of training programmes is complemented by cooperation with public educational institutions and universities.

In 2022, EUR 7.9 million (previous year: EUR 5.5 million) were invested in further education and training for our employees, as this was again easier to do after the Covid-19 pandemic.

The ATON Group employed on average 14,710 employees during the year 2022 (previous year: 14,149 employees).

In the financial year, the employees, as a non-financial performance indicator, were distributed among the following groups:

	2022	in %	2021	in %
Salaried staff	10,513	71%	9,905	70%
Industrial workers	3,867	26%	3,873	27%
Trainees and interns	330	2%	371	3%
Total employees	**14,710**	**100%**	**14,149**	**100%**
Production and service	12,426	84%	12,478	88%
General administration	1,855	13%	1,282	9%
Sales and marketing	293	2%	268	2%
Research and development	137	1%	121	1%
Total employees	**14,710**	**100%**	**14,149**	**100%**
Germany	7,012	48%	6,761	48%
Europe (excluding Germany)	1,851	13%	1,764	12%
North America	1,971	13%	1,856	13%
South America	148	1%	142	1%
Australia	912	6%	901	6%
Asia	2,297	16%	2,131	15%
Africa	520	4%	594	4%
Total employees	**14,710**	**100%**	**14,149**	**100%**

VI. EXPECTED DEVELOPMENTS, OPPORTUNITIES AND RISKS

1. Expected developments

The global economy faces an exceptional degree of uncertainty regarding geopolitical and macroeconomic developments such as Russia’s war against Ukraine, the development of trade between China, the European Union and the United States, and the further course of the Covid-19 pandemic. These may impact supply chains and the development of prices for raw materials and energy. In addition, continued inflationary pressure on consumers and companies and the associated central bank increases in interest rates, as well as a more pronounced slowdown in the economic growth, make the outlook more difficult. The worldwide shortage of semiconductors is easing, however individual issues remain, causing supply constraints.

According to the International Monetary Fund’s (IMF) assessment from January 2023, the global economy growth is projected to fall to 2.9 % in 2023, then rise to 3.1 % in 2024. The rise in central bank rates to fight inflation and Russia’s war against Ukraine continue to weigh on economic activity. The rapid spread of Covid-19 in China dampened growth in 2022, but the reopening towards the end of 2022 has paved the way for a faster-than-expected recovery. Global inflation is expected to fall from 8.8 % in 2022 to 6.6 % in 2023 and 4.3 % in 2024, still above pre-pandemic (2017 - 2019) levels of about 3.5 % (refer to IMF World Economic Outlook, update from January 2023).

According to the IMF, the balance of risks remains tilted to the downside, but adverse risks have moderated since the October 2022 WEO. On the upside, a stronger boost from pent-up demand in numerous economies or a faster fall in inflation are plausible. On the downside, severe epidemic setbacks in China could hold back the recovery, Russia’s war against Ukraine could escalate, and tighter global financing costs could worsen debt distress. Financial markets could also suddenly reprice in response to adverse inflation news, while further geopolitical fragmentation could hamper economic progress.

In most economies, amid the cost-of-living crisis, the sustained fight against inflation remains a priority. With tighter monetary conditions and lower growth potentially affecting financial and debt stability, it is necessary to deploy macroprudential tools to strengthen financial stability and debt restructuring frameworks. Accelerating Covid-19 vaccinations in China would safeguard the recovery, with positive cross-border spillovers. Fiscal support should be better targeted at those most affected by elevated food and energy prices, and broad-based fiscal relief measures should be withdrawn. Stronger multilateral cooperation is essential to preserve the gains from the rules-based multilateral system and to mitigate climate change by limiting emissions and raising green investment.

In this uncertain environment, we nevertheless expect a slight increase in ATON Group's gross revenue in 2023, with an EBIT and EAT also increasing slightly (after adjusting the financial result for the effects of the Murray & Roberts share price development, which cannot be reliably forecast).

2. Risks

a) Macroeconomic risks

With regard to the macroeconomic risks, please refer to the expected developments as well as to the explanations of the macroeconomic development.

b) Financial risks

Liquidity risks

The provision of required liquid funds to implement corporate objectives remains of central importance. At present the Group's liquidity supply is ensured by the existing cash and bank balances as well as sufficient lines of credit. At the end of financial year, cash, including short-term investments in securities and bonds, amounted to EUR 460.9 million. Including short-term loans and financial liabilities, the Group presents a net debt of EUR 8.0 million. Financial liabilities of EUR 513.9 million include EUR 17.6 million of loans from related parties and shareholders. In addition, the Group and the individual companies have access to sufficient lines of credit and guarantee facilities from banks and credit insurers. At the end of December 2022, the Group had EUR 517.1 million of unutilised lines of credit at banks and credit insurers.

The development of liquidity and available liquid funds is monitored and managed by means of a weekly cash report. Thus, liquidity risks are addressed by appropriate measures at an early stage. Additional profit contributions are generated by maturity transformation of financial assets. Furthermore, the necessary liquidity reserve is optimised at the overall Group level and the aim is always to improve the conditions with banks in the area of payment transactions and cash management by using higher transaction volumes.

Interest rate risks

An interest rate risk due to a change in the market interest rates result primarily from variable interest loan liabilities. The Group addresses this risk through a mixture of fixed and variable interest rate financial liabilities. At the end of the year, EUR 140.5 million of financial liabilities from banks were fixed-rate liabilities and EUR 34.5 million were at variable interest rates. In addition, EUR 17.6 million of fixed interest rate financial liabilities to related parties exist at the end of the year. The low level of variable interest rate financial liabilities in the Group limits the effects of interest rate changes.

Foreign currency risks

To the extent possible and available, foreign currency risks are hedged by local financing of the subsidiaries in their respective national currency. For further hedging, forward exchange contracts are concluded at the level of the subsidiaries and in individual cases between the parent company and the subsidiaries.

Default risks

In order to limit default risks, a number of protective measures are in place at the subsidiaries. In Germany, default risks are generally addressed by credit insurers, letters of credit and prepayments. In Germany as well as abroad, the subsidiaries have established credit assessment procedures. In the great majority of cases, customers are companies with high credit ratings operating in the automotive, commodities or medical industries and public-sector clients. Default risks are furthermore mitigated by retentions of title and the use of letters of credit.

Covenant risks

The majority of financing contracts with banks include covenants that are based on predefined financial ratios. The ratios are mainly equity ratios, leverage ratios and, in individual cases, interest coverage ratios. If one of the agreed thresholds of the covenants is exceeded, the lenders have a right of termination. The existing loan covenants were complied with.

As already at the end of 2021, there are no contractual clauses on the level of the parent company regarding a limitation of the financial debt of the ATON Group and regarding the financial debt of the ATON subsidiaries in 2022. Covenants that exist on the level of the subsidiaries are monitored independently by these companies.

Other price risks

Another market risk is price risk, which is the risk of unfavourable changes in the prices of financial assets. Particularly, stock market prices or indices can be considered as risk variables. At the end of the financial year 2022, the Group holds EUR 105.9 million in securities at fair value through profit or loss, which mainly consist of an actively managed portfolio of share positions and an actively managed portfolio of European corporate bonds and assets managed by Royal Bank of Canada Investment Management (UK) Limited. Since the invests are actively managed, negative developments can be counteracted in good time. The value at risk, i.e. the maximum loss in value to be expected for the actively managed portfolio of share positions of EUR 56.3 million is EUR 15.3 million at a confidence level of 95 % and an observation period of 12 months. The value at risk for the corporate bonds portfolio of EUR 17.4 million is EUR 1.8 million at a confidence level of 95 % and an observation period of 12 months.

For further information regarding the risk report and the risk management system, please refer to chapter **36. Objectives and methods of financial risk management** in the notes to the consolidated financial statements.

c) Risks of the segments

In addition to the aforementioned macroeconomic and financial risks, there is also the risk of an increase in personnel and material costs across all business units due to inflation. This risk has a negative impact on the Group's performance if it is not possible to pass on these higher costs immediately through higher sales prices.

In addition, the individual segments are exposed to specific risks from operating activities.

Engineering

In the Engineering segment, the focus is on project risks. Large-scale projects in particular are usually complex and are often carried out in parallel in different countries. Sometimes, the scope of the services is not finally agreed until the total price has been agreed. Occasionally, the scope of services is formulated in an unclear way and leads to additional expenses that are not reimbursed. Unexpected project developments may lead to delays, cost overruns and quality deficiencies, thus straining the company's net assets and financial position and results of operations. Through continuous project and risk management, the collection of appropriate advance payments, continuous project assessments as well as detailed reporting within the context of project steering committees, the companies are able to identify such risks at an early stage and take countermeasures.

The EDAG Group is in part strongly dependent on certain automotive manufacturers and hence on their long-term strategy and sales success. In response to this, in recent years the company has intensified its acquisition of new customers from start-ups in order to broaden its customer base for the future.

Mining

The greatest risk concerning growth within the Redpath Group is the challenge to retain qualified employees to the company in the long term. In addition, political risks play an important role. The activities of the Redpath Group are partly carried out in politically unstable regions. This may have an impact on the future results of operations of the Redpath Group. Other risks, especially in the short and medium term, consist of a decline in commodity prices as this may cause mine operators to abandon or postpone projects and cut back on investments. Furthermore, long delivery times for machinery could lead to delays in existing projects and increasing competition could reduce profitability. The cancellation of major projects and technical risks in new projects can also influence the development of the Group.

Med Tech

The Ziehm Group develops innovative products. Naturally, there is a risk that the products will not be accepted by the market in the foreseen manner and that the targeted expansion of market shares will not be achieved, and in the worst case that even market shares will be lost. The Group counters this risk by continuously observing the market and the competition, as well as through close exchange with doctors in order to understand the needs of users as best as possible.

Another risk arises from the fact that the growing internationalisation and speed of innovation in the medical technology market makes it increasingly difficult to meet all regulatory requirements. Both nationally and internationally, a large number of standards and regulations have to be considered; if mistakes are made here, marketing bans may follow. The Group counters this risk by continuously expanding the regulatory expertise required internally.

A fundamental risk arises from economic developments. With a downturn in economy, spending within the healthcare sector can be cut, which could have a negative impact on sales of medical technology products. However, due to the strong regulation of the medical technology markets, there may also occur fluctuations in demand that are decoupled from the rest of the economy. The Group addresses this risk through accelerated internationalisation in order to minimise dependence on individual national markets.

Aviation

As a company in the aviation industry, DC Aviation is dependent not only on macroeconomic developments but also on commodity prices, changes in environmental regulations in the course of changing political and public perceptions of aviation, as well as geopolitical crises and the resulting restrictions or sanctions.

Risks of supply chain bottlenecks have so far affected aviation to the extent that individual maintenance events are delayed due to a lack of spare parts, which means that aircraft can only be put back into service later than planned. At the same time, delivery times for newly ordered aircraft will continue to extend, as a result of which prices for used aircraft will remain at an above-average level and the selling of aircraft held by former Russian owners will be absorbed in a relatively market-neutral manner.

Technical operating risks that could lead to flight operations not being able to be carried out as planned are countered by a comprehensive internal control and quality management system. Ongoing internal and external compliance audits ensure that risks are identified and avoided at an early stage. The risk of air accidents caused by human factors is counteracted by regular safety training for the crews, which goes beyond the legal requirements. Commercial accident risks are covered by liability and hull insurance.

DC Aviation specialises in the management, operation and maintenance of business aircraft as well as in the high-end charter business. The direct dependence of business aviation on the general economic situation is fading as the industry participates in the increased individual prosperity, the consequences of a highly inflationary monetary policy and the need for more individual travel in the sense of a luxury good. As all fixed costs in the aircraft management business segment are borne by the respective aircraft owners and the maintenance intervals of the aircraft have to be observed irrespective of economic cycles, the business model is currently characterised as relatively resistant to economic cycles.

d) Legal risks

As an internationally active group, the ATON Group is subject to a number of risks in connection with legal disputes and other, also official, proceedings in the course of its ordinary business activities. Risks may arise from product liability, competition law, intellectual property law and general civil law. If these risks materialise, the ATON Group's reputation could be damaged and this could have a negative impact on the company's success.

These risks are counteracted by standards in the individual Groups units, for example for general terms and conditions, sample contracts and guidelines for action, which are continuously developed. In the case of complex issues or issues that fall outside the standards developed for day-to-day business, external lawyers are regularly consulted.

The risk arising from the squeeze-out of the minority shareholders of W.O.M. World of Medicine AG still has to be reported. Years ago, the minority shareholders initiated legal proceedings ("Spruchverfahren") to verify the adequacy of the cash compensation ("Barabfindung") of EUR 12.72 per share. The legal proceedings before the Regional Court of Berlin ("Landgericht Berlin") are still pending. The duration and outcome of the legal dispute are currently still open. Since, contrary to our expectations, there was again no final decision in 2022, we now assume that a decision will be reached in the financial year 2023.

e) IT risks

In all units of the ATON Group, the importance of digitalisation, electronically processed information and the availability of IT structures continues to increase due to the steadily growing use of IT technologies. This concerns both the frequency of virus and / or hacker attacks, for example, as well as their possible damage potential. Many companies in the ATON Group are highly dependent on functioning IT and secure data connections to customers. However, disruptions and attacks on the IT systems and networks cannot be completely ruled out. An IT system breakdown or loss of data could have severe consequences. There is also a risk that strictly confidential information, especially with regard to new technological findings or partnerships in the research and development sector, could be disclosed to third parties without authorisation. This could have an adverse impact on the good position in the market; in addition, there is the possible loss of reputation associated with this. To guarantee disruption and error free operations, the Group units attach great importance to the availability of IT resources and services. To protect confidential information, a number of security standards (such as firewall systems, virus protection, access and admission controls at operating system and application level, encryption, etc.) have been implemented, which are regularly reviewed for effectiveness by various committees in the individual Group units. The applicable IT security guidelines are continuously updated and adapted to the latest technical standards. The aim is to identify operational IT risks at an early stage and to implement appropriate concepts to prevent dangers.

f) Risks from epidemics / pandemics

Risks exist around the world from the transmission of pathogens from animals to humans, from humans to humans and by other means. Epidemics, pandemics or other spread patterns could cause high rates of disease in various countries, regions or continents. In the short, medium and long term, this can lead to a drop in demand for products and services offered. A high prevalence of sickness among employees may also endanger operations. Restrictions imposed by the authorities can also cause operational restrictions.

As experienced in the Covid-19 crisis, this can result in macroeconomic risks that lead to temporary or prolonged significant declines in economic growth worldwide. Such risks for the ATON Group can not only affect the development of unit sales, but can also lead to significant adverse effects on production, provision of services, the procurement markets and the supply chains.

g) Geopolitical and trade risks

Uncertainties for the global economy and the business development of the ATON Group may arise in particular from geopolitical and trade policy developments worldwide. First and foremost is still Russia’s war against Ukraine, in the worst case, its expansion to other countries. The war could have a negative impact on the sales development of individual Group units, production processes as well as purchasing and logistics processes, for example through interruptions in supply chains and energy supply or bottleneck situations for components, raw materials and intermediate products. Higher cyber risks cannot be ruled out either. Currency risks and bad debt risks may also increase as a result of restrictions on cross-border payment transactions.

Additionally, a further intensification of tensions between the United States and China as well as a further deterioration of political relations between the European Union and China could lead to increased uncertainty and affect both the global economic outlook and the business development of the ATON Group.

3. Opportunities

a) Opportunities in general

According to our own assessment, the subsidiaries of the ATON Group are among the national and international market leaders in various fields and product segments in terms of revenue or the technological level of their products and services. Based on the high level of technological expertise, a high product quality as well as long-term customer relationships the ATON Group sees opportunities for further expansion of the particular market shares. The future strategic orientation of the individual companies' services and products and prospective selective strengthening of the corporate portfolio in the individual business segments leveraging synergies within those segments will enable the companies to create additional opportunities.

b) Opportunities of the segments

Engineering

In 2022, car sales trends were uneven across the top markets and across the year. In terms of the key geographies, China ended the year in positive territory, helped by government tax incentives, despite the continued strict Covid-19 policies. Conversely, the US market fared the worst year-on-year. In Europe, Germany was an outperformer among the largest markets, achieving small growth of approximately 1 % year-on-year in 2022, according to VDA, the German Association of Automotive Industry. German sales were boosted towards the end of the year by the upcoming expiry or reduction of some of the electrified vehicle tax incentives. Other large European markets ended the year in negative territory to varying degrees. Global car sales are expected to increase by around 4 % in 2023 (refer to ING Economic and Financial Analysis - "Car Market Outlook 2023" from 17 January 2023).

According to the IHS Markit Production Forecast from January 2023, global light vehicle production will increase from 81.8 million units in 2022 to 85.0 million units in 2023. A significant headwind is being felt due to the weak economic outlook combined with higher interest rates and increased consumer inflation in the leading Western economies. Thus, a weakening of consumer demand due to economic pressure on households is likely to be the biggest risk factor for car sales expectations, especially in the second half of the year when order backlogs will slowly melt down. However, this risk is countered by the aforementioned pent-up demand and existing order backlogs as well as the relatively high age of the passenger car fleet in some regions, such as Europe.

As expected, the strongest growth in units produced will be seen in Europe (increase of 1.0 million units or +6.4 %) and North America (increase of 0.8 million units or +5.2 %). For Greater China, IHS Markit forecasts only slight growth in light vehicle production of 1.1 % or 0.3 million units in 2023, which means that the sales region will still account for over 31 % of units sold worldwide. It is assumed that China's demand will be supported by the removal of zero-Covid policies while sales in the US and Europe should reflect the accumulated delayed demand and order books, as production volumes improve with the semiconductor supply bottlenecks finally clearing up and delivery times gradually improving (see ING Economic and Financial Analysis "Car Market Outlook 2023", January 17, 2023).

The automotive market remains in a state of transition and continues to be subject to major structural changes. Innovation drivers such as autonomous and connected driving, digitalisation, electromobility and new mobility services are having an impact worldwide and are also influencing the market for development services (EDL). At the same time, there are changing customer needs (including the declining relevance of "automobile as a status symbol"), falling demand for automobiles, and political uncertainties. These trends are creating a highly dynamic environment that entails both opportunities and risks for the EDL market.

EDAG considers itself well positioned in the market for engineering services, also in the future. Significant growth impulses will result above all from electromobility. Alongside electromobility, digitalisation is the second major future trend in the automotive industry. The aim is to develop vehicles and production systems that make optimum use of the advantages of networking. EDAG is expected to participate strongly in these positive trends. The company's strong market position and significantly expanded range of services offer opportunities to further strengthen existing customer relationships and establish new ones.

Also the two Group companies Antriebssysteme Faurndau GmbH and Krebs & Aulich GmbH see themselves very well positioned in the market for high-performance electric motors and expect a positive development of sales and earnings in the coming years.

ecoCOAT GmbH is looking to the future with optimism due to the market launch of the FloorZilla cleaning pads in 2022.

Mining

The development of commodity prices is determined in the long term by the interaction between physical supply and demand. In the short term, many other variables such as market sentiment or the positioning of speculative market participants can have an influence on price developments.

Since the global economy is expected to move on a flat growth path in the coming years, only a moderate development of global commodity demand is to be expected overall. This applies in particular to cyclically sensitive commodity sectors such as industrial metals. Precious metals will no longer receive support from monetary policy in the planning period, although the geopolitical risk premium will probably remain elevated for some time (refer to “DEKA Macro Research – Economy Commodities” from December 2022).

Due to the Redpath Group's well-filled order books the outlook for the mining segment is rather positive despite the gloomy environment in the industry.

Med Tech

The growth in worldwide health expenditure is largely driven by population growth, the increasing ageing of society, rising prosperity (especially in Asia) and clinical and technological progress. This is counteracted by the pressure to cut costs in the healthcare systems and increases in efficiency.

The Ziehm Group essentially stands for the Med Tech segment within the ATON Group, where mobile X-ray imaging in so-called C-arms is to be regarded as the core competence. The Ziehm Group focuses on research and development, which benefits both clinical users and patients. The growth potential of the Ziehm Group lies primarily in the continued penetration of the core markets of Europe and North America and in continued expansion into the markets of Asia and South America. This will be made possible by the continuous advancement of technological innovations, which will ensure technological leadership.

Aviation

DC Aviation is licensed to operate an airline at three international locations. At all three destinations, the company holds its own "AOC" (Aircraft Operating Certificate), i.e. a national licence to operate a commercial airline. The same applies to the permission to handle private aircraft as a handling agent within the framework of a so-called "FBO" (Fixed Base Operator) and to offer various ground services up to and including refuelling (as in the case of Dubai). The airport in Nice takes special position in this field, where DC Aviation won the tender for the FBO licence in 2022. This will enable DC Aviation to handle business jets at one of the three most important business aviation airports in Europe in the future and use this to tap into new customer groups.

The provision of technical services under an "MRO" licence (Maintenance, Repair, Overhaul) takes place in Germany at the locations in Stuttgart and Schwäbisch Hall and within the United Arab Emirates in Dubai. In order to be able to meet the demand for business jets in the Munich area in the future, DC Aviation opened a 6,000 sqm hangar at Oberpfaffenhofen Airport in July 2022.

DC Aviation has a very high reputation in the business aviation industry in terms of service quality and safety standards. The significant increase in demand for individual flight services during the Covid-19 crisis enabled the company to demonstrate this to new charter and aircraft owner customers. Based on this and taking into consideration the new presence at the locations in Oberpfaffenhofen / Munich and Nice, the company's goal is to continuously expand its fleet size by gaining new corporate and private customers.

In addition to organic growth, DC Aviation continuously monitors the market in order to be able to react to acquisition opportunities for a further expansion. Opportunities and targets for corporate and fleet growth lie in economies of scale in relation to the provision of shared services, procurement advantages and opportunities arising from route optimisation.

c) General statement on risks and opportunities

The ATON Group is exposed to a large number of different risks and opportunities. From the management’s point of view, the operational risks of the business units, the macroeconomic risks and currently also the geopolitical risks are more important for the ATON Group than the legal and financial risks. According to the management’s current assessment, these risks overall do not have adverse financial effects on the Group due to the heterogeneous structure and diversified operations in various markets of the ATON Group.

However, it remains to be considered that Russia’s war against Ukraine and a possible spread of the armed conflict could have a strong influence on the overall risk situation of the ATON Group. It is not yet possible to foresee how this crisis will be overcome, so that a final risk assessment is not possible in this respect. However, due to the diversified composition of the Group and the available liquid funds, there should be no risks that could endanger going concern of the Group.

VII. RISK MANAGEMENT AND ACCOUNTING-RELATED INTERNAL CONTROL SYSTEM

1. Management of risks and opportunities

In the course of its business operations, the Group is exposed to risks, which are inextricably linked to its entrepreneurial activities. A complete exclusion of such risks would only be possible by stopping business activities, insofar the acceptance of risks is part of entrepreneurial action.

The primary objective of risk management is to ensure the success and going concern of the companies. This involves identifying risks and opportunities of the individual subsidiaries, evaluating them, and limiting or eliminating any risks that could potentially endanger the success of companies.

The subsidiaries of ATON 2 GmbH operate in different industries, at different geographical locations and in various national and international markets. This entails individual company-specific risks, which can result in risks different in nature and scope depending on the activities and the environment of the respective company. Therefore, the focus of risk identification by the respective subsidiaries' management is first of all placed on the continuous identification of financial risks in the form of risks to results of operations, financial position and liquidity, which may jeopardise the company as a going concern. Identified risks are reported by the subsidiaries' management on an ad-hoc basis to the ATON Group's management. In addition, economic, legal, technical and other risks are assessed at least every six months and discussed with ATON Group's management.

As a result of the highly differentiated Group structure, the distribution of opportunities and risks also depends on very different factors in the individual segments and in the individual companies. For this reason, risk management and implementation of opportunities is planned and controlled by the individual companies and agreed with the holding company in short- and medium-term strategy and financial planning meetings. Key financial data is monitored by means of weekly or monthly financial reporting by the individual companies, which are analysed by the holding company for deviations. Regularly, the companies and the holding management review agreed development of strategy and results of operations and determine possible strategy adjustments and countermeasures.

2. Accounting-related internal control system

The ATON Group's internal control system is designed to ensure that the Group wide (accounting) processes are carried out in a consistent, transparent and reliable manner as well as in compliance with legal standards and the company's internal guidelines. It comprises principles, procedures and measures to reduce risk and to ensure the effectiveness and accuracy of the processes.

The Group's management bears the overall responsibility for the internal control system and risk management with regard to the group accounting process. All companies included in the consolidated financial statements are embedded in a defined management and reporting organisation. In the ATON Group, the areas of responsibility related to accounting are clearly structured and assigned. The central units of ATON 2 GmbH / ATON GmbH, as well as the Group companies, are responsible for the proper execution of the accounting processes. Major processes and deadlines are determined by the parent company on a Group-wide basis. Beyond that, the accounting within the ATON Group is fundamentally organised on a decentralised basis. For the most part, accounting tasks are performed by the consolidated companies at their own responsibility. The audited financial statements of the subsidiaries prepared in accordance with IFRS and the uniform accounting policies are submitted to the Group. The departments involved in the accounting process are appropriately staffed and funded. The employees acting have the necessary qualifications; external experts are also involved on a case-by-case basis. Control activities at Group level include analysing and, if necessary, adjusting the data reported in the financial information submitted by the subsidiaries. The Group management report is prepared centrally in accordance with the applicable requirements and regulations with the involvement of and in consultation with the Group companies. Segregation of duties and the implementation of the four-eye principle are additional control mechanisms. The IT systems are protected against unauthorised access. Access rights are granted on a function-related basis.

Based upon documented processes, risks and controls, the internal control and risk management system is regularly monitored and adjusted to current developments and therefore provides transparency with regard to the structure, workflows and effectiveness of the internal and external reporting.

VIII. DISCLAIMER

The management report contains forward-looking statements on expected developments. These statements are based on current estimates and are subject to risks and uncertainties by nature. Actual results may deviate from the statements made here in the management report, particularly in view of the unforeseeable further development of Russia's war against Ukraine and the resulting economic effects.

Munich, 28 April 2023

ATON 2 GmbH
Management Board

[original German version signed by:]

Georg Denoke | Dr. Wolfgang Salzberger

ATON 2 GmbH, Munich

CONSOLIDATED FINANCIAL STATEMENTS AS OF 31 DECEMBER 2022

(Translation – the German text is authoritative)

CONSOLIDATED INCOME STATEMENT 2022

in EUR '000	Note	2022	2021
Revenue	6	1,950,440	1,679,023
Changes in inventories and own work capitalised	7	15,156	7,903
Other operating income	8	65,844	69,429
Cost of materials	9	-470,935	-354,423
Personnel expenses	10	-1,055,115	-940,294
Impairment losses / reversal of impairment losses on financial assets	22, 23, 24	12,537	-79,479
Depreciation and amortisation	17, 18	-150,476	-148,583
Other operating expenses	11	-289,030	-226,947
Earnings before interest and taxes (EBIT)		**78,421**	**6,629**
Result from investments accounted for using the equity method	12	-58,306	6,696
Other investment result	13	-37,453	57,442
Interest income	14	4,349	3,810
Interest expense	14	-13,522	-12,185
Other financial result	15	-17,118	12,633
Financial result		**-122,050**	**68,396**
Earnings before income taxes (EBT)		**-43,629**	**75,025**
Income taxes	16	2,736	-19,278
Profit or loss for the period from continuing operations		**-40,893**	**55,747**
Profit or loss for the period (EAT)		**-40,893**	**55,747**
attributable to non-controlling interest		-3,761	-4,088
attributable to owners of the parent		**-37,132**	**59,835**

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME 2022

in EUR '000	Note	2022	2021
Profit or loss for the period		**- 40,893**	**55,747**
attributable to non-controlling interest		- 3,761	- 4,088
attributable to owners of the parent		- 37,132	59,835
Items that may be subsequently reclassified to profit or loss			
Currency translation differences			
Gains (+) / losses (-) from currency translation differences recognised in other comprehensive income	28	2,195	- 5,769
Share of other comprehensive income for investments accounted for using the equity method	21	- 23,414	9,270
		- 21,219	**3,501**
Items that will not be reclassified to profit or loss			
Remeasurements of defined benefit plans			
Remeasurements of defined benefit plans recognised in other comprehensive income	29	14,769	1,449
Deferred taxes on remeasurements of defined benefit plans	16	- 4,110	- 510
Share of other comprehensive income for investments accounted for using the equity method		113	17
		10,772	**956**
Other comprehensive income before income taxes		**- 6,337**	**4,967**
Income taxes on other comprehensive income		**- 4,110**	**- 510**
Other comprehensive income, net of income taxes		**- 10,447**	**4,457**
attributable to non-controlling interest		2,442	566
attributable to owners of the parent		- 12,889	3,891
Total comprehensive income for the period		**- 51,340**	**60,204**
attributable to non-controlling interest		- 1,319	- 3,522
attributable to owners of the parent		- 50,021	63,726

CONSOLIDATED BALANCE SHEET AS OF 31.12.2022

Assets **in EUR '000**	**Note**	**31.12.2022**	**31.12.2021**
Goodwill	17	282,570	281,408
Other intangible assets	17	75,737	97,648
Property, plant and equipment	18	554,329	483,265
Reparable aircraft spare parts		332	385
Other financial assets	22	91,580	101,529
Investments accounted for using the equity method	21	86,710	202,921
Trade and other receivables	23	6,273	6,276
Deferred tax assets	16	41,557	26,466
Non-current assets		**1,139,088**	**1,199,898**
Inventories	25	131,963	111,619
Trade and other receivables	23	392,097	352,323
Other financial assets	22	122,692	164,060
Income tax receivables	16	18,818	11,234
Contract assets	24	75,317	68,092
Cash and cash equivalents	26	383,457	529,100
		1,124,344	1,236,428
Assets held for sale	27	-	1,162
Current assets		**1,124,344**	**1,237,590**
Total assets		**2,263,432**	**2,437,488**

CONSOLIDATED BALANCE SHEET AS OF 31.12.2022

Equity and liabilities in EUR '000	Note	31.12.2022	31.12.2021
Equity attributable to owners of the parent *	28	1,230,800	1,386,271
Non-controlling interest	28	12,938	7,589
Equity	28	**1,243,738**	**1,393,860**
Provisions for pensions	29	34,811	50,821
Provisions for income taxes	30	137	146
Other provisions	30	7,142	6,663
Financial liabilities	31	355,742	376,623
Trade and other payables	32	16,947	22,216
Deferred tax liabilities	16	42,755	56,396
Contract liabilities	24	3,280	4,552
Non-current liabilities		**460,814**	**517,417**
Provisions for income taxes	30	10,703	4,447
Other provisions	30	36,644	32,398
Financial liabilities	31	158,205	124,891
Trade and other payables	32	249,307	205,655
Income tax liabilities	16	18,562	5,421
Contract liabilities	24	85,459	152,083
		558,880	524,895
Liabilities associated with assets held for sale	27	-	1,316
Current liabilities		**558,880**	**526,211**
Total equity and liabilities		**2,263,432**	**2,437,488**

* For information on subscribed capital and reserves, please refer to the statement of changes in equity.

STATEMENT OF CHANGES IN EQUITY AS OF 31.12.2022

in EUR ’000	Equity attributable to shareholders of the parent company						Non-controlling interest	Equity
				Other comprehensive income				
	Subscribed capital	Capital reserve	Retained earnings incl. profit or loss	Currency translation differences	Remeasurements of defined benefit plans	Total		
Balance as of 1st January 2021	**265,025**	**73,355**	**1,008,293**	**- 24,728**	**- 6,074**	**1,315,871**	**17,987**	**1,333,858**
Equity transactions with shareholders								
Acquisition of non-controlling interests	-	-	6,674	-	-	6,674	- 6,876	- 202
Other changes	-	1	- 83	82	-	-	-	-
	-	1	6,591	82	-	6,674	- 6,876	- 202
Total comprehensive income for the period								
Other comprehensive income, net of income taxes 2021	-	-	-	3,220	671	3,891	566	4,457
Profit or loss 2021	-	-	59,835	-	-	59,835	- 4,088	55,747
	-	-	59,835	3,220	671	63,726	- 3,522	60,204
Balance as of 31 December 2021	**265,025**	**73,356**	**1,074,719**	**- 21,426**	**- 5,403**	**1,386,271**	**7,589**	**1,393,860**
Balance as of 1st January 2022	**265,025**	**73,356**	**1,074,719**	**- 21,426**	**- 5,403**	**1,386,271**	**7,589**	**1,393,860**
Equity transactions with shareholders								
Changes in the scope of consolidation	-	-	-	-	-	-	2,485	2,485
Capital decrease	- 100,000	-	-	-	-	- 100,000	-	- 100,000
Acquisition / Sale of non-controlling interests	-	-	- 5,450	-	-	- 5,450	5,450	-
Dividend payments	-	-	-	-	-	-	- 1,267	- 1,267
	- 100,000	-	- 5,450	-	-	- 105,450	6,668	- 98,782
Total comprehensive income for the period								
Other comprehensive income, net of income taxes 2022	-	-	-	- 21,247	8,358	- 12,889	2,442	- 10,447
Profit or loss 2022	-	-	- 37,132	-	-	- 37,132	- 3,761	- 40,893
	-	-	- 37,132	- 21,247	8,358	- 50,021	- 1,319	- 51,340
Balance as of 31 December 2022	**165,025**	**73,356**	**1,032,137**	**- 42,673**	**2,955**	**1,230,800**	**12,938**	**1,243,738**

CONSOLIDATED STATEMENT OF CASH FLOWS 2022

Cash and cash equivalents corresponds to the balance sheet item cash and cash equivalents.

in EUR '000	Note	2022	2021
Income before interest, dividends and income taxes	33	- 37,008	81,069
Income taxes paid	16	- 18,441	- 21,985
Interest paid		- 14,032	- 12,010
Interest received		2,904	1,718
Dividends received		3,056	2,331
Depreciation and amortisation / write-ups of assets		195,098	162,801
Change in provisions		2,582	5,169
Other non-cash transactions		52,776	- 11,468
Result from the disposal of property, plant and equipment		- 1,046	404
Result from the disposal of securities		- 547	- 289
Result from the disposal / deconsolidation of consolidated subsidiaries	5	- 32	-
Change in other assets		- 57,713	- 126,514
Change in other liabilities		- 33,189	55,805
Cash flow from operating activities		**94,408**	**137,031**
Investments in intangible assets	17	- 11,610	- 11,320
Proceeds from the disposal of intangible assets		142	144
Investments in property, plant and equipment	18	- 71,398	- 64,681
Proceeds from the disposal of property, plant and equipment		8,345	9,706
Investments in financial assets / associates		- 84,133	- 198,540
Proceeds from the disposal of financial assets		129,530	136,674
Cash outflow from the acquisition of consolidated subsidiaries	5	- 3,892	- 29,672
Cash outflow from the disposal of consolidated subsidiaries or reclassifications to assets held for sale	27	-	- 539
Cash flow from investing activities		**- 33,016**	**- 158,228**
Proceeds from shareholders		19,000	-
Payments to shareholders		- 137,827	- 98,940
Repayments of lease liabilities		- 52,519	- 46,535
Proceeds from bank loans		57,008	142,522
Repayments of bank loans		- 93,228	- 103,143
Cash flow from financing activities		**- 207,566**	**- 106,096**
Change in cash and cash equivalents		- 146,174	- 127,293
Effect of changes in exchange rates		531	- 13,380
Cash and cash equivalents at the beginning of the period		529,100	669,773
Cash and cash equivalents at the end of the period	26	**383,457**	**529,100**

Notes to the consolidated financial statements 2022

Contents

1. General information

ATON 2 GmbH (ATON or the "Company") has its registered office in Leopoldstraße 53, 80802 Munich, Germany, and is registered at the Munich Local Court under the registration number HRB 229865.

ATON 2 GmbH and its subsidiaries (collectively, the "Group") are organised globally and operate on all continents with core activities in the defined business segments of Engineering, Mining, Med Tech and Aviation.

The consolidated financial statements of ATON 2 GmbH as of 31 December 2022 have been prepared in accordance with Section 315e of the German Commercial Code (Handelsgesetzbuch, "HGB") and the provisions of the International Financial Reporting Standards (IFRSs) issued by the International Accounting Standards Board (IASB), London, and with the interpretations of the International Financial Reporting Interpretations Committee (IFRIC), applicable on the reporting date and as adopted by the European Union.

Dr. Lutz Helmig in turn exercises control over ATON 2 GmbH.

As the parent company of the Group, ATON 2 GmbH prepares the mandatory consolidated financial statements in accordance with IFRS. These are submitted electronically to the company register and published via the publication platform (joint portal of the Federal Gazette and the company register). The shareholders still have the theoretical option of amending the financial statements within the framework of the statutory provisions.

The consolidated financial statements are prepared in Euro. Unless indicated otherwise, all amounts are rounded either up or down to the nearest thousand (k EUR) in accordance with normal commercial practice. Rounding may result in rounding differences of +/- EUR 1k.

The financial year corresponds to the calendar year.

Individual items in the income statement and the statement of comprehensive income, the statement of financial position, the statement of cash flows and the statement of changes in equity of the ATON Group are summarised to improve clarity. Full details are given in the notes to the financial statements. The income statement has been prepared in accordance with the nature of expense method. The statement of financial position is classified by maturity of the assets and liabilities. Assets and liabilities are considered to be current if they are due or for settlement or disposal within one year or within the normal business cycle of the company or the Group. Deferred tax assets and liabilities as well as provisions for pensions are generally presented as non-current.

2. Basis of preparation of the consolidated financial statements

2.1. General principles

The financial statements of the domestic and foreign subsidiaries included in the consolidated financial statements are prepared in accordance with the uniform accounting policies that are applied consistently by the ATON Group. The financial statements of the subsidiaries included in the consolidated financial statements are prepared as of the reporting date of the consolidated financial statements.

The consolidated financial statements are prepared based on historical acquisition and production costs, with the exception of items reported at their fair values, such as derivative financial instruments, available-for-sale financial assets and plan assets relating to pension obligations.

2.2. Application of new, amended or revised standards

The accounting policies adopted are consistent with those of the previous financial year except as described below.

Accounting standards applied on a mandatory basis for the first time during the current financial year

The Group has applied the following accounting standards adopted by the EU and required to be applied since 1 January 2022:

- Amendments to IAS 37 regarding 'Onerous contracts – cost of fulfilling a contract',
- Amendments to IAS 16 regarding 'Property, plant and equipment: proceeds before intended use',
- Amendments to IFRS 3 'Updating the reference to the conceptual framework'.

None of those applied standards had a material effect on the consolidated financial statements.

New or amended standards and interpretations not applied

Standards/ amendments		EU Endorse-ment	Mandatory application*1)	Expected effect
Amendments to IAS 12	Deferred tax related to assets and liabilities arising from a single transaction	Yes	01.01.2023	No material effects
Amendments to IAS 1 + IFRS Practice Statement 2	Determining the extent of disclosure of accounting policies based on materiality	Yes	01.01.2023	No material effects
Amendments to IAS 8	Definition of accounting estimates and other amendments to help entities distinguish changes in accounting estimates from changes in accounting policies	Yes	01.01.2023	No material effects
Amendments to IAS 1	Classification of liabilities as current or non-current; non-current liabilities with covenants	No	01.01.2024	No material effects
Amendments to IFRS 16	Lease liability in a sale and leaseback	No	01.01.2024	No material effects

* Mandatory application for financial years beginning on or after the given date.

1) In accordance with section 315e HGB, application is not mandatory for standards and interpretations that have not yet been endorsed by the EU.

2.3. Scope of consolidation and consolidation principles

The shareholdings of the ATON Group comprise subsidiaries, associates and joint ventures.

Subsidiaries

In addition to ATON 2 GmbH, the consolidated financial statements include all material subsidiaries. Subsidiaries are all entities that are controlled by the parent company. The parent company controls an entity when it is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which the parent company gains control. When control over the entity ceases, the Group deconsolidates the subsidiary as of this date.

Acquired subsidiaries are accounted for using the acquisition method. The cost of a business acquisition is measured according to the fair value of the assets acquired and the liabilities incurred or assumed at the date of the acquisition. Acquisition-related costs are recognised as expenses at the date when they are incurred. The identifiable assets acquired in a business combination and the liabilities assumed are measured at their fair value at the date of acquisition, irrespective of the extent of any non-controlling interests in equity. Non-controlling interests are measured either at fair value (full goodwill method) or at the proportionate share of the fair value of the assets acquired and liabilities assumed. The amount by which the total of the cost of the acquisition, the amount of the non-controlling interest in the business acquired and the fair value of any previously held equity interest at the date of acquisition exceeds the Group's share of the net assets measured at fair value is recognised as goodwill. If the cost of the acquisition is lower than the fair value of the net assets of the subsidiary acquired, the difference is recognised directly in the income statement.

After initial recognition, profits and losses are attributed on an unlimited basis in proportion to the shareholdings, which may also result in a negative balance for non-controlling interests.

Any contingent consideration is recognised at fair value at the acquisition date. Subsequent changes in the fair value of the contingent consideration classified as an asset or liability are measured and any resulting gain or loss is recognised in the income statement.

In the case of step acquisitions, the previously acquired equity interest is remeasured at its fair value at the acquisition date. Transactions regarding non-controlling interests not resulting in a loss of control are recognised as an equity transaction directly in equity. At the date of loss of control, any remaining interest is remeasured to fair value through profit or loss.

Intercompany profits or losses and income and expenses arising from transactions within the scope of consolidation, as well as receivables and liabilities existing between consolidated companies, are eliminated. Gains and losses from intra-group transactions regarding fixed assets and inventories are eliminated. Consolidation entries with effect on profit or loss are subject to deferred taxes.

Transactions with non-controlling interests that do not result in loss of control are accounted for as transactions with equity of the Group. Any difference arising on the acquisition of non-controlling interests between the consideration paid and the relevant share acquired of the carrying amount of net assets is recorded directly within equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

When the Group loses control over an entity, any retained interest is remeasured to its fair value and the resulting difference is recognised in profit or loss. The fair value is the fair value determined at initial recognition as an associate, joint venture or financial asset. In addition, any amounts previously recognised in other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets and liabilities. This means that amounts previously recognised in other comprehensive income are reclassified to profit or loss.

Associates

The ATON Group accounts for investments in associates using the equity method.

An “associate” is an entity over which the Group has significant influence but not control, and no joint arrangement exists. This does not include investments accounted for as non-current assets held for sale and discontinued operations under IFRS 5.

Based on the acquisition costs at the date of acquisition of the investment in an associate, the relevant carrying amount of the investment is increased or reduced annually by the Group’s share of profits or losses, reduced by dividends paid to the ATON Group as well as by changes in other comprehensive income of the associate, to the extent attributable to the ATON Group’s interest. Goodwill arising from the acquisition of an associate is included in the carrying amount of the investment. This is not amortised, but tested for impairment as part of the overall investment in the associate.

If the losses attributable to the ATON Group from an investment accounted for using the equity method equal or exceeds its interest in the associate, no further share of losses is recognised, unless the Group has incurred legal or constructive obligations or made payments on behalf of the associate.

Unrealised gains and losses resulting from transactions of Group companies with associates are eliminated proportionally in the income for those companies.

The Group assesses at each reporting date whether there is any indication that an investment accounting for using the equity method may be impaired. If such evidence exists, the ATON Group determines the impairment requirement as the difference between the carrying amount and the recoverable amount.

Joint arrangements

According to IFRS 11, there are two forms of joint arrangements, depending on the structure of the contractual rights and obligations: joint operations and joint ventures. The ATON Group has assessed the nature of its joint arrangements and identified them as joint ventures. Joint ventures are accounted for using the equity method. For information on accounting for companies using the equity method, please refer to the comments on associates.

As of 31 December 2022, the scope of consolidation is as follows:

	Germany	International	Total	31.12.2021
Fully consolidated companies	16	69	85	85
Associates	4	4	8	6
Joint ventures	15	8	23	24
Affiliates accounted for at fair value	4	3	7	7
Companies within the scope of consolidation	**39**	**84**	**123**	**122**

For a complete overview, please refer to the list of shareholdings.

Investments of minor significance are recognised at the lower of their respective acquisition cost or fair value and are not consolidated. Companies are considered to be of minor significance if their cumulative share of revenue, profit or loss for the year and total assets amounts to less than 1 % of consolidated revenue, profit or loss for the year and total assets, and are therefore not relevant for the presentation of a true and fair view of the Group's net assets, financial position, results of operations, as well as its cash flows.

The following domestic subsidiaries, having the legal form of a corporation or of a partnership within the meaning of Section 264a of the German Commercial Code (Handelsgesetzbuch, "HGB"), have fulfilled the necessary conditions in accordance with Section 264 (3) and Section 264b HGB to make use of the exemption provision and therefore do not publish their annual financial statements:

Name of company	Registered office
EDAG Production Solutions GmbH & Co. KG	Fulda

2.4. Currency translation

The consolidated financial statements are prepared in Euro, the reporting currency of ATON 2 GmbH. The functional currency of the subsidiaries is generally the same as the company's respective national currency since the subsidiaries run their operations independently from a financial, economic and organisational point of view.

Foreign currency transactions in the individual financial statements of the Group companies are translated into the functional currency using the exchange rates at the transaction date. At each reporting date, monetary assets and liabilities whose amount is stated in a foreign currency are translated at the closing rate. Non-monetary assets and liabilities measured at fair value and whose amount is stated in a foreign currency are translated at the date on which the fair value is determined. Currency translation gains and losses are recorded in profit or loss. An exception is made in the case of currency translation differences relating to non-monetary assets and liabilities. Those changes in fair values are recognised directly in equity.

The earnings and balance sheet items of all Group companies with a functional currency other than the Euro are translated into Euro as the reporting currency. The assets and liabilities of the relevant Group companies are translated at the closing rate. Items of income and expenses are translated at average exchange rates for the period. Components of equity are translated at historical rates at the respective dates at which they were initially recognised from the point of view of the Group.

Differences arising from the translation at closing rates are reported separately in equity and in the notes under "Currency translation". Currency translation differences recorded directly in equity, while the subsidiary forms part of the Group, are reclassified to profit or loss when the subsidiary leaves the scope of consolidation.

Goodwill and fair value adjustments arising from the acquisition of a foreign company are treated as assets and liabilities of the foreign company and translated at the closing rate.

The most important exchange rates for the translation of the foreign currency financial statements have developed in relation to the Euro as follows (in each case for 1 EUR):

Country	Currency		2022		2021	
	Units per Euro		Closing rate	Average rate	Closing rate	Average rate
Australia	Dollar	AUD	1.5693	1.5167	1.5615	1.5749
Brazil	Real	BRL	5.6386	5.4399	6.3101	6.3779
China	Renminbi	CNY	7.3582	7.0788	7.1947	7.6282
United Kingdom	Pound	GBP	0.8869	0.8528	0.8403	0.8596
India	Rupee	INR	88.1710	82.6864	84.2292	87.4392
Japan	Yen	JPY	140.6600	138.0300	130.3800	129.8800
Canada	Dollar	CAD	1.4440	1.3695	1.4393	1.4826
Korea	Won	KRW	1,344.0900	1,358.0700	1,346.3800	1,354.0600
Malaysia	Ringgit	MYR	4.6984	4.6279	4.7184	4.9015
Mexico	Peso	MXN	20.8560	21.1869	23.1438	23.9852
Namibia	Dollar	NAD	18.1214	17.1833	18.0442	17.4709
Norway	Krone	NOK	10.5138	10.1026	9.9888	10.1633
Poland	Zloty	PLN	4.6808	4.6861	4.5969	4.5652
Romania	Leu	RON	4.9495	4.9313	4.9490	4.9215
Russian Federation	Rouble	RUB	75.6553	72.5717	85.3004	87.1527
Zambia	Kwacha	ZMW	19.2285	17.8860	18.7632	23.6840
Sweden	Krona	SEK	11.1218	10.6296	10.2503	10.1465
Switzerland	Franc	CHF	0.9847	1.0047	1.0331	1.0811
Singapore	Dollar	SGD	1.4300	1.4512	1.5279	1.5891
South Africa	Rand	ZAR	18.0986	17.2086	18.0625	17.4766
Czech Republic	Koruna	CZK	24.1160	24.5660	24.8580	25.6400
Hungary	Forint	HUF	400.8700	391.2900	369.1900	358.5200
USA	Dollar	USD	1.0666	1.0530	1.1326	1.1827

3. Summary of significant accounting policies

3.1. Goodwill

Goodwill is not subject to scheduled amortisation but is tested annually for impairment. An impairment test is carried out also during the financial year if events or circumstances (triggering events) occur giving rise to indications of possible impairment. Goodwill is recognised at purchase cost at the date of acquisition and subsequently measured at its purchase cost less any accumulated impairment losses. For the purposes of impairment testing, goodwill acquired in the context of a business combination is allocated to the cash-generating unit or group of cash-generating units, which are expected to benefit from the synergies of the combination. A cash-generating unit is the smallest identifiable group of assets capable of generating cash inflows that are largely independent of the cash inflows from other assets or other groups of assets. If the recoverable amount of a cash-generating unit is less than the carrying amount of the unit, the impairment loss is allocated first to the carrying amount of any goodwill allocated to the unit and then to the other assets pro rata on the basis of the carrying amount of each asset within the unit. The recoverable amount is the higher of the fair value of the unit less costs to sell and its value in use. As a matter of principle, the ATON Group utilises the value in use of the relevant cash-generating units to determine the recoverable amount. This is based on the current business plan prepared by management, which generally covers a period of three years. If necessary to achieve a sustainable planning year, the planning period will be extended to five years. Reasonable assumptions are made with respect to the future development of the business for the subsequent years. The cash flows are determined based on the expected growth rates in the relevant sectors and markets. The cash flows after the end of the detailed planning period are estimated using individual growth rates derived from information relating to the particular market of no more than 1.2 % p.a. Individual discount rates for the particular cash-generating units between 6.3 % and 10.6 % (previous year: 5.1 % and 8.6 %) are used for the purpose of determining the value in use. A goodwill impairment loss recognised in one period may not be reversed in future periods. In the event of the sale of a subsidiary, the associated amount of goodwill is included in the calculation of the gain or loss on disposal. The treatment of goodwill arising on the acquisition of an associate is described under "associates".

3.2. Other intangible assets

Purchased intangible assets are measured at cost and amortised on a straight-line basis over their economic useful lives. Other intangible assets mainly comprise software, together with patents, licences and similar rights. The expected useful life for concessions, patents and similar rights is generally defined between three and ten years and for software between one and eight years.

Research costs are expensed in the period in which they are incurred.

The development costs of a project are only capitalised as an intangible asset if the company can demonstrate both the technical feasibility of completing the intangible asset so that it will be available for internal use or sale and also the intention to complete the intangible asset and to use or sell it. It must also demonstrate how the asset will generate future economic benefits, the availability of resources to complete the asset and the ability to reliably measure the expenditure attributable to the intangible asset during its development. The cost of an internally generated intangible asset is the total of the directly attributable direct costs and overheads incurred from the date when the intangible asset first meets the recognition criteria described above. Financing costs are not capitalised except in the case of qualifying assets. Internally generated intangible assets are amortised on a straight-line basis over their economic useful lives of three years. Amortisation in the case of internally generated intangible assets begins when the asset is available for use, i.e. when it is in the condition necessary for it to be capable of operating in the manner intended by management.

In cases where it is not possible to recognise an internally generated intangible asset, the costs of development are expensed in the period in which they are incurred.

Intangible assets acquired in a business combination are recorded separately from goodwill if the fair value of the asset can be reliably measured. The costs of such an intangible asset correspond to its fair value at the date of acquisition. Amortisation is calculated using the straight-line method based on the estimated useful life.

Intangible assets with indefinite useful lives are not amortised but are tested annually for possible impairment. If events or changes in circumstances occur giving indications of possible impairment, impairment testing must be carried out more frequently. Further details of the procedure for annual impairment tests are provided under note **3.4. Impairment of property, plant and equipment and other intangible assets**.

3.3. Property, plant and equipment

Items of property, plant and equipment used in the business for longer than one year are recognised at the cost of acquisition or production less straight-line depreciation and accumulated impairment losses. The cost of production comprises all directly attributable costs and appropriate portions of production-related overheads. Investment grants are generally deducted from the cost of the asset. If the production or acquisition of items of property, plant and equipment is spread over a longer period, borrowing costs incurred up to the date of completion are capitalised as a component of cost in conformity with the provisions of IAS 23. If the costs of particular components are significant in relation to the total cost of the item of property, plant and equipment, then those components are capitalised and depreciated separately. The cost of replacing a part of the item of property, plant and equipment is included in the carrying amount of that item at the date when it is incurred, provided that the criteria for recognition are satisfied. The cost of carrying out a major inspection is also recognised in the carrying amount of property, plant and equipment as a replacement, provided that the recognition criteria are met. All other servicing and maintenance costs are recorded immediately in the income statement. Subsequent costs of acquisition or production are only recognised as part of the cost of the asset if it is probable that it will bring future economic benefit to the Group and if the cost of the asset can be reliably determined.

The useful lives of the principal categories of assets of the Group are determined using comparative tables customary in the industry and on the basis of its own past experience, which can be classified as follows:

Property, plant and equipment	**Useful life in years**
Buildings	2 to 67
Technical equipment and machinery (excluding mining and construction machinery)	2 to 25
Other machinery and equipment	2 to 8
Operating and office equipment	1 to 25

3.4. Impairment of property, plant and equipment and other intangible assets

At each reporting date or the occurrence of respective events, the Group assesses whether there are indications that items of property, plant and equipment and intangible assets might be impaired. If such indications are identified, the recoverable amount of the asset is estimated in order to determine the extent of an impairment loss. The recoverable amount is calculated as the higher of the fair value less costs to sell ("net realisable value") and the present value of the expected net cash inflows from the continuing use of the asset ("value in use"). Where a forecast of the expected cash inflows for an individual asset is not possible, the cash inflows are estimated for the next larger group of assets, which generates cash inflows that are largely independent of those from other assets, (cash-generating unit) to which the asset belongs to.

For the purpose of estimating value in use, the estimated future cash flows are discounted to their present value using a pre-tax rate of interest. If the estimated recoverable amount of an asset (or of a cash-generating unit) falls below its carrying amount, the carrying amount of the asset (or of the cash-generating unit) is reduced to the recoverable amount. First, any goodwill allocated to the cash-generating unit is impaired and any remaining impairment loss is then allocated to the other assets of the unit on the basis of the carrying amount of each asset in the unit.

The impairment loss is recognised immediately with effect on income statement. If the impairment loss is subsequently reversed, the carrying amount of the asset (or of the cash-generating unit) is increased to the updated estimate of the recoverable amount. The carrying amount resulting from this increase must not exceed the carrying amount that would have been determined for the asset (or the cash-generating unit) if an impairment loss had not been recognised in previous periods. The reversal of an impairment loss is recorded immediately in the income statement. Impairment losses recognised in respect of goodwill may not be reversed.

Internally generated intangible assets that have not yet been completed are tested for impairment at least once a year.

3.5. Cash and cash equivalents

Cash reported in the consolidated statement of financial position comprises cheques, cash-in-hand and balances with banks with an original maturity of up to three months. Cash equivalents reported in the balance sheet consist of short-term, highly liquid financial assets that can be converted into specified amounts of cash at any time and are exposed only to insignificant risks of fluctuations in value. Cash and cash equivalents are measured at amortised cost. Cash and cash equivalents in the consolidated statement of cash flows are defined in accordance with the above definition.

3.6. Investment properties

This item refers to property held for the purpose of generating rental income and/or increase in value (including property being constructed or developed and intended for such purposes). Investment properties are initially recognised at cost, including transaction costs. In subsequent periods, investment properties are recorded at amortised cost net of accumulated straight-line depreciation and impairment losses. The useful life is generally between 50 and 60 years. Unchanged to prior year as of 31 December 2022 no investment properties exist.

3.7. Leases

The ATON Group applies the provisions of IFRS 16 "Leases" since 1 January 2019 (previously accounting under IAS 17). The standard contains a comprehensive model for identifying lease agreements and accounting for lessors and lessees. The provisions of IFRS 16 were applied modified retrospectively within the Group, i.e. the cumulative adjustment amounts will be recognized as retained earnings in equity as of 1 January 2019.

Identifying a lease

At inception of a contract, it must be assessed whether a contract is or contains a lease. This is the case if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

In the transition to IFRS 16, the Group made use of the practical relief of IFRS 16.C3, which permits that for all existing contracts at the transition date, no new reassessment has to be made as to whether an arrangement is a lease or not. The Group applies the new lease definition to all agreements that are closed or modified on or after 1 January 2019.

The Group as lessee

Lessees recognize a right-of-use for a leased asset (so-called right-of-use asset or RoU asset) and a corresponding lease liability for all leases in accordance with IFRS 16. An exception is short-term leases with a maximum term of 12 months and leases where the underlying asset is of low value. The lease payments resulting from these leases are recognised in the Group as an expense on a straight-line basis over the term of the lease.

RoU assets are valued at cost at the commencement date. These costs comprise the amount of the lease liability initially recognised plus any lease payments made at or before the commencement date, plus any initial direct costs and estimated costs of dismantling and eliminating the underlying asset less any lease incentives received. In subsequent periods, RoU assets are generally measured at amortised cost. If the lease transfers ownership of the underlying asset to the lessee by the end of the lease term or if the cost of the right-of-use asset reflects that the lessee will exercise a purchase option, the lessee shall depreciate the right-of-use asset from the commencement date to the end of the useful life of the underlying asset. Otherwise, the lessee shall depreciate the right-of-use asset form the commencement date to the earlier of the useful life of the right-of-use asset or the end of lease term.

At the commencement date of the lease, the Group measures the lease liabilities at the present value of the lease payments not yet paid. The lease payments are discounted using the interest rate implicit in the lease. If this rate cannot be readily determined, the Group uses the incremental borrowing rate. As part of the subsequent valuation, the book value of the lease liability is increased to reflect interest using the interest rate used for discounting and reduced by the lease payments made.

Leasing liabilities are remeasured,

- if there is a change in the estimated amounts expected to be payable under residual value guarantees;
- if future lease payments change as a result of a change in an index or interest; or
- if the Group's assessment changes with respect to purchase options, extension options or cancellation options.

If the lease liability is remeasured on the basis of one of the aforementioned reasons, the adjustment is recognised against the right-of-use asset. If the carrying amount of the right-of-use asset is zero, the adjustment is recognised in profit or loss.

The Group as a lessor

The lessor distinguishes between finance and operating leases. Leases under which substantially all the risks and rewards are retained by the Group are classified as operating leases. The leased assets continue to be capitalised by the ATON Group as fixed assets. Initial direct costs incurred in negotiating and concluding a lease agreement are added to the carrying amount of the leased asset and expensed over the term of the lease agreement in a manner corresponding to the recognition of the rental income. Contingent rents are recorded in the period in which they are generated.

For subleases, the interim lessor classifies the sub-lease as a finance or operating lease in respect of the right of use arising from the principal lease. In other words, under IFRS 16, the intermediate lessor treats the right-of-use asset as the underlying asset of the sub-lease rather than the underlying leased asset by the principal lessor.

3.8. Reparable aircraft spare parts

For the purpose of measuring reparable aircraft spare parts, the spare parts are allocated to the individual aircraft models and depreciated over the remaining useful life of the respective aircraft model, taking into account estimated residual values. Residual values and useful lives are reviewed at each reporting date. Changes in the residual values and their effects on annual depreciation charges are reflected prospectively in accordance with IAS 8, “Accounting Policies, Changes in Accounting Estimates and Errors” in the period of the change and the subsequent periods.

3.9. Inventories

Inventories are valued at the lower of acquisition or production cost and their net realisable value on the reporting date. The net realisable value is the estimated selling price in the ordinary course of business less direct selling costs and directly attributable production costs still to be incurred. If the net realisable value is lower than the carrying amount, an impairment loss is recognised.

The cost of raw materials, consumables and supplies is mainly determined at average purchase prices, which are calculated on the basis of a moving average.

In addition to direct material costs, direct labour costs and special direct costs, the production costs of unfinished and finished goods include all directly attributable production-related overheads. General administrative costs and financing costs are not capitalised, except in the case of a qualifying asset. The production costs are determined on the basis of normal production capacity.

The purchasing cost of merchandise also includes incidental costs of purchase.

3.10. Non-current assets held for sale and disposal groups

Non-current assets or disposal groups are classified as held for sale if the associated carrying amount is mainly intended to be realised by means of a sale and not from continuing use. This condition is considered to have been satisfied only if the sale is highly probable and the asset (or the disposal group) is available for immediate sale in its current condition. Management must be committed to a plan for the sale of the asset (or the disposal group) and must have initiated an active programme to locate a buyer and to implement the plan. In addition, the asset (or the disposal group) must be actively marketed at a price that is reasonable in relation to its current fair value. There must be an expectation that this will result in the recognition of a completed sale transaction within one year of such classification. Depreciation is suspended in such cases. Non-current assets (and disposal groups) classified as held for sale are measured at the lower of their original carrying amount and their fair value less costs to sell.

3.11. Financial assets

Classification and measurement

IFRS 9 contains three measurement categories: 1) amortised cost, 2) at fair value through other comprehensive income and 3) at fair value through profit or loss. The classification and measurement of financial assets (financial instruments) that are not equity instruments depends on two factors that are to be examined at the moment of acquisition (and in the case of first-time adoption of IFRS 9 on transition): the business model for the financial asset and the cash flow conditions of the instrument. A valuation at amortised cost is appropriate, provided that the cash flows of the instrument consist only of interest payments on the nominal amount and repayments (cash flow criterion) and the instrument is held with the purpose of realising the contractual cash flows ("hold" business model). If the cash flow criterion is met and the instrument is held under a business model that realises the cash flows from the instrument through holding to maturity and through sales ("hold or sell" business model), a fair value measurement is made through other comprehensive income. If the cash flow criterion is not met or for all business models other than "hold" or "hold or sell", the instrument must be measured at fair value through profit or loss.

A reclassification of a financial asset between the measurement categories of IFRS 9 requires a change in the business model for each group of instruments. Such a change is expected to be very infrequent in practice and will occur only if: 1) determined by the entity’s senior management as a result of external or internal changes, 2) the change is significant to the operations and 3) be demonstrable to external parties.

Loans, trade receivables and other receivables as well as contract assets under IFRS 15 of the ATON Group fulfil the cash flow criterion. The instruments are held in a business model that aims to realise the cash flows by holding the instruments to final maturity. For this reason, valuation continues to be carried out at amortised cost, taking into account the effective interest method.

Investments in equity instruments do not meet the cash flow criterion due to the intrinsic leverage effect of price fluctuations. These instruments are generally to be measured at fair value through profit or loss. The ATON Group will not make use of the option of measuring investments in equity instruments at fair value through other comprehensive income (FVTOCI) in the future.

Financial assets are measured at fair value upon initial recognition. All financial assets that are not classified as at fair value through profit or loss also include the transaction costs that are directly attributable to the acquisition of the asset.

All purchases and sales of financial assets at-arms-lengths are recognised at the trading day, i.e. at the date on which the Group entered into the obligation to purchase or sell the asset.

Impairment

In order to recognise changes in default risk since the initial recognition of a financial asset, the Group adjusts the expected future losses as part of risk provisioning at each reporting date. This means, that a so-called loss event that triggers impairment is not required.

IFRS 9 distinguishes between three levels when measuring expected losses. The expected future losses on a financial asset are measured on the basis of one of the following three measures:

- the "expected 12-month loss" (present value of expected credit losses resulting from possible default events within the next 12 months after the balance sheet date) - level 1;

- the total expected credit loss over the remaining life of the financial instrument (present value of expected credit losses due to all possible default events over the remaining term of the financial instrument), whereby the gross book value is still the basis for the effective interest rate - level 2;

- or the total expected credit loss over the remaining life of the instrument (present value of expected credit losses due to all possible default events over the remaining life of the financial instrument), whereby the net book value is the basis for the effective interest rate - level 3.

For trade receivables and contract assets within the scope of IFRS 15, which do not contain a significant financing component under IFRS 15, IFRS 9 provides a simplified impairment approach for measuring expected credit losses. The simplified impairment approach is, for reasons of practicability, also applicable to contracts for which it is reasonable expected according to IFRS 15, that they do not contain a significant component of financing based on a maximum duration of the contract of one year.

Due to the short duration of these financial instruments, the simplified impairment approach requires a direct recording of the expected credit losses over the entire residual term. These financial instruments are therefore directly attributable to level 2 of the impairment model (unless they are already impaired when they are issued, which would lead to an allocation to level 3).

In the case of a significant financing component for trade receivables and contract assets within the scope of IFRS 15, IFRS 9 gives the option of applying the simplified impairment approach for measuring expected credit losses. This option can also be applied to lease receivables. However, the ATON Group does not apply this option to lease receivables because the lease receivables are recognised under other receivables.

The ATON Group makes use of the option regarding the simplified impairment approach to measure the lifetime expected credit losses. For loans and other receivables, however, expected credit losses are recognised under the general 3-step model.

Increase of default risk

The loss recognition of the lifetime expected credit losses is obligatory for financial instruments whose default risk has significantly increased since initial measurement (level 2). If there are objective indications of impairment, the asset must be reclassified to level 3 and the loan loss allowance has to be adjusted accordingly.

A significant increase occurs when there is little risk of default, the debtor is highly capable of making his contractually agreed payments, and adverse changes in the economic or business environment may, in the long term, affect the debtor's ability to make contractually agreed payments. The rules also include the rebuttable presumption that the default risk has significantly increased since the instrument's access when contractual payments are overdue for more than 30 days. This rebuttable presumption is used by the ATON Group. In addition, the Group makes use of the simplification for financial assets whose default risk is considered low. It may then be assumed that for financial assets whose default risk is considered low, the default risk has not significantly increased. The ATON Group considers a low default risk to be related to financial assets whose internal or external credit rating falls into the "investment grade" category. This simplified approach applies to loans and other receivables.

In accordance with IFRS 9, a financial asset has objective evidence of impairment if one or more events have occurred that have a significant impact on the expected future cash flows of the financial asset. These include, for example, significant financial difficulties of the issuer or the debtor or a breach of contract such as a default or a delay of interest or principal payments. Based on historical experience, a loss of financial assets measured at amortised cost is assumed in the event of various circumstances such as delayed payment over a certain period of time, initiation of coercive measures, threatened insolvency or over-indebtedness, application or initiation of insolvency proceedings or failure of restructuring measures. In addition, the Group uses the rebuttable presumption for loans and other receivables that there are objective indications of impairment at the latest when the contractual payments for an instrument are outstanding for more than 90 days. For trade receivables and contract assets within the scope of IFRS 15, estimates are made on a case-by-case basis. The Group reviews at each balance sheet date whether there are any objective indications for an impairment of a trade receivable / contract asset within the scope of IFRS 15. Receivables and the associated accumulated risk allowances are only derecognised if they are classified as irrecoverable, i.e. no more cash inflows are expected. In this case, the outstanding amount of receivables is adjusted against the risk allowance.

Measurement of expected credit losses

The expected credit loss is a function of the probability of default, the loss given default and the credit exposure at the time of default. Loans and other receivables (general impairment approach) are classified by the ATON Group based on an internal rating scale. This rating scale is as follows:

ATON		S&P
Grade	**Description**	**Description**
A	Very good credit rating (investment grade)	AAA-BBB
B	Good to satisfactory credit rating (sub-investment grade)	BBB-BB
C	Credit rating below average	below BB

The default probability for each rating grade is based on the experience of an external rating agency, which is historical data enriched with forward-looking data. These are reviewed annually and, if necessary, adjusted. Based on empirical values, the loss rate in case of default for these financial instruments is calculated to be one hundred percent.

For trade receivables and contract assets within the scope of IFRS 15 (simplified impairment approach), the ATON Group calculates a default rate on the basis of historical default at each reporting date and adjusts it to expected future economic developments based on a 6-month forecast. At the time of the default, the book value is used as an approximation of the outstanding amount within the ATON Group.

The expected credit losses on loans are determined on the basis of the respective financial instrument or for the respective debtor. However, in the case of trade receivables, contract assets in the scope of IFRS 15 and other receivables, an assessment based on the individual debtor / instrument is not possible. For this reason, the expected credit losses for these instruments are determined on a collective basis. Trade receivables and contract assets in the scope of IFRS 15 are grouped for these purposes at the level of the segments, because the segments are the highest possible level at which the ATON Group's customers have common default risk characteristics. The ATON Group regularly reviews grouping and aggregation to ensure that the instruments within each group continue to share common default risk characteristics.

At each reporting date, the Group reviews whether the default risk has significantly increased since the first-time recognition or whether there is objective evidence of impairment. Affected financial assets are reclassified to the respective level of the impairment model accordingly; the valuation of the expected credit loss is also adjusted to the respective level.

Presentation of expected credit losses

Expected credit losses and their changes are reported by the Group in a separate line item in the consolidated income statement.

3.12. Financial liabilities

Classification and measurement (without impairment) – financial liabilities

Financial liabilities are classified either as financial liabilities at fair value through profit or loss or as other financial liabilities measured at amortised cost.

Financial liabilities are measured at fair value on initial recognition. The transaction costs directly attributable to the acquisition will continue to be recognised for all financial liabilities that are not subsequently measured at fair value through profit or loss. Financial guarantees issued are subsequently not measured at fair value through profit or loss but at the higher of: 1) the amount resulting from the application of the impairment requirements from IFRS 9 or 2) the amount originally recognised.

3.13. Derecognition of financial assets and financial liabilities

Financial assets

A financial asset (or a portion of a financial asset or a portion of a group of similar financial assets) is derecognised if one of the three following preconditions is met:

- The contractual rights to receive the cash flows from a financial asset have expired.
- While the Group retains the rights to receive the cash flows from a financial asset, it assumes a contractual obligation to pay the cash flows immediately to a third party under an arrangement that satisfies the conditions of IFRS 9.3.2.6 (pass-through arrangement).
- The Group has transferred its contractual rights to receive the cash flows from a financial asset and in doing so has transferred substantially all the risks and rewards associated with ownership of the financial asset or, while it has neither transferred nor retained substantially all the risks and rewards associated with ownership of the financial asset, has nevertheless transferred control over the asset.

If the Group transfers its contractual rights to the cash flows from an asset, and neither transfers nor retains substantially all the risks and rewards of ownership of the transferred asset and retains control of the transferred asset, the Group continues to recognise the transferred asset to the extent of its continuing involvement. When the continuing involvement takes the form of guaranteeing the transferred asset, the extent of the continuing involvement is the lower of the original carrying amount of the asset and the maximum amount of the consideration received that the Group could be required to repay. When the continuing involvement takes the form of a written and / or a purchased option on the transferred asset (including an option settled in cash or by a similar method), the extent of the Group's continuing involvement is the amount of the transferred asset that it may repurchase. However, in the case of a written put option (including an option settled in cash or by a similar method) on an asset that is measured at fair value, the extent of the Group's continuing involvement is limited to the lower of the fair value of the transferred asset and the exercise price of the option.

Financial liabilities

A financial liability is derecognised when the underlying obligation is discharged, cancelled or has expired. If an existing financial liability is exchanged for another financial liability of the same lender with substantially different terms or if the terms of an existing liability are substantially modified, such exchange or modification is accounted for as a derecognition of the original liability and the recognition of a new liability. It does not matter if this is due to financial difficulties of the debtor or not. The difference between the respective carrying amounts is recognised in profit or loss.

3.14. Derivative financial instruments

The Group uses derivative financial instruments such as forward exchange contracts and options in order to hedge against currency risks. These derivative financial instruments are recorded at their fair value at the date of inception of the contract and measured at their fair value in subsequent periods. Derivative financial instruments are recognised as assets if they have a positive fair value and as liabilities if their fair value is negative. Gains and losses from changes in the fair value of derivative financial instruments that do not meet the criteria for hedge accounting are recognised immediately in the income statement. The fair value of forward exchange contracts and options is calculated using recognised valuation models with reference to current market parameters.

Cash flow hedges are used to hedge the risk of fluctuations in the future cash flows associated with a recognised asset, a recognised liability or a highly probable forecast transaction. In the case of a cash flow hedge, unrealised gains and losses on the hedging instrument are initially recorded in other comprehensive income after reflecting deferred taxes, if the hedging relationships are deemed effective. They are reclassified into the income statement only when the hedged item affects profit or loss. If forecast transactions are hedged and those transactions result in the recognition of a financial asset or a financial liability in subsequent periods, the amounts recorded in equity up to that date are reclassified into profit or loss in the same period in which the asset or the liability affects profit or loss. If the transactions result in the recognition of non-financial assets or liabilities, such as the purchase of property, plant and equipment, the amounts recorded directly in equity are included in the initial carrying amount of the asset or the liability.

At the inception of a hedge, comprehensive documentation of the hedge accounting is required in accordance with the requirements of IFRS 9, which among other things describes the risk management strategy and objectives associated with the hedge. The effectiveness of the hedging relationship is measured at regular intervals and the hedging relationship adjusted if necessary.

3.15. Provisions

A provision is recognised if the Group has a present obligation (legal or constructive) as a result of a past event, an outflow of resources embodying economic benefits to settle the obligation is probable (more likely than not) and the amount of the obligation can be estimated reliably. If the Group expects reimbursement in respect of at least a portion of a provision recognised (such as in the case of an insurance policy), the reimbursement is recognised as a separate asset to the extent to which it is virtually certain that the reimbursement will be received. The expense from the recognition of the provision is reported in the income statement net of the reimbursement.

If the interest effect from discounting is material, provisions are discounted at a pre-tax interest rate which reflects the specific risks for the liability. In the event of discounting, the increase in the provision over time is recorded as a financial expense.

3.16. Employee benefits

Pension obligations

The Group has both defined benefit and defined contribution pension plans. A defined contribution plan is a pension plan under which the Group pays fixed contributions to a company (fund) which is not a part of the Group. The Group has no legal or constructive obligation to make further payments if the fund does not have sufficient assets to pay all of the employees' pension entitlements from the current and previous financial years. In contrast, defined benefit plans typically specify an amount of pension benefits that an employee will receive on retirement and which is generally dependent on one or more factors such as age, years of service and salary.

The provision recognised in the statement of financial position in respect of defined benefit pension plans is the present value of the defined benefit obligation (DBO) at the end of the reporting period less the fair value of the plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The measurement of the obligation in the statement of financial position is based on a number of actuarial assumptions. Assumptions are required to be made, in particular, about the long-term salary and pension trends as well as the average life expectancy. The assumptions about salary and pension trends are based on developments observed in the past, and take into account the level of interest rates and inflation in the particular country and the respective developments in the labour market. Recognised biometric bases for actuarial calculations are used to estimate the average life expectancy. The interest rate used for discounting the future payment obligations is derived from currency and term congruent high-quality corporate bonds.

Remeasurements arising from experience adjustments and changes in actuarial assumptions are recognised in other comprehensive income in equity in the period in which they arise. Past-service cost is recognised immediately in profit or loss.

Pension expenses are included in the personnel expenses with the exception of interest components which are included in the financial result.

In the case of defined contribution plans, the Group pays contributions to state or private pension insurance plans either on the basis of statutory or contractual obligations, or voluntarily. The Group has no further payment obligations once the contributions have been paid. The amounts are recorded in personnel expenses when they become due. Prepayments of contributions are recognised as assets to the extent that a right exists to a refund or a reduction in future payments.

Termination benefits

Termination benefits are paid if employment is terminated by a Group company before the employee reaches the regular retirement age or if an employee leaves the company voluntarily against a compensation payment. The Group recognises severance payments when it is demonstrably committed to terminate the employment of current employees in accordance with a detailed formal plan which cannot be withdrawn, or when it is demonstrably required to make severance payments as a result of voluntary termination of employment by employees. Payments that are due more than twelve months after the reporting date are discounted to their present value.

3.17. Revenue recognition

The relevant accounting standard IFRS 15 provides a single, principle-based, five-step model that applies to all contracts with customers. According to the five-step model, the contract with the customer must first be determined (step 1). In step 2, the independent performance obligations are to be identified in the contract. Subsequently (step 3), the transaction price is to be determined, with explicit provisions for the treatment of variable consideration, significant financing components, payments to the customer and barter transactions. After the determination of the transaction price, in step 4 the allocation of the transaction price to the individual performance obligations has to be carried out. This is based on the stand-alone selling prices of each performance obligations. Finally (step 5) the revenue can be recognised, provided the performance obligations have been met. The prerequisite for this is the transfer of the power of disposal of the goods or the service to the customer.

The following table shows the main products and services from which the ATON Group's individual business segments generate their revenues. Revenue recognition always takes place over the period of time regarding satisfying the performance obligation, if

- the customer simultaneously receives and consumes the benefits provided by the entity's performance as the entity performs, which is usually the case for services (IFRS 15.35 (a)),
- the customer gains control of the asset while it is being manufactured, typically on the client's property (IFRS 15.35 (b)) or
- the Group cannot prove any alternative use of the asset and at the same time has an enforceable right to payment at any time plus an appropriate margin to the customer (IFRS 15.35 (c)).

In all other cases, revenue is recognised at the time the customer gains control of the asset. This is usually the case when the legal title and the significant risks and rewards have passed to the customer, a payment claim against the customer exists and (in some cases) an acceptance has taken place.

In the individual segments, the revenue recognition is as follows:

Segment Engineering:

Products and services	Satisfaction of the performance obligation…			Description
	at a point in time	over a period of time		
		Criteria	Method	
Turnkey contracts		15.35(c)	Input Method	Construction of turn-key production facilities, i.e. planning, production and commissioning of fully linked production facilities. The fulfilment of these performance obligations takes place over a period of time over the respective project duration. Accordingly, revenue is recognised in accordance with the calculated percentage of completion.
contractual labour relationship		15.35(c)	Input Method	Provision of customer-specific technology solutions for various tasks in production and, to a lesser extent, developing tools which are used in subsequent series production.
Service contracts		15.35(a)	Input Method	The transaction price usually consists of a fixed fee per unit of time.
Customer-specific construction contracts (project-business)		15.35(c)	Input Method	Provision of services and predominantly in so-called customer-specific construction contracts (project business) within the framework of contractual labour relationship. The fulfilment of the performance obligations generally takes place over the period during the duration of the project. Accordingly, revenue is recognised in accordance with the calculated percentage of completion. Characteristic of the customer-specific performance obligations is a close cooperation / coordination with the customers within the individual projects. Repurchase obligations, reimbursement obligations and similar obligations as well as guarantees associated with the performance obligation basically do not exist after final acceptance by the customer.
High-performance electric motors	x			The Group recognises revenues, depending on the delivery terms, after delivery to and acceptance by the customer, since at this point in time the power of disposition is regularly transferred to the customer. Payment by the customer is usually made 30 to 60 days after delivery or billing.
Injection moulded parts (series production)	x			The Group produces innovative and complex components in series production on demand from international automotive manufacturers. Revenue recognition, depending on the delivery terms, takes place after delivery and acceptance by the customer, since at this point in time the power of disposition is regularly transferred to the customer.

Segment Mining:

Products and services	Satisfaction of the performance obligation…			Description
	at a point in time	over a period of time		
		Criteria	Method	
Bundles of different services in combination with the provision of goods		15.35(a) 15.35(b)	Based on monthly invoicing since this reflects the benefits, which has been transferred to the customer.	In the case of contracts within the segment Mining, the Group generally provides a bundle of various services in combination with the provision of goods, which in its entirety constitutes one performance obligation in accordance with IFRS 15 because significant integration services are provided. The services actually provided are billed on a monthly basis so that the relief granted under IFRS 15.B16 can be claimed and that the revenues are recognised on a monthly basis in the amount of the invoice.

Segment Med Tech:

Products and services	Satisfaction of the performance obligation…			Description
	at a point in time	over a period of time		
		Criteria	Method	
X-ray machines	x			The Group recognises revenues depending on the delivery terms after delivery to the customer or when making available to the customer, since at this point in time the power of disposition is regularly transferred to the customer. Payment by the customer is usually made 30 days after delivery or billing.
Extended warranty		15.35(a)	On the basis of historical values, which represent the benefits for the customer.	The Group offers extended warranty contracts exclusively to foreign customers. The consideration paid by the customer must be paid in advance for the entire contract period. The advance payment minimises the administrative burden on the Group and ensures that customers meet their contractual obligations so that the contracts do not contain any significant financing component. Revenue recognition over the contract period is based on the benefit profile for the customer, which is based on historical data.

Segment Aviation:

Products and services	Satisfaction of the performance obligation…			Description
	at a point in time	over a period of time		
		Criteria	Method	
Aircraft Management		15.35(a)	Output method	In the case of aircraft management contracts, the Group provides a bundle of services, which in its entirety constitutes one performance obligation in accordance with IFRS 15. The services actually provided are billed on a monthly basis so that the relief granted under IFRS 15.B16 can be claimed and that the revenue is realised monthly at the invoiced amount.

3.18. Contract assets / Contract liabilities

If a performance obligation has been fulfilled and a receivable has not yet arisen, a contract asset must be recognised. Contract assets are subject to the IFRS 9 impairment provisions explained in note **3.11. Financial assets**.

A contract liability is recorded when the customer pays consideration or the Group has an unconditional right to an amount of consideration (whichever is earlier) before the Group transfers the corresponding goods or services to the customer. Contract liabilities are recognised as revenue as soon as the Group fulfils its contractual obligations (i.e. as soon as it transfers control of the goods or services to the customer).

3.19. Borrowing costs

Borrowing costs that can be directly allocated to the acquisition, construction or production of a qualifying asset are capitalised as a component of the acquisition or production cost of that asset. Other borrowing costs are recognised as an expense in the period in which they are incurred, if they are not also required to be capitalised under IAS 23.

3.20. Government grants

Government grants are recognised only when there is reasonable assurance that the Group will comply with the conditions attached to the grants and that the grants will also be received.

Government grants whose most important condition is the purchase, construction or other acquisition of non-current assets are recorded as a deduction from the acquisition or production cost of the asset. Other government grants are recognised as income over the period necessary to match them with the related costs, which they are intended to compensate, on a systematic basis. Government grants received as compensation for expenses or losses already incurred or for the purpose of providing immediate financial support to the Group with no future related costs are offset against the expenses incurred in the period in which the entitlement is established.

3.21. Income taxes

The income tax expense for the period comprises current and deferred taxes.

Current taxes

The current tax expense for each entity liable to tax is derived from its taxable income. The Group's current tax liability is calculated on the basis of the applicable tax rates.

Deferred taxes

Deferred taxes are recognised for all temporary differences between the tax base of the assets and liabilities and their carrying amounts in the consolidated financial statements (balance sheet-oriented liability method). Deferred taxes are not recognised if the temporary differences arise from the initial recognition of goodwill or (except in the case of business combinations) of other assets and liabilities resulting from transactions that do not affect either taxable income or the net profit for the year.

Deferred tax assets and liabilities are generally recognised for all taxable temporary differences. When deferred tax assets exceed deferred tax liabilities, they are only recognised to the extent to which taxable income will probably be available against which the deductible temporary differences can be utilised, and where the assumption can be made that they will reverse in the foreseeable future.

Deferred tax liabilities are recognised for taxable temporary differences arising from investments in subsidiaries or associates as well as investments in joint ventures, unless the Group can control the timing of the reversal of the temporary differences and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax assets and liabilities are calculated on the basis of the tax rates (and the tax laws) expected to be applicable at the date when the liability is settled or the asset is realised. The measurement of deferred tax assets and liabilities reflects the tax consequences that would arise from the manner in which the Group expects at the reporting date to settle the liability or to realise the asset. Deferred tax assets and liabilities are offset if there is a legally enforceable right to set off current tax assets against current tax liabilities, and if they relate to income taxes levied by the same tax authority and the Group intends to settle its current tax assets and liabilities on a net basis. Additionally, deferred tax assets for tax losses carried forward are recognised, if their use in following periods is expected to reduce tax payments.

In addition, deferred tax assets are recognised for the carry forward of unused tax losses or unused tax credits to the extent that it is probable that future taxable profit will be available against which the unused tax losses and unused tax credits can be utilised.

Current and deferred taxes for the period

Current and deferred taxes are recorded as income or expenses unless they relate to items recognised directly in equity. In this event, the tax is also recorded directly in equity. In addition, tax effects are not recognised in the income statement if they result from the initial recognition of a business combination. In the case of a business combination, the tax effect is reflected in the calculation of the goodwill or in the determination of the excess of the acquirer's share of the fair value of the identifiable assets, liabilities and contingent liabilities of the business acquired over the cost of the business combination.

4. Estimates and assumptions

In preparing the consolidated financial statements, assumptions and estimates are made to a certain extent that affect the amount and presentation of the assets and liabilities recognised, the income and expenses and the contingent liabilities for the reporting period. The premises underlying the assumptions and estimates are based on the state of knowledge available at the time in the particular case. However, the uncertainty associated with these assumptions and estimates could result in future adjustments to the carrying amount of the assets and liabilities affected.

The significant estimates listed below and the associated assumptions together with the uncertainties inherent in accounting policies adopted are central to an understanding of the risks underlying the financial reporting and the effects that those estimates, assumptions and uncertainties may have on the financial statements.

Estimates are especially required for the following assets and liabilities referred to below and the associated income and expenses.

Business combinations

The measurement of items of property, plant and equipment and intangible assets acquired as part of a business combination requires estimates to be made for determining their fair value at the acquisition date. Furthermore, the expected useful lives of the assets must be estimated. The determination of the fair values of assets and liabilities and of the useful lives of the assets is based on management assessments.

Impairment of goodwill

The Group tests goodwill for possible impairment at least once a year. The determination of the recoverable amount of a cash generating unit to which goodwill has been allocated requires estimates to be made by management. The Group generally determines these amounts using valuation techniques based on discounted cash flows. These cash flows are based on three- or five-year forecasts derived from financial projections approved by management. The forecasts take into account past experience and are based on management's best estimate of future developments. The key assumptions underlying the determination of the discounted cash flows comprise estimated growth rates, weighted interest rates and tax rates. These assumptions can have a significant effect on the respective amounts and therefore on the extent to which goodwill is impaired.

Impairment of property, plant and equipment and intangible assets

The identification of impairments, the estimation of future cash flows and the determination of the fair values of assets or groups of assets require significant judgement by management in identifying and testing for indications of impairment, expected cash flows, appropriate discount rates, respective useful lives and any residual values.

Revenue recognition based on the performance obligations satisfied over time in accordance with IFRS 15

In some companies, in particular within the EDAG Group and the Redpath Group, revenue is recognised over the period of time for a large part of the business. In the construction projects business, revenue is often recognised over the period of time where the performance obligation is satisfied. In order to determine the stage of completion, the total project costs and revenues as well as project risks are among the most important estimates. The companies continuously review and, if necessary, adjust all estimates related to such construction contracts.

Determination of expected credit losses according to IFRS 9

The calculation of expected credit losses for loans, trade receivables, contract assets according to IFRS 15 and other receivables is subject to significant estimates and assumptions, which are explained below.

The measurement of expected credit losses on loans and other receivables is essentially based on the classification of the respective debtors in ATON-specific risk categories and the default probabilities recorded there. In a changing market and competitive environment, the estimate of a debtor's creditworthiness made at the reporting date may differ during the course of the year. The risk allowance recognised can thus be recorded too low / high. Furthermore, the probability of default represents a statistical measure, which may also require adjustments to the risk allowances.

The determination of the expected credit losses for trade receivables and contract assets in accordance with IFRS 15 is based on historical values, which are adjusted by the use of future-related information. The forward-related information has proved to be a suitable indicator for the amounts of impairments using statistical methods. However, due to strong economic upswings and downturns, the forward-looking information may lose its explanatory power and thus induce volatility in the recognition of risk allowances. In addition, material effects from the past can distort the risk allowance, which may also require a subsequent correction (please refer also to note **3.11 Financial assets**).

Pensions and other post-employment benefits

The obligation from defined benefit plans and other post-employment benefits is determined on the basis of actuarial calculations. The actuarial measurement is based on assumptions with respect to discount rates, future wage and salary increases, biometric bases and future increases in pensions.

The discount factors applied reflect the interest rates obtained at the reporting date for high-quality corporate bonds with matching currencies and maturities. As a result of the changing situation in the market and the economy and the long-term orientation of these pension plans, the underlying assumptions may differ from the actual development, which may significantly affect the obligations for pensions and other post-employment benefits.

For a sensitivity analysis showing how the present value of the defined benefit obligation would have been affected by changes in the significant actuarial assumptions, reference is made to note **29. Provisions for pensions**.

Provisions

The determination of provisions for imminent losses from onerous contracts, provisions for warranties and provisions for litigation is dependent to a considerable extent on estimates of the likelihood of a future outflow of resources, as well as on experience and the circumstances known at the reporting date. Because of the uncertainties associated with this assessment, actual losses may differ from the original estimates and therefore from the amount of the provision.

A huge portion of the business of EDAG, Redpath and their subsidiaries is conducted in the form of long-term contracts. The Group recognises a provision for imminent losses from onerous contracts if the current estimate of the total contract costs exceeds the expected revenue from the relevant contract. These estimates are subject to revision in the light of new information as the project progresses. The companies identify onerous contracts by constantly monitoring the progress of the project and updating the calculation of total contract costs.

Leases

Rights of use and obligations arising from leases are initially measured at the present value of the future lease payments. The determination of the fair value is regularly associated with estimates regarding the cash flows from the use of the leased asset and the discount rate used. To determine the present value of the minimum lease payments, the interest rate underlying the lease or, if not determinable, the incremental borrowing rate is used. The exercise of possible extension and termination options must also be assessed.

Fair value of derivative financial instruments

The fair value of financial instruments not traded on an active market is determined by applying appropriate valuation techniques from a variety of methods. The underlying assumptions are largely based on market conditions existing on the balance sheet date.

Deferred tax assets

Deferred tax assets are recognised to the extent that it is probable that they can be utilised. The tax benefit from the utilisation of deferred tax assets depends on the ability to generate sufficient future taxable income relating to the particular type of taxation and tax jurisdiction, taking into account any statutory restrictions relating to minimum taxation or a maximum period for which tax losses may be carried forward. The assessment of the probability that deferred tax assets will be utilisable in the future is based on a number of factors, such as past results of operations, operating business plans, or tax planning strategies. If actual results differ from these estimates or if adjustments to the estimates are necessary in future periods, this may have a negative impact on the results of operations, net assets and financial position. If there is a change in the assessment of the recoverability of deferred tax assets, the deferred tax assets are written down through profit or loss or other comprehensive income – according to their original recognition – or, respectively, impaired deferred tax assets are recognised through profit or loss or directly in equity.

Impact of the Covid-19 pandemic and the Russia's war against Ukraine

Due to the ongoing Covid-19 pandemic, which has still not been finally overcome at least in parts of the world, Russia's war against Ukraine, which is ongoing since 24 February 2022, and other geopolitical tensions, the estimates and judgments listed above are still subject to increased uncertainty. The actual amounts realised may differ from these estimates and judgments. Changes may have a material impact on the consolidated financial statements.

In updating these estimates and judgements, all available information concerning expected future economic developments and country-specific government measures were taken into account.

The information on the topics described above was included in particular in the impairment tests for financial assets (see note **22. Other financial assets** and note **23. Trade and other receivables**) and for financial investments accounted for using the equity method (see note **13. Other investment result**). In addition, impairment tests were performed for cash-generating units (see note **17. Goodwill and other intangible assets**), which confirmed the recoverability of the respective underlying carrying amounts.

5. Changes in the scope of consolidation

The following changes occurred in the scope of consolidation and regarding associated companies during the reporting period:

By signing the contract dated 15 December 2021, EDAG Production Solutions GmbH & Co. KG undertook to sell all shares in its subsidiary EDAG Production Solutions CZ S.R.O., Mladá Boleslav, to a third party. Consequently, the net assets of the company were already recognised as assets and liabilities held for sale as at 31 December 2021 and measured at the expected selling price. The sale became effective at the end of 31 January 2022 (loss of control).

On 10 February 2022, a further capital increase at ecoCOAT GmbH, Allershausen, was resolved. This capital increase was executed by notarial certification on 7 March 2022, as part of which ATON GmbH's share increased from 45.65 % to 51.0 %. ATON GmbH has thus acquired control over this company, which had previously been accounted for using the equity method. For materiality reasons, the initial consolidation was carried out as of 1 January 2022, and the company is fully consolidated since then. The company develops new high-tech solutions for innovative products and specialises in a coating technology that can be used to bond metals and polymers to almost any surface in the atmosphere. The company is allocated to the Engineering segment. The carrying amounts and fair values of the assets and liabilities at the acquisition date recognised as a result of the acquisition are as follows:

in EUR '000	IFRS carrying amounts at date of acquisition	Purchase price allocation	Fair values at date of acquisition
Intangible assets	193	4,350	4,543
Property, plant and equipment	887	-	887
Deferred tax assets	387	-	387
Trade and other receivables	14	-	14
Non-current assets	**1,481**	**4,350**	**5,831**
Inventories	84	-	84
Trade and other receivables	104	-	104
Cash and cash equivalents	1,751	-	1,751
Current assets	**1,939**	**-**	**1,939**
Total assets	**3,420**	**4,350**	**7,770**
Other provisions	1	-	1
Financial liabilities	352	-	352
Trade and other liabilities	72	-	72
Deferred tax liabilities	46	814	860
Total liabilities	**471**	**814**	**1,285**
Net assets acquired (including non-controlling interests)	**2,949**	**3,536**	**6,485**

The following non-tax-deductible goodwill results from the acquisition of the company:

in EUR '000	2022
Value of the interest held at acquisition date	3,665
Valuation of the existing interest held at fair value	335
Total consideration transferred at fair value	**4,000**
Fair value of net assets held by non-controlling interest	2,485
Net assets at book value	-2,949
Difference (before purchase price allocation)	**3,536**
Adjustment to fair values	
Intangible assets	-2,936
Deferred tax liabilities	814
Goodwill (partial goodwill at 51.0 %)	**1,414**

The purchase price and the resulting goodwill at Group level can be mainly traced to the development know-how of the employees.

The incidental acquisition costs associated with the business combination, amounting to EUR 119k, are presented in the income statement under other operating expenses and in the cash flow statement under cash flow from operating activities.

In the period from 1 January 2022 to 31 December 2022, the acquired company generated revenues of EUR 253k and a net loss (before continuation effects from the purchase price allocation) of EUR -692k.

With the purchase and assignment agreement dated 4 April 2022, ATON GmbH acquired 100.0 % of the shares in Autotest Südtirol GmbH, Franzensfeste / Italy, which is fully consolidated since then (due to materiality as of 1 April 2022). The company develops and manufactures highly innovative and highly complex components for the international automotive industry and is allocated to the Engineering segment.

The transaction is a business combination under common control, as the parent company of the selling and the acquiring group are ultimately controlled by the same shareholders. As there is currently no guidance for such a transaction within the IFRS, the transaction was accounted for using the acquisition method in analogous application of IFRS 3.

The carrying amounts and fair values of the assets and liabilities at the acquisition date recognised as a result of the acquisition are as follows:

in EUR '000	IFRS carrying amounts at date of acquisition	Purchase price allocation	Fair values at date of acquisition
Intangible assets	732	2,240	2,972
Property, plant and equipment	8,672	-	8,672
Deferred tax assets	1,947	-	1,947
Non-current assets	**11,351**	**2,240**	**13,591**
Inventories	4,699	-	4,699
Trade and other receivables	4,917	-	4,917
Contract assets	1,313	-	1,313
Cash and cash equivalents	119	-	119
Current assets	**11,048**	**-**	**11,048**
Total assets	**22,399**	**2,240**	**24,639**
Other provisions	1,160	-	1,160
Financial liabilities	9,030	-	9,030
Trade and other liabilities	3,633	-	3,633
Deferred tax liabilities	938	598	1,536
Total liabilities	**14,761**	**598**	**15,359**
Net assets acquired	**7,638**	**1,642**	**9,280**

The following non-tax-deductible goodwill results from the acquisition of the company:

in EUR '000	2022
Fair value of the purchase price for the net assets	3,117
Net assets at book value	7,638
Difference (before purchase price allocation)	**-4,521**
Adjustment to fair values	
Intangible assets	2,240
Deferred tax liabilities	-598
Badwill (recognised with effect on income statement)	**-6,163**

The purchase price and the resulting badwill at the Group level result primarily from the purchase price determination, which was based on a company valuation using the discounted cash flow method based on the company's 3-year planning. Since the agreed purchase price is significantly below the equity according to IFRS at the acquisition date, this is the main reason for the badwill. As part of the purchase price allocation, a critical assessment was therefore made once again as to whether all hidden liabilities and reserves have been fully identified and appropriately measured. Since, in our opinion, all available information as of acquisition date was appropriately considered, the resulting badwill was recognised in profit or loss under other operating income.

The incidental acquisition costs associated with the business combination, amounting to EUR 18k, are presented in the income statement under other operating expenses and in the cash flow statement under cash flow from operating activities.

In the period from 1 April 2022 to 31 December 2022, the acquired company generated revenues of EUR 23,809k and a net loss (before continuation effects from the purchase price allocation) of EUR -2k.

In the course of the acquisition of Autotest Südtirol GmbH, the 26.7 % interest in Vist Tech GmbH, Kaltern / Italy, and the 6.0 % interest in Autotest Eisenach GmbH, Hörselberg-Hanich were also acquired.

With effect from 13 April 2022, the wholly owned subsidiary of EDAG Production Solutions GmbH & Co. KG, OOO EDAG Production Solutions RU, Russia, was liquidated.

On 24 May 2022, a capital increase took place at Redpath Mining (S.A.) (Pty.) Ltd, South Africa, in which only Redpath participated as majority shareholder. As a result, Redpath's share increased from 53.9 % to 67.0 % and the percentage of non-controlling interests decreased. This capital increase also affected Redpath Zambia Limited, Zambia, 99.0 % of which is held by Redpath Mining (S.A.) (Pty.) Ltd. Unchanged to previous year, the companies continue to be fully consolidated.

Furthermore, Distinct Crew Management Ltd., Luqa / Malta, held by DC Aviation, was liquidated.

As a result of a unilateral capital increase by ATON Digital Services GmbH on 26 July 2022 and a simultaneous conversion of the convertible loan, the interest in OneFiber Interconnect Germany GmbH, St. Wendel, increased from 33.34 % to 75.12 %. On 8 November 2022, the shareholding in OneFiber Interconnect Germany GmbH, St. Wendel, increased from 75.12 % to 91.24 % as a result of a further unilateral capital increase and conversion of the convertible loan.

On 1 August 2022, the Arbeitsgemeinschaft Freezing HS2, Dortmund, was established as a joint venture. 60 % of the shares are held by the Redpath Group.

On 28 November 2022, the company Deilmann-Haniel Mining Systems GmbH, Munich, was renamed and now operates as ATON MedTech GmbH, Munich.

With effect from 28 November 2022, ATON GmbH transferred its 100 % interest in Ziehm Imaging GmbH, Nuremberg, and contributed it to ATON MedTech GmbH, Munich. This intercompany transaction had no effect on the consolidated financial statements. ATON GmbH is the sole shareholder of ATON MedTech GmbH, Munich.

With regard to the changes in the scope of consolidation in the comparative previous year's period, please refer to the previous year's consolidated financial statements published on the ATON website at www.aton.de.

6. Revenue

The breakdown of revenue in the reporting period is as follows:

	Business segments					Total
in EUR '000	**Engineering**	**Mining**	**Med Tech**	**Aviation**	**Holding / Consolidation**	**ATON Group**
Geographical area						
Germany	495,029	27,978	40,884	86,581	166	650,638
North America	51,863	271,659	71,570	4,101	-	399,193
Europe (excluding Germany)	164,133	60,177	54,593	30,647	-	309,550
Asia	130,548	151,329	29,368	4,180	-	315,425
Australia	508	190,452	984	-	-	191,944
Africa	9	70,788	2,106	1,173	-	74,076
South America	4,581	2,032	3,001	-	-	9,614
Total revenue	**846,671**	**774,415**	**202,506**	**126,682**	**166**	**1,950,440**
Type of revenues						
Revenue from rendering of services	798,855	772,610	26,714	126,682	123	1,724,984
Revenue from sales of goods	47,816	1,805	175,647	-	13	225,281
Other operating revenue	-	-	145	-	30	175
Total revenue	**846,671**	**774,415**	**202,506**	**126,682**	**166**	**1,950,440**
Revenue recognition						
Over a period of time	774,315	774,415	16,366	126,682	-	1,691,778
At a point in time	72,356	-	186,140	-	166	258,662
Total revenue	**846,671**	**774,415**	**202,506**	**126,682**	**166**	**1,950,440**

The breakdown of revenue in the previous year's period was as follows:

	Business segments					Total
in EUR '000	Engineering	Mining	Med Tech	Aviation	Holding / Consolidation	ATON Group
Geographical area						
Germany	386,758	19,443	40,859	55,389	5,146	507,595
North America	45,949	252,805	66,775	1,454	-	366,983
Europe (excluding Germany)	151,734	61,524	55,470	24,467	-	293,195
Asia	112,637	135,430	29,444	2,958	-	280,469
Australia	932	165,709	1,753	-	-	168,394
Africa	10	51,238	2,438	1,255	-	54,941
South America	3,806	506	3,134	-	-	7,446
Total revenue	**701,826**	**686,655**	**199,873**	**85,523**	**5,146**	**1,679,023**
Type of revenues						
Revenue from rendering of services	689,534	683,474	17,234	85,523	-	1,475,765
Revenue from sales of goods	12,292	3,181	151,212	-	5,023	171,708
Other operating revenue	-	-	31,427	-	123	31,550
Total revenue	**701,826**	**686,655**	**199,873**	**85,523**	**5,146**	**1,679,023**
Revenue recognition						
Over a period of time	670,761	686,655	12,295	85,523	-	1,455,234
At a point in time	31,065	-	187,578	-	5,146	223,789
Total revenue	**701,826**	**686,655**	**199,873**	**85,523**	**5,146**	**1,679,023**

7. Changes in inventories and own work capitalised

Changes in inventories and own work capitalised break down as follows:

in EUR '000	2022	2021
Changes in inventories of goods and services	8,869	1,881
Own work capitalised	6,287	6,022
Changes in inventories and own work capitalised	**15,156**	**7,903**

Changes in inventories reflect the increase / decrease in unfinished and finished goods and services, which are determined on the basis of the acquisition and production cost method

The increase in inventories compared to the previous year results from an increase in unfinished and thus products and services not yet invoiced, particularly in the Med Tech and Engineering segment.

Own work capitalised in the reporting period mainly contains capitalised development costs at Ziehm Group amounting to EUR 5,180k (previous year: EUR 5,169k).

8. Other operating income

Other operating income comprises the following:

in EUR '000	2022	2021
Operating income		
Income from insurance compensation payments	9,988	1,918
Government grants	8,384	8,567
Miscellaneous operating income	7,548	4,538
Monetary advantage company cars	5,122	5,043
Income from subleases	2,024	1,729
Income from compensation	1,087	1,383
Rental and lease income	844	720
Income from cost reimbursements	411	22
Income from recycling / scrap disposal	208	88
Income from catering / canteen	48	49
Income from external services and cost transfers third parties	190	32
Operating income	**35,854**	**24,089**
Non-operating income		
Currency translation gains	10,493	30,332
Income from the reversal of provisions / derecognition of liabilities	7,585	6,396
Miscellaneous non-operating income	7,034	4,107
Income from the disposal and write-ups of intangible assets and property, plant and equipment	4,123	3,189
Income from hedging transactions	562	1,103
Income from other periods	161	193
Income from the disposal / deconsolidation of consolidated companies	32	-
Income from the disposal and write-ups of current assets	-	20
Non-operating income	**29,990**	**45,340**
Other operating income	**65,844**	**69,429**

The decrease in other operating income is mainly attributable to income from foreign currency translation (EUR -19,839k). The change results almost exclusively from the Mining segment.

The increased income from insurance compensation payments results in particular from the Mining segment.

Income from the reversal of provisions increased compared to the previous year. The increase is mainly attributable to the Mining segment.

The increase in income from the disposal and write-ups of intangible assets and property, plant and equipment results almost entirely from the Engineering segment.

Miscellaneous operating income and miscellaneous non-operating income comprise a large number of individual items, whereby the miscellaneous non-operating income in the financial year primarily includes the recognition of the badwill from the initial consolidation of Autotest Südtirol GmbH in the amount of EUR 6,163k.

9. Cost of materials

The cost of materials breaks down as follows:

in EUR '000	2022	2021
Cost of raw materials, consumables and supplies and of purchased merchandise	281,005	225,550
Cost of purchased services	189,930	128,873
Cost of materials	**470,935**	**354,423**

The cost of raw materials, consumables and supplies and of purchased merchandise allocates to the business segments as follows:

in EUR '000	2022	2021
Engineering	51,800	34,229
Mining	108,282	96,133
Med Tech	84,747	79,764
Aviation	36,057	10,268
Holding/Consolidation	119	5,156
Cost of raw materials, consumables and supplies and of purchased merchandise	**281,005**	**225,550**

The costs mainly relate to expenses for purchased parts, models and small parts as well as supplies of materials for construction activities and plant construction.

The cost of purchased services can be allocated as follows:

in EUR '000	2022	2021
Engineering	79,593	55,969
Mining	52,103	23,302
Med Tech	4,768	4,100
Aviation	53,542	45,578
Holding/Consolidation	- 76	- 76
Cost of purchased services	**189,930**	**128,873**

The cost of purchased services primarily consists of costs for subcontractors and purchased inputs for the provision of services.

10. Personnel expenses

Personnel expenses comprise the following:

in EUR '000	2022	2021
Wages and salaries	887,901	792,599
Expenses for social security, retirement and other employee benefit expenses	167,214	147,695
Personnel expenses	**1,055,115**	**940,294**

The expenses for retirement include, among other things, the expenses for defined benefit pension commitments. Due to its financial character the net interest expense of the provisions for pensions is presented within the financial result. For the presentation of the pension commitments, please refer to note **29**. **Provisions for pensions**.

Personnel expenses include EUR 362k (previous year: EUR 7,781k) of government grants, mainly in Germany, for short-working compensation including social security contributions, which are netted within personnel expenses.

In addition, government wage subsidies of EUR 753k (previous year: EUR 5,948k) were granted in other countries, which are reported under other operating income.

The average number of employees of the companies included in the consolidated financial statements during the financial year, broken down by categories, is as follows compared with the previous year:

Number	2022	2021
Industrial workers	3,867	3,873
Salaried staff	10,513	9,905
Total employees excluding trainees	**14,380**	**13,778**
Trainees	330	371

11. Other operating expenses

Other operating expenses comprise the following:

in EUR '000	2022	2021
Operating expenses		
Administration costs	52,577	44,995
Travelling expenses	45,847	33,712
Maintenance	32,318	26,807
Legal and consulting costs, audit costs	29,165	20,341
Expenses from additions to provisions	17,571	8,943
Other expenses for leasing contracts	17,208	15,187
Selling and marketing costs	13,792	12,913
Other incidental personnel expenses	11,502	8,146
Leasing expenses from short-term leases	10,064	5,201
Insurances	9,809	6,789
Education and training costs	7,910	5,469
Other taxes and levies	7,489	5,923
Leasing expenses from low-value leases	5,248	4,172
Research and development costs	3,594	2,135
Incidental rental costs and cleaning expenses	1,540	1,062
Car expenses	1,357	918
Incidental costs of monetary transactions	600	1,224
Expenses from security services	515	479
Variable leasing expenses (not included in lease liabilities)	338	143
Non-deductible input tax	318	301
Expenses from cost transfers third parties	291	29
Miscellaneous operating expenses	9,292	9,124
Operating expenses	**278,345**	**214,013**
Non-operating expenses		
Currency translation losses	8,288	8,821
Expenses from the disposal of property, plant and equipment	2,053	3,265
Expenses from other periods	184	135
Miscellaneous non-operating expenses	160	534
Expense from hedging transactions	-	179
Non-operating expenses	**10,685**	**12,934**
Other operating expenses	**289,030**	**226,947**

Other operating expenses increased by EUR 62,083k compared to the previous year.

In particular, there was an increase in traveling expenses, legal and consulting costs, expenses from additions to provisions, administration costs, maintenance, other incidental personnel expenses, insurances, and leasing expenses from short-term leases. By contrast, expenses from the disposal of property, plant and equipment, incidental costs of monetary transactions, expenses from currency translation, and other non-operating expenses were lower in the financial year 2022 than in the previous year.

The miscellaneous operating expenses and miscellaneous non-operating expenses comprise a large number of smaller, non-material individual items.

12. Result from investments accounted for using the equity method

The result from investments accounted for using the equity method amounts to EUR -58,306k (previous year: EUR 6,696k) and is mainly due to the valuation effects for Murray & Roberts Holdings Limited. For further information please refer to note **21**. **Investments accounted for using the equity method**.

13. Other investment result

The other investment result is composed as follows:

in EUR '000	2022	2021
Result from the write-ups / disposal of investments	335	70,968
Expenses from the impairment of investments	- 37,788	- 13,526
Other investment result	**- 37,453**	**57,442**

The result from the write-ups / disposal of investments is due to the write-up of the investment in ecoCOAT GmbH, Allershausen, in the context of the revaluation to its fair value immediately prior to the date of full consolidation.

The expenses from the impairment of investments result exclusively from the valuation of the investment in Murray & Roberts Holdings Limited at the stock market price as of balance sheet date. Since, as a minority shareholder, we do not have receive any multi-year planning for a valuation of the investment, e.g. according to the discounted cash flow method, the stock market price as of balance sheet date was used as the best estimate for the fair value for the valuation as of balance sheet date.

In the previous year, the valuation of the investment in Murray & Roberts Holdings Limited at the stock market price was also the reason for the other investment result.

14. Net interest result

The net interest result comprises the following:

in EUR '000	2022	2021
Interest income		
Interest income from credit institutions	1,098	238
Interest and similar income from related parties	2,875	3,188
Other interest income	376	384
	4,349	**3,810**
Interest expenses		
Interest expenses to credit institutions and bondholders	5,577	4,745
Interest expenses from lease agreements	5,653	4,890
Net interest expenses from defined benefit pension plans	547	424
Interest and similar expenses to related parties or shareholder	279	411
Other interest expenses	1,466	1,715
	13,522	**12,185**
Net interest result	**- 9,173**	**- 8,375**

15. Other financial result

The other financial result comprises the following:

in EUR '000	2022	2021
Other financial income		
Gains from fair value measurement	9,967	14,774
Interest and dividend income from securities	3,146	2,903
Income from sale of securities	584	1,682
Other financial income	1,061	216
	14,758	**19,575**
Other financial expenses		
Losses from fair value measurement	31,667	5,542
Losses from sale of securities	37	1,393
Other financial expenses	172	7
	31,876	**6,942**
Other financial result	**- 17,118**	**12,633**

Gains and losses from fair value measurement result mainly from the securities held.

16. Income taxes

Income taxes include taxes on income and deferred taxes.

Income taxes for the financial years 2022 and 2021 break down as follows:

in EUR '000	2022	2021
Income taxes		
Income taxes for the current year	29,947	20,407
Income taxes for previous years	87	- 2,157
Income from the reversal of provisions for income taxes	- 62	- 6
	29,972	**18,244**
Deferred taxes		
Deferred taxes from temporary differences	- 13,939	- 3,435
Deferred taxes on losses carried forward	- 18,769	4,469
	- 32,708	**1,034**
Income taxes (+ = expense / - = income)	**- 2,736**	**19,278**

In December 2018, a profit and loss transfer agreement was concluded between ATON GmbH and ATON 2 GmbH. As a result, there is a tax group for income tax purposes between ATON GmbH and ATON 2 GmbH.

Unchanged to previous year, current income taxes in Germany are based on a uniform corporate income tax rate of 15.0 % plus a solidarity surcharge of 5.5 % of this amount. In addition to the corporate income tax, trade tax is levied on profits generated in Germany. Taking into consideration that trade tax cannot be deducted as an operating expense, the average trade tax rate is 15.05 %, resulting in an average composite tax rate of 30.88 %. The higher assessment rate at the domicile of the parent company leads to a higher composite tax rate of 32.98 % unchanged to prior year.

The taxable profit generated by foreign subsidiaries is determined based on the respective regulation of national tax law and using the country-specific tax rate. As in previous year, tax rates applied by the foreign companies vary between 5.5 % and 35.0 %.

In the following, income taxes of the reporting period with a tax income of EUR 2,736k (previous year: expense of EUR 19,278k), are reconciled from an expected income tax expense that would have resulted from applying the parent company's statutory income tax rate to the profit before income taxes, to the income tax expense reported in the consolidated income statement:

	2022		2021	
	EUR '000	in %	EUR '000	in %
Earnings before income taxes (EBT)	**- 43,629**		**75,025**	
Income tax rate of the parent		32.98%		32.98%
Expected income tax expense	**- 14,389**		**24,743**	
Tax-free income and non-deductible expenses, incl. the effect of sections 8a / 8b of the KStG (corporate tax law) as well as permanent differences	32,730	-75.02%	4,237	5.65%
Income taxes for previous years	35	-0.08%	- 2,163	-2.88%
Tax rate variances	- 4,337	9.94%	- 13,534	-18.04%
Amount of tax losses carried forward and other deferred tax assets not recognised or impaired	4,791	-10.98%	3,837	5.11%
Effects from the recognition of previously unrecognised tax losses carried forward	- 25,520	58.49%	- 782	-1.04%
Non-deductible withholding taxes	3,223	-7.39%	3,148	4.20%
Other tax effects	731	-1.68%	- 208	-0.28%
Income taxes reported in the consolidated income statement	**- 2,736**		**19,278**	
Effective tax rate		**6.27%**		**25.69%**

As in the previous year, the item "tax-free income and non-deductible expenses, incl. the effect of sections 8a / 8b of the KStG (corporate tax law)" mainly relates to non-tax effective impairments / write-ups on investments (primarily Murray & Roberts Holdings Limited) and non-tax-effective results from companies accounted for using the equity method.

The tax rate variances result mainly from the Redpath Group, the EDAG Group and the Ziehm Group.

The item “effects from the recognition of previously unrecognised tax losses carried forward” mainly relates to the tax losses carried forward of one company, which were not expected to be usable in 2021, but are now expected to be fully usable within the next five years.

Current and deferred taxes compose as follows:

in EUR '000	31.12.2022	31.12.2021
Current income taxes in the consolidated income statement		
Income tax assets	18,818	11,234
Income tax liabilities	- 18,562	- 5,421
Provisions for income taxes	- 10,840	- 4,593
	- 10,584	**1,220**
Deferred taxes in the consolidated income statement		
Deferred tax assets	41,557	26,466
Deferred tax liabilities	- 42,755	- 56,396
	- 1,198	**- 29,930**
Income taxes in the consolidated income statement	**- 11,782**	**- 28,710**

The deferred tax assets and liabilities are attributable to the following items of the consolidated balance sheet:

in EUR '000	31.12.2022	31.12.2021
Deferred tax assets		
Intangible assets	410	6
Property, plant and equipment	229	401
Financial assets	164	492
Inventories	5,270	5,913
Receivables and other assets	743	8,416
Provisions for pensions	5,791	9,383
Other provisions	10,531	4,508
Other liabilities	98,527	88,938
Losses carried forward	35,602	15,396
Netting	- 115,710	- 106,987
	41,557	**26,466**
of which: non-current before netting	**42,196**	**25,678**
Deferred tax liabilities		
Intangible assets	18,247	25,459
Property, plant and equipment	101,585	81,877
Financial assets	1,733	3,404
Inventories	23	15
Receivables and other assets	24,134	37,980
Provisions for pensions	0	-
Other provisions	5,672	14,094
Other liabilities	7,071	554
Netting	- 115,710	- 106,987
	42,755	**56,396**
of which: non-current before netting	**121,565**	**110,740**
Deferred taxes, net	**- 1,198**	**- 29,930**

Deferred taxes developed as follows:

in EUR '000	2022	2021
Deferred taxes at the beginning of the financial year	- 29,930	- 22,905
Changes in the scope of consolidation	- 61	- 4,441
Recognised in profit or loss	32,708	- 1,034
Recognised directly in equity	- 4,110	- 510
Currency translation differences	195	- 1,040
Deferred taxes at the end of the financial year	**- 1,198**	**- 29,930**

The high amount of deferred taxes recognised in profit or loss is mainly due to the fact that it is not now probable that tax loss carried forwards can be utilised as described above.

The changes in the scope of consolidation in the current year in the amount of EUR -61k relate to ecoCOAT GmbH and Autotest Südtirol GmbH, which have been fully consolidated since 2022. In the previous year, the changes in the scope of consolidation amounting to EUR -4,441k related to the acquisitions of Antriebssysteme Faurndau GmbH and Krebs & Aulich GmbH.

The recoverability of deferred taxes is assessed on a regular basis. The ability to realise tax income from deferred taxes depends on the ability to generate taxable income in the future and to utilise tax losses carried forward before they expire. Deferred tax assets are recognised only to the extent to which it is probable that future taxable profit will be available against which the deductible temporary differences can be utilised and where it can be assumed that they will reverse in the foreseeable future.

Deferred tax assets and liabilities are offset, if a legally enforceable right to set off current tax assets against current tax liabilities exists. In addition, tax assets and liabilities have to relate to the income taxes of the same taxable entity levied by the same tax authority.

The domestic and foreign corporate income tax losses carried forward are as follows at the reporting dates:

in EUR '000	2022	2021
Losses carried forward (total)		
Losses carried forward expire within		
1 year	41,698	7,979
2 to 5 years	107,943	30,866
over 5 years	11,993	16,916
carried forward indefinitely	119,327	162,313
	280,961	**218,074**
Losses carried forward (not usable)		
Losses carried forward expire within		
1 year	469	-
2 to 5 years	26,081	15,077
over 5 years	11,299	14,266
carried forward indefinitely	119,327	162,313
	157,176	**191,656**
Expected use of usable tax losses carried forward		
1 year	41,229	7,979
2 to 5 years	81,862	15,789
over 5 years	694	2,650
	123,785	**26,418**

As of 31 December 2022, trade tax losses carried forward amount to EUR 123,920k (previous year: EUR 124,789k), for which no deferred tax assets have been recognised in the amount of EUR 18,563k (previous year: EUR 85,651k).

17. Goodwill and other intangible assets

The development of goodwill and other intangible assets is as follows during the financial year:

in EUR '000	Acquired goodwill	Develop-ment costs	Other acquired intangible assets	Advance payments	Total other intangible assets
Acquisition and production cost					
As of 1 January 2022	**281,408**	29,110	284,543	5,828	**319,481**
Changes in the scope of consolidation	**1,414**	0	6,115	17	**6,132**
Additions	**0**	4,031	5,824	1,755	**11,610**
Disposals	**0**	0	-21,325	0	**-21,325**
Reclassifications	**0**	0	4,233	-4,120	**113**
Currency translation differences	**-252**	85	222	0	**307**
As of 31 December 2022	**282,570**	**33,226**	**279,612**	**3,480**	**316,318**
Accumulated depreciation, amortisation and impairment losses					
As of 1 January 2022	**0**	15,992	205,841	0	**221,833**
Depreciation, amortisation and impairment 2022	**0**	1,901	37,920	0	**39,821**
Depreciation and amortisation	**0**	1,901	37,920	0	**39,821**
Impairment	**0**	0	0	0	**0**
Disposals	**0**	0	-21,183	0	**-21,183**
Reclassifications	**0**	0	0	0	**0**
Currency translation differences	**0**	10	100	0	**110**
As of 31 December 2022	**0**	**17,903**	**222,678**	**0**	**240,581**
Carrying amounts					
As of 1 January 2022	281,408	13,118	78,702	5,828	97,648
As of 31 December 2022	282,570	15,323	56,934	3,480	75,737

The development of goodwill and other intangible assets was as follows during the previous year:

in EUR '000	Acquired goodwill	Develop-ment costs	Other acquired intangible assets	Advance payments	Total other intangible assets
Acquisition and production cost					
As of 1 January 2021	**270,120**	26,381	263,254	2,995	**292,630**
Changes in the scope of consolidation	**9,388**	-	16,339	-	**16,339**
Additions	**-**	4,044	4,133	3,143	**11,320**
Disposals	**-**	- 1,483	- 2,530	-	**- 4,013**
Reclassifications	**-**	-	2,344	- 310	**2,034**
Reclassifications in accordance IFRS 5	**-**	-	- 500	-	**- 500**
Currency translation differences	**1,900**	168	1,503	-	**1,671**
As of 31 December 2021	**281,408**	**29,110**	**284,543**	**5,828**	**319,481**
Accumulated depreciation, amortisation and impairment losses					
As of 1 January 2021	**-**	15,015	170,347	-	**185,362**
Depreciation, amortisation and impairment 2021	**-**	2,387	36,947	-	**39,334**
Depreciation and amortisation	**-**	2,387	36,947	-	**39,334**
Impairment	**-**	-	-	-	**-**
Disposals	**-**	- 1,482	- 2,387	-	**- 3,869**
Reclassifications	**-**	-	216	-	**216**
Reclassifications in accordance IFRS 5	**-**	-	- 500	-	**- 500**
Currency translation differences	**-**	72	1,218	-	**1,290**
As of 31 December 2021	**-**	**15,992**	**205,841**	**-**	**221,833**
Carrying amounts					
As of 1 January 2021	270,120	11,366	92,907	2,995	107,268
As of 31 December 2021	281,408	13,118	78,702	5,828	97,648

The changes in the scope of consolidation for the acquired goodwill and other intangible assets reflect the addition of ecoCOAT GmbH, Allershausen, due to initial consolidation and the acquisition of Autotest Südtirol GmbH, Franzensfeste, Italy. In the previous year, the changes in the scope of consolidation for acquired goodwill and other intangible assets included the addition from the acquisition of Antriebssysteme Faurndau GmbH, Göppingen, and Krebs & Aulich GmbH, Wernigerode, both with effect from 1 July 2021.

The capitalised development costs for internally generated intangible assets relate exclusively to the Med Tech segment as of the balance sheet date. In addition to the capitalised development costs, research and development costs of EUR 20,825k (previous year: EUR 13,613k) were expensed.

No borrowing costs were capitalised in the financial year.

As in the previous year, there are no purchase commitments for the acquisition of intangible assets as of 31 December 2022.

As in the previous year, there are no restrictions on ownership of intangible assets. Intangible assets do not include any assets acquired as leases.

In the financial year 2022, government grants in the amount of EUR 1,088k (previous year: EUR 0k) were deducted directly from the acquisition / production costs of intangible assets.

In the financial year 2022, government grants for intangible assets in the amount of EUR 6,030k (previous year: EUR 3,188k) were recognised in the income statement.

The carrying amounts of the goodwill attributable to the acquired companies are allocated to the following cash-generating units:

in EUR '000	31.12.2022	31.12.2021
EDAG	166,052	166,231
Antriebssysteme Faurndau GmbH	3,701	3,701
Krebs & Aulich GmbH	5,687	5,687
ecoCOAT GmbH	1,414	-
Goodwill Engineering	**176,854**	**175,619**
Redpath	41,998	42,071
Goodwill Mining	**41,998**	**42,071**
Ziehm/OrthoScan	63,718	63,718
Goodwill Med Tech	**63,718**	**63,718**
Total Goodwill	**282,570**	**281,408**

The Group tests goodwill for impairment at least once a year. As of 31 December 2022, all goodwill items were subject to an impairment test conducted as described in note 3.1 Goodwill in which the carrying amount is compared with the value in use as recoverable amount. The value in use is determined using the discounted cash flow method based at least on a three-year planning period. As in previous year, there is no impairment for the financial year 2022.

The increase in the Engineering segment results from the addition of ecoCOAT GmbH, Allershausen. The initial consolidation took place on 1 January, 2022, since when the company has been fully consolidated. In addition, there are still minor changes from exchange rate effects at the EDAG Group.

The changes in the Mining segment result exclusively from exchange rate effects.

The basic assumptions, on which the determination of the recoverable amounts for the goodwill impairment tests are based on, are as follows:

	2022	2021
Planning period	3 to 5 years	3 to 5 years
Growth rate	1.00% to 1.25%	1.00%
Expected market return	5.75% to 7.25%	6.91% to 7.79%
Return for risk-free investments	2.00% to 4.15%	-0.09% to 1.43%
Post-tax discount rate	6.33% bis 10.57%	5.02% to 8.05%

As in the previous year, a planning period of five years was used for the goodwill impairment test in the Engineering segment for the EDAG Group, in order to be able to represent the recovery effect after the Covid-19 pandemic in a sustainable fifth planning year. All other impairment tests continue to be based on a three-year planning period. A five-year planning period was also used for Autotest Südtirol GmbH, as the effects of the restructuring of the company are only expected to be sustainable then. All other impairment tests are still based on a 3-year planning period.

The recoverable amounts are significantly higher than the carrying amounts in almost all cases as of the balance sheet date, so that sensitivity analyses are not presented.

Only in the case of the Redpath Group, the headroom as the difference between the recoverable amount and the book value (EUR 12,961k) is relatively low due to the sharp increase in the discount rate (WACC) from 8.59 % in the previous year to 10.57 % as of balance sheet date. If the growth rate in the terminal value was to fall below 0.85 %, this would result in an impairment. A further increase in the discount rate (WACC) to over 10.90 % would also result in an impairment. If the free cash flow were to fall by more than 4.34 % in the sustainable third year of the planning period, this would also lead to an impairment.

18. Property, plant and equipment and investment properties

The development of property, plant and equipment is as follows in the financial year:

in EUR '000	Land, land rights and buildings, including buildings on third party land	Technical equipment and machinery	Other equipment, operating and office equipment	Advance payments for and construction in progress	Total property, plant and equipment
Acquisition and production cost					
As of 1 January 2022	332,377	522,555	138,486	6,602	**1,000,020**
Changes in the scope of consolidation	4,930	3,793	661	175	**9,559**
Additions	64,403	59,861	19,867	35,555	**179,686**
Disposals	-7,425	-60,458	-7,858	-337	**-76,078**
Reclassifications	6,531	11,318	358	-18,320	**-113**
Currency translation differences	395	2,785	392	-213	**3,359**
As of 31 December 2022	**401,211**	**539,854**	**151,906**	**23,462**	**1,116,433**
Accumulated depreciation, amortisation and impairment					
As of 1 January 2022	88,346	339,769	88,640	0	**516,755**
Changes in the scope of consolidation	0	0	0	0	**0**
Depreciation, amortisation and impairment 2022	29,050	64,756	16,849	0	**110,655**
Depreciation and amortisation	29,050	59,624	16,849	0	**105,523**
Impairment	0	5,132	0	0	**5,132**
Write-up	-800	-223	0	0	**-1,023**
Disposals	-6,254	-53,057	-7,492	0	**-66,803**
Reclassifications	-2	7	-5	0	**0**
Currency translation differences	158	2,084	279	0	**2,521**
As of 31 December 2022	**110,498**	**353,336**	**98,270**	**0**	**562,104**
Carrying amounts					
As of 1 January 2022	244,031	182,786	49,846	6,602	483,265
As of 31 December 2022	290,713	186,518	53,636	23,462	554,329

The development of property, plant and equipment is as follows during the previous year:

in EUR '000	Land, land rights and buildings, including buildings on third party land	Technical equipment and machinery	Other equipment, operating and office equipment	Advance payments for and construction in progress	Total property, plant and equipment
Acquisition and production cost					
As of 1 January 2021	307,853	453,848	133,965	7,265	**902,931**
Changes in the scope consolidation	4,900	889	656	35	**6,480**
Additions	42,715	53,916	15,779	13,677	**126,087**
Disposals	-24,576	-23,316	-12,403	-1,019	**-61,314**
Reclassifications	387	11,698	-467	-13,652	**-2,034**
Reclassifications in accordance with IFRS 5	-1,355	0	-292	0	**-1,647**
Currency translation differences	2,453	25,520	1,248	296	**29,517**
As of 31 December 2021	**332,377**	**522,555**	**138,486**	**6,602**	**1,000,020**
Accumulated depreciation, amortisation and impairment					
As of 1 January 2021	71,499	273,746	82,858	0	**428,103**
Changes in the scope consolidation	0	0	0	0	**0**
Depreciation, amortisation and impairment 2021	29,342	63,039	16,868	0	**109,249**
Depreciation and amortisation	28,159	62,767	16,271	0	**107,197**
Impairment	1,183	272	597	0	**2,052**
Disposals	-12,474	-15,888	-11,306	0	**-39,668**
Reclassifications	0	349	-565	0	**-216**
Reclassifications in accordance with IFRS 5	-1,213	0	-230	0	**-1,443**
Currency translation differences	1,192	18,850	1,015	0	**21,057**
As of 31 December 2021	**88,346**	**339,769**	**88,640**	**0**	**516,755**
Carrying amounts					
As of 1 January 2021	236,354	180,102	51,107	7,265	474,828
As of 31 December 2021	244,031	182,786	49,846	6,602	483,265

The increase in “land, land rights and buildings, including buildings on third-party land” from EUR 244,031k to EUR 290,713k is mainly due to additions of right-of-use assets for leases in the Engineering, Mining and Aviation segments. In the Med Tech segment, on the other hand, there is a decrease in this item.

While the Aviation segment recorded a decrease in the item "technical equipment and machinery", technical equipment and machinery increased in the other segments, above all in the Engineering segment.

The increase in “other equipment, operating and office equipment” from EUR 49,846k to EUR 53,636k is due in particular to the Engineering segment. In the Med Tech and Mining segments, however, the item decreased.

The increase in “advance payments for and construction in progress” is mainly attributable to the Engineering and Mining segments, while the other segments recorded a slight decrease.

In the financial year, impairment losses of EUR 5,132k were recognised on items of property, plant and equipment relating to technical equipment and machinery in the Mining segment. In the previous year, impairment losses in the amount of EUR 1,183k were recognised on land and buildings. These impairment losses were recognised on right-of-use assets resulting from vacant land in the Engineering segment.

The line item “changes in scope of consolidation” for property, plant and equipment reflects the addition of eco-COAT GmbH, Allershausen, to the scope of consolidation and the acquisition of Autotest Südtirol GmbH, Franzensfeste / Italy. In the previous year, changes in the scope of consolidation included the addition from the acquisition of Antriebssysteme Faurndau GmbH and Krebs & Aulich GmbH, both with effect from 1 July 2021.

Property, plant and equipment in the amount of EUR 54,757k (previous year: EUR 34,375k) were used as collateral for liabilities. Property, plant and equipment is subject to restrictions on ownership in the amount of EUR 55,067k (previous year: EUR 34,652k), which mainly originate from the Mining segment.

Property, plant and equipment includes assets in the amount of EUR 321,650k (previous year: EUR 260,548k) that were acquired under leases.

Purchase commitments for property, plant and equipment amount to EUR 60,752k as of 31 December 2022 (previous year: EUR 25,367k).

In the financial year 2022, government grants amounting to EUR 1,345k (previous year: EUR 0k) were deducted directly from the acquisition and production costs of property, plant and equipment.

There are no investment properties in the financial year 2022 nor in 2021.

As in the previous year, no borrowing costs were capitalised in the financial year 2022.

19. The Group as lessee

The carrying amounts of right-of-use-assets capitalised under property, plant and equipment, other than sale-and-lease-back arrangements, are as follows as of 31 December 2022 and 31 December 2021:

in EUR '000	31.12.2022	31.12.2021
Land and buildings	256,417	217,848
Technical equipment and machinery	56,647	35,128
Other equipment, operating and office equipment	8,586	7,572
Total net carrying amount of right-of-use assets / of capitalised leased assets	**321,650**	**260,548**

The right-of-use-assets relating to land and buildings mainly concern the Engineering segment and, to a lesser extent, the Med Tech and Aviation segments.

Technical equipment and machinery amounting to EUR 56,647k (previous year: EUR 35,128k) are mainly capitalised at the Redpath Group. As in the previous year, the lease terms vary between two and five years.

Additions to right-of-use assets amount to EUR 99,895k in the financial year (previous year: EUR 61,406k). Total cash outflow from leases amounts to EUR 91,030k in the financial year (previous year: EUR 76,127k).

The total lease expense in the financial year comprises the following:

in EUR '000	31.12.2022	31.12.2021
Land and buildings	26,377	26,437
Technical equipment and machinery	20,009	13,436
Other equipment, operating and office equipment	4,261	4,133
Depreciation charge for right-of-use assets	**50,647**	**44,006**
Interest expense from lease liabilities	5,653	4,890
Other lease expenses		
Lease expense relating to short-term leases	10,064	5,201
Lease expense relating to leases of low-value assets	5,248	4,172
Expense relating to variable lease payments (not included in the measurement of lease liabilities)	338	143
Income from subleasing right-of-use assets	- 2,024	- 1,729
Total Lease Expense	**69,926**	**56,683**

As at the balance sheet date, the following future obligations exist from capitalised leasing contracts:

in EUR '000	31.12.2022	31.12.2021
Maturity		
Up to 1 year	52,043	41,748
1 to 5 years	118,362	94,017
Over 5 years	148,772	124,071
Total lease liabilities	**319,177**	**259,836**

Extension or purchase options are taken into account in accounting in accordance with IFRS 16 if it is reasonably certain that they will be exercised. In the EDAG Group, a 3-year extension option in a long-term building lease agreement with a basic term until May 2023 was not considered to be reasonably certain and was therefore not included in the measurement of the lease liability. The potential future cash outflows from the aforementioned option period amount to a total of EUR 432k.

The optional relief granted as a result of the Covid-19 pandemic to treat lease concessions from a lessor as a variable lease payment instead of an amendment to the lease agreement was utilised by the Ziehm Group in the amount of EUR 86k (previous year: EUR 0k) in the financial year.

The other expenses recognised and the future lease payments from leases or lease components not recognised as lease liabilities are as follows:

in EUR '000	2022	2021
Other expenses from leases	17,208	15,186
Future lease payments (maturity)		
Up to 1 year	8,544	8,532
1 to 5 years	3,026	2,905
Over 5 years	704	803
Total	**12,274**	**12,240**

The obligations from non-cancellable leasing contracts mainly include the incidental cost components of leasing contracts recognised in the income statement for which a right-of-use asset and a lease liability were recognised in accordance with IFRS 16 and for which the practical expedient under IFRS 16.15 was not applied, which were incurred particularly in the Engineering segment.

Furthermore, the lease payments recognised as expense include rental expenses from leases of intangible assets for which the provisions of IFRS 16 are not applied.

As in the previous year, there are no significant subleases in the financial year.

20. The Group as lessor

The Group acts as lessor in operating leases, most of which relate to building premises. The contracts usually have a short term. Income from operating leases recognised in profit or loss amounts to EUR 2,868k in the financial year (previous year: EUR 2,449k). Income relating to variable lease payments that do not depend on an index or a rate amounts to EUR 583k in the financial year (previous year: EUR 417k).

The undiscounted future minimum lease payments from non-cancellable operating leases have the following maturities:

in EUR '000	31.12.2022	31.12.2021
Operating leases under IFRS 16		
Up to 1 year	1,627	1,816
Up to 2 years	758	963
Up to 3 years	737	497
Up to 4 years	327	476
Up to 5 years	30	257
Over 5 years	-	30
Total lease payments	**3,479**	**4,039**

Furthermore, the Group acts as lessor under a finance lease. The lease involved is a sublease of a building and property at EDAG Group. For this lease, the right of use resulting from the main rental contract was derecognised and a leasing receivable was recognised. Interest income on net investment in finance leases amounts to EUR 8k in the financial year (previous year: EUR 370k). The leasing instalments received are split into a repayment and an interest portion, and carried forward using the effective interest method.

The due dates of the leasing receivables as of 31 December 2022 and 2021 are as follows:

in EUR '000	31.12.2022	31.12.2021
Up to 1 year	60	240
Up to 2 years	-	60
Total undiscounted minimum lease payments	**60**	**300**
Unearned finance income	-	- 9
Net investment in the lease	**60**	**291**

21. Investments accounted for using the equity method

The Group has investments in joint ventures and associates. The carrying amount of investments accounted for using the equity method is as follows:

in EUR '000	31.12.2022	31.12.2021
Investments accounted for using the equity method		
Associates	50,247	172,062
Joint Ventures	36,463	30,859
	86,710	**202,921**

The amounts recognised in the consolidated income statement are as follows:

in EUR '000	2022	2021
Result from investments accounted for using the equity method		
Associates	-60,239	1,669
Joint Ventures	1,933	5,027
	-58,306	**6,696**

The share in Murray & Roberts Holdings Limited, Bedfordview, South Africa, which is listed in South Africa remained unchanged at 43.8 % and is accounted for using the equity method in the present consolidated financial statements. The Group operates worldwide in the field of engineering, construction and underground mining services. The range of services covers the areas of oil & gas, underground mining and energy & water. The company has a financial year that deviates from the calendar year, which lasts from 1 July to 30 June, but also publishes interim financial statements as of 31 December. The following tables present the values for the period from 1 January through 31 December 2022.

The respective 50.0 % interest in the joint venture Konrad Versatzaufbereitung Los 1, Dortmund, the joint venture Schacht Konrad 1, Mühlheim an der Ruhr, and the joint venture Schacht Konrad 2, Mühlheim an der Ruhr, are also accounted for using the equity method. These joint ventures are strategic partnerships for the Group between Redpath Deilmann GmbH, Dortmund, and Thyssen Schachtbau GmbH. Schacht Konrad 2 offers access to the former iron ore mine in Salzgitter, which is currently being converted. As part of the joint venture Konrad Versatzaufbereitung Los 1 mine areas are opened and expanded. In addition to the retrofitting of the shafts and the excavation of the storage chambers, the so-called auxiliary pit areas for the required infrastructure regarding the emplacement operations are also being built or extended.

The 49.0 % interest in EDAG Werkzeug + Karosserie GmbH, Fulda, is also accounted for as an associated company using the equity method.

The 33.0 % interest in the joint venture TRL Mining Construction LP, Regina, Canada, is also accounted for using the equity method. TRL Mining Construction LP is a strategic partnership for the Group between Redpath Group, Thyssen Mining Inc. and Ledcor Group and was established in 2018 for the Jansen Potash Project Saskatchewan, Canada.

Summarised financial information for the most significant investments accounted for using the equity method as of 31 December 2022 are presented in the following tables.

The summarised balance sheet is as follows:

in EUR '000				
Company	**Murray & Roberts Holdings Limited**		**Joint Venture Konrad Versatzaufbereitung Los 1**	
Nature of the relationship	Associate		Joint Venture	
	31.12.2022	**31.12.2021**	**31.12.2022**	**31.12.2021**
Interest held in %	43.8	43.8	50.0	50.0
Current				
Cash and cash equivalents	37,682	222,671	734	2,078
Other current assets (excluding cash)	337,540	500,706	62,744	53,722
Total current assets	**375,222**	**723,377**	**63,478**	**55,800**
Financial liabilities (excluding trade and other payables, provisions and tax liabilities)	-112,882	-120,858	0	0
Other liabilities (including trade and other payables, provisions and tax liabilities)	-213,773	-676,318	-56,506	-50,642
Total current liabilities	**-326,655**	**-797,176**	**-56,506**	**-50,642**
Non-current				
Assets	**118,407**	**448,664**	**32**	**0**
Financial liabilities (excluding trade and other payables, provisions and tax liabilities)	-33,428	-49,938	0	0
Other liabilities (including trade and other payables, provisions and tax liabilities)	-11,769	-14,173	0	0
Total non-current liabilities	**-45,197**	**-64,111**	**0**	**0**
Net assets	**121,777**	**310,754**	**7,004**	**5,158**

in EUR '000				
Company	**Joint Venture Schacht Konrad 1**		**Joint Venture Schacht Konrad 2**	
Nature of the relationship	Joint Venture		Joint Venture	
	31.12.2022	**31.12.2021**	**31.12.2022**	**31.12.2021**
Interest held in %	50.0	50.0	50.0	50.0
Current				
Cash and cash equivalents	961	415	1,082	560
Other current assets (excluding cash)	17,925	11,167	24,034	24,120
Total current assets	**18,886**	**11,582**	**25,116**	**24,680**
Financial liabilities (excluding trade and other payables, provisions and tax liabilities)	0	0	0	0
Other liabilities (including trade and other payables, provisions and tax liabilities)	-9,419	-4,496	-7,788	-9,563
Total current liabilities	**-9,419**	**-4,496**	**-7,788**	**-9,563**
Non-current				
Assets	**213**	**0**	**924**	**0**
Financial liabilities (excluding trade and other payables, provisions and tax liabilities)	0	0	0	0
Other liabilities (including trade and other payables, provisions and tax liabilities)	0	0	0	0
Total non-current liabilities	**0**	**0**	**0**	**0**
Net assets	**9,680**	**7,086**	**18,252**	**15,117**

in EUR '000				
Company	**EDAG Werkzeug + Karosserie GmbH**		**TRL Mining Construction LP**	
Nature of the relationship	Associate		Joint Venture	
	31.12.2022	**31.12.2021**	**31.12.2022**	**31.12.2021**
Interest held in %	49.0	49.0	33.0	33.0
Current				
Cash and cash equivalents	3,549	6,303	13,613	18,446
Other current assets (excluding cash)	19,640	16,032	4,598	9,942
Total current assets	**23,189**	**22,335**	**18,211**	**28,388**
Financial liabilities (excluding trade and other payables, provisions and tax liabilities)	-950	-1,132	0	0
Other liabilities (including trade and other payables, provisions and tax liabilities)	-5,777	-7,175	-14,743	-16,183
Total current liabilities	**-6,727**	**-8,307**	**-14,743**	**-16,183**
Non-current				
Assets	**7,933**	**10,018**	**0**	**0**
Financial liabilities (excluding trade and other payables, provisions and tax liabilities)	-430	-589	0	0
Other liabilities (including trade and other payables, provisions and tax liabilities)	-1,267	-1,509	0	0
Total non-current liabilities	**-1,697**	**-2,098**	**0**	**0**
Net assets	**22,698**	**21,948**	**3,468**	**12,205**

The summarised statement of comprehensive income is as follows:

in EUR '000				
Company	**Murray & Roberts Holdings Limited**		**Joint Venture Konrad Versatzaufbereitung Los 1**	
Nature of the relationship	Associate		Joint Venture	
	2022	**2021**	**2022**	**2021**
Interest held in %	43.8	43.8	50.0	50.0
Revenue	608,301	2,567,834	9,868	7,677
Depreciation and amortisation	-22,954	-100,420	-3,372	-7
Interest income	465	0	0	0
Interest expense	-14,586	-23,574	0	0
Profit (+) or loss (-) from continuing operations	**-5,753**	**1,545**	**1,821**	**1,925**
Income tax expense (-) / income (+)	-6,218	-19,512	0	0
Profit (+) or loss (-) after tax from continuing operations	**-11,971**	**-17,967**	**1,821**	**1,925**
Profit (+) or loss (-) after tax from discontinuing operations	-130,690	-9,670	0	0
Other comprehensive income	-54,566	43,716	0	0
Total comprehensive income	**-197,227**	**16,079**	**1,821**	**1,925**
Dividends received	0	0	0	0

in EUR '000				
Company	**Joint Venture Schacht Konrad 1**		**Joint Venture Schacht Konrad 2**	
Nature of the relationship	Joint Venture		Joint Venture	
	2022	**2021**	**2022**	**2021**
Interest held in %	50.0	50.0	50.0	50.0
Revenue	10,683	6,161	25,425	16,247
Depreciation and amortisation	0	-102	-13,633	-425
Interest income	0	0	0	0
Interest expense	0	0	0	0
Profit (+) or loss (-) from continuing operations	**2,560**	**860**	**3,073**	**2,473**
Income tax expense (-) / income (+)	0	0	0	0
Profit (+) or loss (-) after tax from continuing operations	**2,560**	**860**	**3,073**	**2,473**
Profit (+) or loss (-) after tax from discontinuing operations	0	0	0	0
Other comprehensive income	0	0	0	0
Total comprehensive income	**2,560**	**860**	**3,073**	**2,473**
Dividends received	0	0	0	0

in EUR '000				
Company	**EDAG Werkzeug + Karosserie GmbH**		**TRL Mining Construction LP**	
Nature of the relationship	Associate		Joint Venture	
	2022	**2021**	**2022**	**2021**
Interest held in %	49.0	49.0	33.0	33.0
Revenue	38,467	41,532	59,330	91,633
Depreciation and amortisation	-2,064	-2,065	0	0
Interest income	0	0	235	135
Interest expense	-53	-120	0	0
Profit (+) or loss (-) from continuing operations	**2,221**	**1,887**	**8,010**	**5,221**
Income tax expense (-) / income (+)	-709	-640	0	0
Profit (+) or loss (-) after tax from continuing operations	**1,512**	**1,247**	**8,010**	**5,221**
Profit (+) or loss (-) after tax from discontinuing operations	0	0	0	0
Other comprehensive income	231	19	0	0
Total comprehensive income	**1,743**	**1,266**	**8,010**	**5,221**
Dividends received	992	0	0	0

There are no commitments and contingent liabilities relating to the investments accounted for using the equity method.

The information presented above reflects the amounts presented in the financial statements of the investments accounted for using the equity method (and not ATON 2 GmbH’s share).

The reconciliation of the summarised financial information related to the carrying amount of the investments accounted for using the equity method is presented in the following table:

in EUR '000								
Company	**Murray & Roberts Holdings Limited**		**Joint Venture Konrad Versatzaufbereitung Los 1**		**Joint Venture Schacht Konrad 1**		**Joint Venture Schacht Konrad 2**	
	2022	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**
Net assets as of 1 January	220,272	279,836	5,158	3,243	7,086	6,247	15,117	12,687
Additions	0	0	0	0	0	0	0	0
Profit (+) / loss (-) for the period	-142,661	-27,637	1,821	1,925	2,560	860	3,073	2,473
Other comprehensive income	-54,566	43,716	0	0	0	0	0	0
Increase in capital	0	0	0	0	0	0	0	0
Adjustments / Disposals	0	0	0	0	0	0	0	0
Dividends received	0	0	0	0	0	0	0	0
Currency translation differences	135,709	-75,643	25	-10	34	-21	62	-43
Net assets as of 31 December	**158,754**	**220,272**	**7,004**	**5,158**	**9,680**	**7,086**	**18,252**	**15,117**
Interest held in %	43.8	43.8	50.0	50.0	50.0	50.0	50.0	50.0
Interest in investments accounted for using the equity method	69,549	96,501	3,502	2,579	4,840	3,543	9,126	7,559
Allocated hidden reserves/burden as a result of the PPA	0	0	0	0	0	0	0	0
Impairment	-37,789	57,442	0	0	0	0	0	0
Goodwill	0	0	0	0	0	0	0	0
Carrying amount	**31,760**	**153,943**	**3,502**	**2,579**	**4,840**	**3,543**	**9,126**	**7,559**
Investments accounted for using the equity method	31,760	153,943	3,502	2,579	4,840	3,543	9,126	7,559
Receivables (+) / liabilities (-) to investments accounted for using the equity method	0	0	-3,218	-2,481	-3,311	-3,719	-3,467	-7,872

in EUR '000								
Company	**EDAG Werkzeug + Karosserie GmbH**		**TRL Mining Construction LP**		**Other investments accounted for using the equity method**		**Total**	
	2022	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**
Net assets as of 1 January	21,948	20,682	12,121	14,324	36,155	26,942	317,857	363,961
Additions	0	0	0	0	0	5,136	0	5,136
Profit (+) / loss (-) for the period	1,512	1,247	8,010	5,221	-3,952	1,920	-129,637	-13,991
Other comprehensive income	231	19	0	0	0	0	-54,335	43,735
Increase in capital	0	0	0	0	4,750	3,778	4,750	3,778
Adjustments / Disposals	-992	0	-17,923	-10,220	-13,644	-1,580	-32,559	-11,800
Dividends received	0	0	0	0	-36	0	-36	0
Currency translation differences	0	0	1,261	2,796	-83	-41	137,008	-72,962
Net assets as of 31 December	**22,699**	**21,948**	**3,469**	**12,121**	**23,190**	**36,155**	**243,048**	**317,857**
Interest held in %	49.0	49.0	33.0	33.0	33,0 to 91,2	25,2 to 60,0	33,0 to 91,2	25,2 to 60,0
Interest in investments accounted for using the equity method	11,123	10,755	1,144	4,000	17,851	13,178	117,135	138,115
Allocated hidden reserves/burden as a result of the PPA	0	0	0	0	0	0	0	0
Impairment	0	0	0	0	0	0	-37,789	57,442
Goodwill	7,364	7,364	0	0	0	0	7,364	7,364
Carrying amount	**18,487**	**18,119**	**1,144**	**4,000**	**17,851**	**13,178**	**86,710**	**202,921**
Investments accounted for using the equity method	18,487	18,119	1,144	4,000	17,851	13,178	86,710	202,921
Receivables (+) / liabilities (-) to investments accounted for using the equity method	-104	-63	0	0	3,512	5,527	-6,588	-8,608

For investments accounted for using the equity method, intercompany profits and losses are eliminated on a pro-rata basis in general.

22. Other financial assets

Other financial assets break down as follows:

in EUR '000	31.12.2022			31.12.2021		
	Remaining maturity			Remaining maturity		
	> 1 year	< 1 year	Total	> 1 year	< 1 year	Total
Non-consolidated investments in affiliated companies	587	-	587	587	-	587
Loans	60,845	45,032	105,877	48,506	82,622	131,128
Other investments	1,289	-	1,289	1,289	-	1,289
Securities measured at fair value through profit and loss	28,441	77,480	105,921	51,147	81,436	132,583
Fair values of derivative financial instruments	418	180	598	-	2	2
Other financial assets	**91,580**	**122,692**	**214,272**	**101,529**	**164,060**	**265,589**

The non-consolidated investments in affiliated companies and other investments are measured at fair value through profit and loss.

Loans include loans to shareholders (before risk allowance) in the amount of EUR 11,000k (previous year: EUR 9,000k).

Securities measured at fair value through profit and loss include mainly managed portfolios of equity positions and European corporate bonds and assets managed by the Royal Bank of Canada Investment Management (UK) Limited.

Cash flow hedges are generally used to hedge against foreign currency risks arising from future sales or procurement transactions. Options and future contracts regarding foreign currencies serve as hedging instruments. Changes in the fair value of the hedging instruments, to the extent that they affect their effective portion, are recognised in other comprehensive income until the underlying transaction is realised. The ineffective portion of changes in fair value is recognised in the income statement.

When the hedged item is realised, the fair value changes of the hedging instrument recognised in other comprehensive income are reclassified to the income statement. However, no hedging instruments were used for cash flow hedges either on the balance sheet date or on the previous year's balance sheet date.

The development of the risk allowance for loans during financial year 2022 is as follows:

in EUR '000	Bucket 1	Bucket 2	Bucket 3	Total
As of 01 January 2022	**-272**	**0**	**-36,205**	**-36,477**
Transfer to Bucket 1	0	0	0	**0**
Transfer to Bucket 2	0	0	0	**0**
Transfer to Bucket 3	0	0	0	**0**
Additions	-99	0	0	**-99**
Disposal due to settlement / Consumption	112	0	0	**112**
Reversal / Write-up	393	0	16,287	**16,680**
Change in the scope of consolidation	0	0	0	**0**
Currency translation differences and other changes	0	0	0	**0**
As of 31 December 2022	**134**	**0**	**-19,918**	**-19,784**

The development of the gross book values of loans during financial year 2022 is as follows:

in EUR '000	Bucket 1	Bucket 2	Bucket 3	Total
As of 01 January 2022	**124,397**	**0**	**43,209**	**167,606**
Transfer to Bucket 1	0	0	0	**0**
Transfer to Bucket 2	0	0	0	**0**
Transfer to Bucket 3	0	0	0	**0**
Additions	56,431	0	0	**56,431**
Disposal due to settlement / Consumption	-98,376	0	0	**-98,376**
Change in the scope of consolidation	0	0	0	**0**
Currency translation differences and other changes	0	0	0	**0**
As of 31 December 2022	**82,452**	**0**	**43,209**	**125,661**

The net loans of EUR 105,877k (previous year: EUR 131,128k) were not overdue as of the reporting date and will be repaid as scheduled. There was no significant change in the gross book values that would have led to a change in the risk allowance. The reversal of the risk allowance in the amount of EUR 16.287k relates to an individual risk allowance for a subordinated loan to a related party recognised in the previous year. The net decrease in loans results from scheduled and unscheduled repayments of loans granted and the simultaneous issuing of new loans.

The development of the risk allowance for loans as of 31 December 2021 is as follows:

in EUR '000	Bucket 1	Bucket 2	Bucket 3	Total
As of 01 January 2021	**-319**	**0**	**0**	**-319**
Transfer to Bucket 1	0	0	0	**0**
Transfer to Bucket 2	0	0	0	**0**
Transfer to Bucket 3	0	0	0	**0**
Additions	-96	0	-36,205	**-36,301**
Disposal due to settlement / Consumption	26	0	0	**26**
Reversal / Write-up	117	0	0	**117**
Change in the scope of consolidation	0	0	0	**0**
Currency translation differences and other changes	0	0	0	**0**
As of 31 December 2021	**-272**	**0**	**-36,205**	**-36,477**

The development of the gross book values of loans as of 31 December 2021 is as follows:

in EUR '000	Bucket 1	Bucket 2	Bucket 3	Total
As of 01 January 2021	**81,539**	**0**	**43,209**	**124,748**
Transfer to Bucket 1	0	0	0	**0**
Transfer to Bucket 2	0	0	0	**0**
Transfer to Bucket 3	0	0	0	**0**
Additions	157,479	0	0	**157,479**
Disposal due to settlement / Consumption	-114,678	0	0	**-114,678**
Change in the scope of consolidation	56	0	0	**56**
Currency translation differences and other changes	0	0	0	**0**
As of 31 December 2021	**124,396**	**0**	**43,209**	**167,605**

23. Trade and other receivables

in EUR '000	31.12.2022		31.12.2021	
	current	non-current	current	non-current
Trade receivables	345,489	59	309,367	81
Other receivables (financial instruments)	12,518	3,676	9,719	6,109
Other receivables (non-financial instruments)	34,090	2,538	33,237	86
Carrying amount (net)	**392,097**	**6,273**	**352,323**	**6,276**

Risk allowances for receivables from goods and services developed as follows in financial year 2022:

in EUR '000	Bucket 2	Bucket 3	Total
As of 01 January 2022	**-5,502**	**-27,525**	**-33,027**
Transfer to Bucket 2	0	0	**0**
Transfer to Bucket 3	3,650	-3,650	**0**
Additions	-3,305	-2,394	**-5,699**
Disposal due to settlement / Consumption	0	4,349	**4,349**
Reversal / Write-up	234	1,606	**1,840**
Change in the scope of consolidation	-244	-156	**-400**
Currency translation differences and other changes	179	-5	**174**
As of 31 December 2022	**-4,988**	**-27,775**	**-32,763**

The gross book values of trade receivables developed as follows in financial year 2022:

in EUR '000	Bucket 2	Bucket 3	Total
As of 01 January 2022	**313,960**	**28,515**	**342,475**
Transfer to Bucket 2	0	0	**0**
Transfer to Bucket 3	-419	419	**0**
Additions	1,318,441	2,910	**1,321,351**
Disposal due to settlement / Consumption	-1,289,905	-2,888	**-1,292,793**
Change in the scope of consolidation	4,357	156	**4,513**
Currency translation differences and other changes	2,727	38	**2,765**
As of 31 December 2022	**349,161**	**29,150**	**378,311**

There were no significant changes in gross book values that would have led to a change in expected credit losses.

Risk allowances for receivables from goods and services developed as follows in financial year 2021:

in EUR '000	Bucket 2	Bucket 3	Total
As of 01 January 2021	**-26,720**	**-4,157**	**-30,877**
Transfer to Bucket 2	0	0	**0**
Transfer to Bucket 3	21,449	-21,449	**0**
Additions	-93	-3,190	**-3,283**
Disposal due to settlement / Consumption	0	1,195	**1,195**
Reversal / Write-up	194	170	**364**
Change in the scope of consolidation	-36	-8	**-44**
Currency translation differences and other changes	-296	-86	**-382**
As of 31 December 2021	**-5,502**	**-27,525**	**-33,027**

The gross book values of trade receivables developed as follows in financial year 2021:

in EUR '000	**Bucket 2**	**Bucket 3**	**Total**
As of 01 January 2021	**259,355**	**6,427**	**265,782**
Transfer to Bucket 2	0	0	**0**
Transfer to Bucket 3	-21,920	21,920	**0**
Additions	960,732	2,354	**963,086**
Disposal due to settlement / Consumption	-812,621	-2,317	**-814,938**
Change in the scope of consolidation	-70,773	8	**-70,765**
Currency translation differences and other changes	-813	123	**-690**
As of 31 December 2021	**313,960**	**28,515**	**342,475**

Other receivables break down as follows:

in EUR '000	**31.12.2022**	**31.12.2021**
Current		
financial instruments		
Creditors with debit balances	197	254
Other receivables	12,331	9,478
Allowances (Buckets 1-3)	- 10	- 13
	12,518	**9,719**
No financial instruments		
Value added tax receivables	9,646	9,747
Receivables from employees	1,207	1,390
Other tax receivables	595	306
Other receivables	23,988	23,116
Allowances	- 1,346	- 1,322
	34,090	**33,237**
	46,608	**42,956**
Non-current		
financial instruments		
Other receivables	**3,681**	**6,118**
Allowances (Buckets 1-3)	- 5	- 9
	3,676	**6,109**
No financial instruments		
Other receivables	2,538	86
Allowances	-	-
	2,538	**86**
	6,214	**6,195**
Other receivables	**52,822**	**49,151**

Risk allowances for other receivables (financial instruments) developed as follows in financial year 2022:

in EUR '000	**Bucket 1**	**Bucket 2**	**Bucket 3**	**Total**
As of 01 January 2022	**-19**	**0**	**-3**	**-22**
Transfer to Bucket 1	-1	0	1	**0**
Transfer to Bucket 2	0	0	0	**0**
Transfer to Bucket 3	0	0	0	**0**
Additions	-13	0	0	**-13**
Disposal due to settlement / Consumption	0	0	0	**0**
Reversal / Write-up	19	0	0	**19**
Change in the scope of consolidation	0	0	0	**0**
Currency translation differences and other changes	-2	0	3	**1**
As of 31 December 2022	**-16**	**0**	**1**	**-15**

The gross carrying amounts of other receivables (financial instruments) developed as follows in financial year 2022:

in EUR '000	**Bucket 1**	**Bucket 2**	**Bucket 3**	**Total**
As of 01 January 2022	**13,022**	**0**	**2,828**	**15,850**
Transfer to Bucket 1	1	0	-1	**0**
Transfer to Bucket 2	0	0	0	**0**
Transfer to Bucket 3	0	0	0	**0**
Additions	22,520	0	1,897	**24,417**
Disposal due to settlement / Consumption	-23,422	0	-625	**-24,047**
Change in the scope of consolidation	45	0	0	**45**
Currency translation differences and other changes	-56	0	0	**-56**
As of 31 December 2022	**12,110**	**0**	**4,099**	**16,209**

There were no significant changes in gross book values that would have led to a change in expected credit losses.

Risk allowances for other receivables (financial instruments) developed as follows in financial year 2021:

in EUR '000	**Bucket 1**	**Bucket 2**	**Bucket 3**	**Total**
As of 01 January 2021	**-1,301**	**0**	**-1,003**	**-2,304**
Transfer to Bucket 1	0	0	0	**0**
Transfer to Bucket 2	0	0	0	**0**
Transfer to Bucket 3	0	0	0	**0**
Additions	-18	0	0	**-18**
Disposal due to settlement / Consumption	1	0	1,000	**1,001**
Reversal / Write-up	1,369	0	0	**1,369**
Change in the scope of consolidation	0	0	0	**0**
Currency translation differences and other changes	-70	0	0	**-70**
As of 31 December 2021	**-19**	**0**	**-3**	**-22**

The gross carrying amounts of other receivables (financial instruments) developed as follows in financial year 2021:

in EUR '000	Bucket 1	Bucket 2	Bucket 3	Total
As of 01 January 2022	**15,748**	**0**	**2,416**	**18,164**
Transfer to Bucket 1	0	0	0	**0**
Transfer to Bucket 2	0	0	0	**0**
Transfer to Bucket 3	0	0	0	**0**
Additions	27,446	0	1,412	**28,858**
Disposal due to settlement / Consumption	-29,975	0	-1,000	**-30,975**
Change in the scope of consolidation	3	0	0	**3**
Currency translation differences and other changes	-200	0	0	**-200**
As of 31 December 2021	**13,022**	**0**	**2,828**	**15,850**

24. Contract Assets and Liabilities

Contractual assets and liabilities break down by business segments as follows:

in EUR '000	31.12.2022	31.12.2021
Contract assets	**75,317**	**68,092**
Engineering	73,161	64,732
Mining	1,995	3,253
Med Tech	161	107
Aviation	0	0
Contract liabilities	**88,739**	**156,635**
Engineering	76,530	147,276
Mining	1,338	0
Med Tech	10,871	9,359
Aviation	0	0

Risk allowances for contract assets developed as follows in financial year 2022:

in EUR '000	Bucket 2	Bucket 3	Total
As of 01 January 2022	**-257**	**-42,597**	**-42,854**
Transfer to Bucket 2	0	0	**0**
Transfer to Bucket 3	0	0	**0**
Additions	-300	-4	**-304**
Disposal due to settlement / Consumption	0	0	**0**
Reversal / Write-up	0	0	**0**
Change in the scope of consolidation	0	0	**0**
Currency translation differences and other changes	1	-134	**-133**
As of 31 December 2022	**-556**	**-42,735**	**-43,291**

The gross carrying amount of contract assets developed as follows in financial year 2022:

in EUR '000	Bucket 2	Bucket 3	Total
As of 01 January 2022	**65,867**	**45,079**	**110,946**
Transfer to Bucket 2	0	0	**0**
Transfer to Bucket 3	0	0	**0**
Additions	73,421	1,896	**75,317**
Disposal due to settlement / Consumption	-66,811	**-2,351**	**-69,162**
Change in the scope of consolidation	1,313	0	**1,313**
Currency translation differences and other changes	74	120	**194**
As of 31 December 2022	**73,864**	**44,744**	**118,608**

There has been no significant change in the gross carrying amounts that has led to a change in risk allowances for contract assets.

Risk allowances for contract assets developed as follows in the financial year 2021:

in EUR '000	Bucket 2	Bucket 3	Total
As of 01 January 2021	**-36**	**0**	**-36**
Transfer to Bucket 2	0	0	**0**
Transfer to Bucket 3	0	0	**0**
Additions	-222	-41,533	**-41,755**
Disposal due to settlement / Consumption	0	0	**0**
Reversal / Write-up	2	0	**2**
Change in the scope of consolidation	0	0	**0**
Currency translation differences and other changes	-1	-1,064	**-1,065**
As of 31 December 2021	**-257**	**-42,597**	**-42,854**

The gross carrying amount of contract assets developed as follows in financial year 2021:

in EUR '000	Bucket 2	Bucket 3	Total
As of 01 January 2021	**58,423**	**0**	**58,423**
Transfer to Bucket 2	0	0	**0**
Transfer to Bucket 3	0	0	**0**
Additions	82,167	43,762	**125,929**
Disposal due to settlement / Consumption	-74,714	**0**	**-74,714**
Change in the scope of consolidation	0	0	**0**
Currency translation differences and other changes	-9	1,317	**1,308**
As of 31 December 2021	**65,867**	**45,079**	**110,946**

Revenue recognised in the reporting period from performance obligations satisfied (or partially satisfied) in previous periods is as follows:

in EUR '000	31.12.2022	31.12.2021
Revenue recognised in the reporting period from performance obligations satisfied (or partially satisfied) in previous periods	0	0

For some Group entities, revenue recognised in the reporting period from performance obligations satisfied (or partially satisfied) in previous periods may not be reported separately because changes in the transaction price typically also result in changes in the scope of the projects in the current reporting period. Therefore, it is not possible to determine the scope of changes in the transaction price without adjusting the scope of performance obligations.

Contract assets exist in the Engineering, Mining and Med Tech segments and reflect the claim for a consideration for the complete performance of the contractual services. Receivables are recognised when the right to receive a consideration becomes unconditional. In this case, the Group receives advance payments from customers, which are netted with the contract assets or recognised as contract liabilities. As soon as the contractual services are rendered, revenue is recognised.

The following table presents the significant changes in the contract assets and liabilities:

in EUR '000	2022		2021	
	Contract Assets	Contract Liabilities	Contract Assets	Contract Liabilities
Contract asset / Contract liability at the beginning of the reporting period	**68,092**	**-156,635**	**58,387**	**-136,316**
Revenue recognised in the reporting period that was included in the contract liability balance at the beginning of period	0	165,521	0	104,846
Reclassification of contract assets at the beginning of period to accounts receivable (due to invoicing)	-68,381	0	-8,711	0
Increase of contract liability / Decrease of contract assets due to payments received, with exception of amounts that have been recognised as revenue during the period	-45,748	-97,503	-53,518	-124,621
Increase due to change in measure of progress (which have still not resulted in accounts receivable)	119,639	0	114,564	0
Net changes in allowances / impairment for contract assets	270	0	-41,310	0
Changes due to business combinations	1,313	0	-284	52
Reclassifications between contract assets and contract liabilities since the net amount of contract asset and payments received is changing the sign (+/-)	0	0	0	0
Currency translation difference for contract assets / liabilities	132	-122	-1,036	-596
other significant changes in contract balances	0	0	0	0
Contract asset / Contract liability at the end of the reporting period	**75,317**	**-88,739**	**68,092**	**-156,635**

The transaction price allocated to the outstanding performance obligations as of 31 December 2022 is as follows:

in EUR '000	up to 1 year	1 - 5 years	> 5 years	Total
	85,459	3,177	103	88,739

The transaction price allocated to the outstanding performance obligations as of 31 December 2021 was as follows:

in EUR '000	up to 1 year	1 - 5 years	> 5 years	Total
	152,083	4,492	60	156,635

As the Mining segment recognises revenue for satisfied performance obligations in accordance with IFRS 15.B16, the practical expedient in IFRS 15.121 (b) is used and therefore the disclosure of the open transaction price for unsatisfied performance obligations as required by IFRS 15.120 is waived.

As in the previous year, in 2022 there are no costs to be capitalised that were incurred for obtaining a contract with a customer or for the fulfilment of a contract.

25. Inventories

The carrying amount of inventories amounting to EUR 131,963k (previous year: EUR 111,619k) breaks down as follows:

in EUR '000	31.12.2022	31.12.2021
Raw materials, consumables and supplies	39,169	27,711
Unfinished goods, work in progress	15,600	9,899
Finished goods	21,009	15,478
Merchandises	54,440	49,147
Advance payments	1,745	9,384
Inventories	**131,963**	**111,619**

Inventories are written down to the net realisable value if lower than the acquisition or production costs. The carrying amount of inventories measured at net realisable value is EUR 11,060k (previous year: EUR 11,030k). Write-downs amounting to EUR 16,782k were recognised (previous year: EUR 12,922k). As in the previous year, the impairment losses are fully recognised under cost of materials.

As in the previous year, no inventories were pledged as collateral for liabilities.

26. Cash and cash equivalents

in EUR '000	31.12.2022	31.12.2021
Cash and bank balances	383,455	529,101
Other cash equivalents	10	10
Cash in transit	-8	-11
Cash and cash equivalents	**383,457**	**529,100**

With regard to the development of cash and cash equivalents, please refer to the consolidated statement of cash flows. As of 31 December 2022, the Group cannot freely dispose of cash amounting to EUR 174k (previous year: EUR 283k).

27. Assets held for sale / liabilities associated with assets held for sale

As of 31 December 2022, there were no assets held for sale or liabilities associated with assets held for sale in accordance with IFRS 5 in none of the segments.

As of 31 December 2021 the following assets and liabilities were classified as assets held for sale / liabilities associated with assets held for sale in the **Engineering** segment (fair value hierarchy measurement level 1):

in EUR '000	31.12.2021
Trade and other receivables	275
Inventories	87
Contract assets	261
Cash and cash equivalents	539
Assets held for disposal	**1,162**

in TEUR	31.12.2021
Financial liabilities	852
Trade and other payables	412
Contract liabilities	52
Liabilities associated with assets held for disposal	**1,316**

With signing the contract on 15 December 2021, EDAG Production Solutions GmbH & Co. KG undertook to sell all shares in the subsidiary EDAG Production Solutions CZ S.R.O., Mladá Boleslav, to a third party. The sale became effective with the end of 31 January 2022 (loss of control). The sale resulted from changes in the general market situation and the transformation process in the EDAG Group's industry, which led to a reduction in the OEMs' model range. This had a direct impact on the number of planned production plants and thus on the market volume. The consequence had been production stops and postponements and an accompanying massive deterioration in price levels. The measurement of the respective assets and liabilities at fair value resulted in an impairment loss of EUR 227k.

In the other segments, there are no assets / liabilities held for sale in accordance with IFRS 5 as of 31 December 2021.

28. Equity

Details of the development of equity between 1 January and 31 December 2022 and the previous period are presented in the Group's statement of changes in equity.

Subscribed capital

The subscribed capital of EUR 165,025k (previous year: EUR 265,025k) corresponds to the equity of the parent company. As of 31 December 2022, the share capital of EUR 165,025k is fully paid in. The reduction of the share capital by EUR 100,000k resolved by shareholders' resolution on 29 April 2021 was paid out to the shareholders in May 2022 after the expiry of the lock-up period of one year. At the shareholders' meeting on 25 March 2022, a further capital reduction of EUR 150,000k was resolved. This capital reduction will be carried out in April 2023 after the expiry of the one-year lock-up period.

Capital reserve

As of 31 December 2022, the capital reserve amounts to EUR 73,356k (Vj. EUR 265,025k).

Other reserves

Other reserves include revenue reserves, profit or loss of previous years a (retained earnings), the current net profit or loss, reserves from the transition from HGB (German GAAP) to IFRS, reserves from the transition to IFRS 9, IFRS 15 and IFRS 16 and total other comprehensive income, as far as they are attributable to shareholders of the parent company.

Other comprehensive income includes the effects of currency translation differences, effects from remeasurements of defined benefit plans and the effective portions of changes from cash flow hedges. The currency translation differences include differences the translation of the financial statements of foreign subsidiaries, recognised directly in equity.

In 2022, no distributions were made to the shareholders of ATON 2 GmbH. In the financial year, EUR 1,267k were distributed to non-controlling interests at the level of subsidiaries (previous year: EUR 0k).

in EUR '000	31.12.2022	31.12.2021
Retained earnings including profit or loss		
Revenue reserves and profit (+) or loss (-) carried forward	1,069,122	1,014,737
Profit or loss attributable to the owners	-37,132	59,835
Reserve from the transition to IFRS / from application of IFRS 9, 15 and 16	147	147
	1,032,137	**1,074,719**
Other comprehensive income		
Currency translation differences	-42,673	-21,426
Remeasurements of defined benefit plans	2,955	-5,403
	-39,718	**-26,829**
Other reserves	**992,419**	**1,047,890**

Non-controlling interests

The non-controlling interests are attributable to the following companies:

in EUR '000	31.12.2022	31.12.2021
EDAG subgroup	26,033	21,912
Redpath subgroup	-15,137	-14,323
ecoCOAT GmbH	2,042	0
Total non-controlling interests	**12,938**	**7,589**

As of balance sheet date, non-controlling interests in the EDAG subgroup result from the fact that the ATON Group only holds 74.66 % (previous year: 74.66 %) of the shares in EDAG Engineering Group AG as parent company of the subgroup.

As in the previous year, the non-controlling interests relating to the Redpath subgroup are not material, so that disclosures on the balance sheet, income statement and cash flow statement for the subsidiaries with non-controlling interests have been omitted accordingly. The interest relates to the non-controlling interests in the two subsidiaries in South Africa and Zambia.

The non-controlling interests in ecoCOAT GmbH result from the fact that ATON GmbH only 51.0 % of the shares in ecoCOAT GmbH are held by ATON GmbH as at the balance sheet date. The remaining 49.0 % are held by non-controlling shareholders.

The following table presents information regarding the material, non-controlling interests in the EDAG Group (after effects from the purchase price allocation):

in EUR '000	**31.12.2022**	**31.12.2021**
Percentage of non-controlling interests	**25.3**	**25.3**
Non-current assets	350,353	334,785
Current assets	351,333	369,401
Non-current liabilities	-258,392	-327,959
Current liabilities	-341,849	-290,311
Net assets	**101,445**	**85,916**
Net assets corresponding to non-controlling interests	**25,706**	**21,771**
Revenue	794,854	687,343
Profit or loss for the period	11,627	-7,552
Other comprehensive income, net of income taxes	9,637	2,159
Total comprehensive income to non-controlling interest	**21,264**	**-5,393**
Profit or loss for the period corresponding to non-controlling interests	2,946	-1,914
Other comprehensive income (net of taxes) corresponding to non-controlling interests	2,442	547
Cash flow from operating activities	33,999	23,594
Cash flow from investing activities	-29,720	-18,366
Cash flow from financing activities	-33,028	-10,555
Foreign exchange effects / IFRS reallocations	346	126
Net change in cash and cash equivalents	**-28,403**	**-5,201**

The development of the non-controlling interests in equity is shown in the table below:

in EUR '000	**2022**	**2021**
As of 1 January	**7,589**	**17,987**
Changes in equity recognised directly in equity		
Dividend payments	- 1,267	-
Changes in the scope of consolidation	2,485	-
Change in non-controlling interest due to step acquisition	5,450	-
Change in non-controlling interest due to disposal of interests to non-controlling interests	-	- 6,876
Remeasurement of defined benefit plans	2,414	285
Currency translation differences from translation of financial statements of foreign subsidiaries	28	281
	9,110	**- 6,310**
Changes in equity recognised in profit or loss	- 3,761	- 4,088
As of 31 December	**12,938**	**7,589**

Dividend payments relate to the dividends of the EDAG Group in the financial year 2022, insofar as these are attributable to non-controlling interests.

Changes in equity due to changes in the scope of consolidation relate to the effects of the initial consolidation of ecoCOAT GmbH, in which ATON GmbH holds 51.0 % and 49.0 % are attributable to other shareholders.

The change in non-controlling interests from step acquisitions in 2022 result from a capital increase at Redpath Mining (S.A.) (Pty.) Ltd, South Africa, in which only Redpath participated as majority shareholder (resulting in an increase in the shareholding from 53.9 % to 67.0 %). As a result, the minority interests in Redpath Mining (S.A.) (Pty.) Ltd. decreased from 46.1 % to 33.0 %. This capital increase also affected Redpath Zambia Limited, Zambia, 99.0% of which is held by Redpath Mining (S.A.) (Pty.) Ltd. Overall, this transaction and the related decrease in non-controlling interests increased non-controlling interests by EUR 5,450k, as the underlying net assets of the subsidiaries are negative.

In the previous year, the decrease in non-controlling interests resulted also from the Redpath subgroup and was caused by the following two transactions: In the first step, a capital increase took place at Redpath Mining (S.A.) (Pty.) Ltd, South Africa, on 23 November 2021, in which only Redpath participated as majority shareholder. As a result, Redpath's shareholding increased from previously 74.0 % to 80.0 % and the percentage share of non-controlling interests decreased consequently. In a second step, shares in Redpath Mining (S.A.) (Pty.) Ltd. were transferred to a new non-controlling shareholder on 14 December 2021. As a result, the interest held by Redpath decreased to 53.9 % and the non-controlling interests increased accordingly. This capital increase and the subsequent sale of shares to the non-controlling shareholder also affected Redpath Zambia Limited, Zambia, 99.0 % of which is held by Redpath Mining (S.A.) (Pty.) Ltd.. Overall, these transactions and the percentage increase in non-controlling interests reduced non-controlling interests by EUR 6,876k, as the underlying net assets of the subsidiaries were negative.

The change in equity from the remeasurement of defined benefit plans without effect on profit or loss, is attributable to the sharp increase in the interest rate used to discount pension obligations. The change results exclusively from the EDAG Group.

In 2022, the changes in equity recognised in profit or loss regarding non-controlling interests is attributable to the Redpath Group in the amount of EUR -6,264k, ecoCOAT GmbH in the amount of EUR -443k and the EDAG Group in the amount of EUR 2,946k.

29. Provisions for pensions

The Group has company pension schemes in the form of defined contribution plans and defined benefit plans.

Defined contribution exist in the form of retirement, disability and survivor's benefits. The employer contributions paid to the statutory pension insurance scheme in Germany should be treated as such defined contribution plans. Payments to defined contribution plans in the Group predominantly refer to contributions to the statutory pension insurance in Germany. Apart from the payment of contributions, the Group has no further payment obligations. In the reporting period, current contributions of EUR 60,026k (previous year: EUR 55,114k) were paid. Other long-term employee benefits according to IAS 19.153 amount to EUR 722k in 2022 (previous year: EUR 808k).

The defined benefit plan involves both direct pension commitments and indirect pension commitments made through VKE Versorgungskasse EDAG-Firmengruppe e.V. (VKE) for companies in the EDAG Group. The direct pension commitments guarantee life-long pension payments. The obligations partly take the form of fixed commitments and partly of commitments, which depend on years of service and salary. Commitments are made for old-age, disability and survivor's benefits.

The purpose of VKE – a group support fund – is to serve as a social institution of EDAG and its affiliated companies wishing to have their company retirement pension schemes managed by VKE. The sponsors (members using VKE to handle their company retirement pension schemes) are the following companies:

- EDAG Engineering GmbH, Wiesbaden
- EDAG Production Solutions GmbH & Co. KG, Fulda

The exclusive and unalterable purpose of VKE is to manage the support fund which grants to beneficiaries voluntary, one-time, repeated or recurring benefits according to the benefit plan of VKE when they need support, become disabled or incapable to work and during old age. Beneficiaries can be employees and / or former employees of the funding companies as well as their close relatives (spouses and children) and / or surviving dependants. Members of the funding companies are also persons with whom the funding companies are, or have been, in an employment-type relationship. For employees recruited on or after 1 June 2006, there are no pension commitments.

The employees entitled to benefits receive retirement and survivor's benefits in the form of a lump sum payment in accordance with the provisions of the applicable pension plan. The benefits are financed through an external fund, whereby the fund assets are reinvested in the funding companies in the form of loans.

In addition, there are also defined benefit commitments to a lesser extent at ATON MedTech GmbH (former: Deilmann-Haniel Mining Systems GmbH), Munich. Beneficiaries are employees who are not insured under the miners' pension insurance scheme and employees covered by collective bargaining agreements who joined the company until 30 June 1995.

Pension commitments in Germany are governed by the provisions of the German Company Pensions Act. Due to the legally prescribed pension adjustment obligation, pension commitments are subject to inflation risk.

Furthermore, there is the risk that, due to changes in life expectancy, invalidity probabilities and mortality probabilities, the actual payment obligations may be different from what was expected at the time of the commitment.

In Switzerland, the Group’s company pension scheme is being handled by BVG Sammelstiftung Swiss Life. Assets are invested jointly for all accounts in a collective fund. All biometric risks (disability, death and longevity) as well as the investment and interest rate risk are reinsured by Swiss Life.

In Italy, benefits are paid upon termination of the employment (Trattamento di Fine Rapporto [TFR]). Every employee is entitled to benefits in such cases. For every year of service, provisions for severance payments have to be recognised based on the total annual remuneration divided by 13.5. Hence, the employer pays a part (0.5 % of the salary) to the Italian National Social Security Institute or to an external pensions fund during the year. This amount is subtracted from the provisions for severance payments. On 31 December of each year, the accumulated provision of the previous year is revalued using an index prescribed by law (1.5 % plus 75 % of the increase in the consumer price index for families of workers and employees based on the last 12 months).

In India, according to the Compensation Act from 1972 ("gratuity act"), post-employment benefits are paid to employees provided that they have served at least 4.5 years. The payment is based on the monthly base salary divided by 26 days multiplied by 15 days for each completed year, with six completed months being considered as one year.

Employees in Mexico also have a settlement claim. A payment in the amount of 12 days per service year is granted. In addition, in the event of unfair dismissal of employees who have reached retirement age, compensation must be paid for the service years worked. The compensation amounts to three months’ salaries.

In addition, there are other post-employment benefit plans under Indonesian law that apply to all employed Indonesian nationals. The obligation is to pay a severance pay upon termination of employment. The benefit amount varies for each individual employee depending on length of service and other factors such as age and position. In November 2022, the Indonesian subsidiary enacted a corporate regulation related to post-employment benefits, which resulted in a plan curtailment and thus a reduction in the scope of the obligation.

The pension obligations and the obligations from other postretirement benefit plans are determined on the basis of actuarial reports, which are requested annually. The benefit amount is determined using the duration of employment as well as the future estimated salary and pension trends.

The provisions for pensions recognised in the statement of financial position are as follows:

in EUR '000	2022	2021
Present value of funded obligations	37,744	49,958
Fair value of plan assets	- 19,031	- 20,560
Deficit of funded plans	**18,713**	**29,398**
Present value of unfunded obligations	16,098	21,423
Total deficit of defined benefit pension plans	**34,811**	**50,821**
Provisions for pensions as of 31 December	**34,811**	**50,821**

The provisions for pensions developed as follows:

in EUR '000	2022	2021
Provisions for pensions as of 1 January	50,821	50,075
Current service cost	2,060	2,355
Past service cost	-2,653	-241
Net interest cost (+) / income (-)	547	424
Remeasurements	-14,769	-1,449
from changes in demographic assumptions	920	80
from changes in financial assumptions	-15,855	-1,334
from experience gains (-) / losses (+)	166	-195
Gains (-) / losses (+) from settlements	0	220
Currency translation differences	-134	461
Employer contributions	-137	-124
Benefit payments	-934	-910
Administration cost	10	10
Provisions for pensions as of 31 December	**34,811**	**50,821**

The present value of the defined benefit obligation developed as follows:

in EUR '000	2022	2021
Present value of the defined benefit obligation as of 1 January	71,381	71,910
Current service cost	2,060	2,355
Past service cost	-2,653	-241
Interest cost	750	593
Remeasurements of defined benefit plans		
from changes in demographic assumptions	920	80
from changes in financial assumptions	-15,820	-1,567
from experience gains (-) / losses (+)	166	-195
Currency translation differences	-44	554
Contributions by plan participants	318	124
Benefit payments	-3,246	-2,242
Administration cost	10	10
Present value of the defined benefit obligation as of 31 December	**53,842**	**71,381**

The fair value of plan assets developed as follows:

in EUR '000	2022	2021
Fair value of plan assets as of 1 January	20,560	21,835
Interest income	203	169
Gains (+) / losses (-) from settlements	0	-220
Return on (-) / loss from (-) plan assets excluding amounts included in interest income	35	-233
Currency translation differences	90	93
Employer contributions	137	124
Contributions by plan participants	318	124
Benefit payments	-2,312	-1,332
Fair value of plan assets as of 31 December	**19,031**	**20,560**

The fair value of the plan assets is allocated to the individual asset categories as follows:

in EUR '000	2022	in %	2021	in %
Debt instruments (Germany)	17,551	92%	18,414	90%
thereof investments in employer company or related parties	17,551		18,414	
Asset values of reinsurance cover pension trust (Germany)	0	0%	0	0%
thereof without a quoted market price in an active market	0		0	
Collective foundation (Switzerland)	1,480	8%	2,146	10%
thereof without a quoted market price in an active market	1,480		2,146	
Cash and cash equivalents	0	0%	0	0%
Plan assets as of 31 December	**19,031**	**100%**	**20,560**	**100%**

Neither as of 31 December 2022 nor as of 31 December 2021, the asset ceiling for plan assets to be recorded does apply.

The calculation of the present value of the defined benefit obligation is based on the following significant actuarial assumptions:

	2022	2021
Average discount rate		
Germany	4.06%	0.94%
India	7.47%	6.95%
Indonesia	7.05%	6.75%
Italy	3.98%	1.06%
Mexico	8.40%	7.00%
Switzerland	2.25%	0.20%
Biometric accounting bases		
Germany	Actuarial tables 2018 G	Actuarial tables 2018 G
India	IALM 2012 - 14	IALM 2012 - 14
Indonesia	TMI 4 (2019)	TMI 4 (2019)
Italy	RG 48	RG 48
Mexico	ENOE 2010 - INEGI	ENOE 2010 - INEGI
Switzerland	BVG 2020 GT	BVG 2020 GT

The following sensitivity analyses show how the present value of the defined benefit obligation would be affected by an increase or decrease in the main actuarial assumptions:

in EUR'000		2022	in %	2021	in %
Average discount rate	+ 0,50 %	51,781	-3.83	67,116	-5.97
	- 0,50 %	56,637	5.19	75,460	5.71
Average life expectancy	+ 1 year	54,363	0.97	71,567	0.26
	- 1 year	53,877	0.06	70,730	-0.91

The sensitivities were determined analogously to the scope of obligations. One assumption was changed while holding all other assumptions and the valuation method unchanged. If several assumptions change at the same time, the total effect does not have to correspond to the sum of the individual effects. In addition, the effects of the individual changes in assumptions are not linear. The assumptions on salary and pension trends do not have a material impact on the present value of the defined benefit obligation. Hence, no sensitivities were stated for these assumptions.

For the financial year 2023, the Group expects contributions to defined benefit pension plans in the total amount of EUR 3,571k (previous year: EUR 2,494k).

The weighted average duration of the defined benefit obligation of ATON's defined benefit plans is 10 years as of 31 December 2022 (previous year: 12 years).

30. Provisions for income taxes and other provisions

Provisionsfor income taxes and other provisions developed as follows:

in EUR '000	Income taxes	Personnel	Warranties	Rework	Onerous contracts	Litigation risks	Other	Total other provisions
As of 1 January 2022	**4,593**	**17,830**	**4,023**	**222**	**7,366**	**839**	**8,781**	**39,061**
thereof: current	**4,447**	13,947	3,274	222	7,366	839	6,750	**32,398**
Changes in the scope of consolidation	**0**	811	0	0	349	0	1	**1,161**
Currency translation differences	**15**	52	26	-20	89	14	-37	**124**
Additions	**8,591**	3,358	2,265	1,088	14,235	2	440	**21,388**
Consumption	**-2,297**	-7,410	-713	-575	-272	-412	-1,189	**-10,571**
Reversal	**-62**	-2,078	-1,141	-2	-1,460	-5	-2,707	**-7,393**
Interest effect	**0**	18	0	0	0	0	-2	**16**
Other changes	**0**	0	0	0	0	0	0	**0**
As of 31 December 2022	**10,840**	**12,581**	**4,460**	**713**	**20,307**	**438**	**5,287**	**43,786**
thereof: current	**10,703**	8,090	3,819	713	20,256	438	3,328	**36,644**

in EUR '000	Income taxes	Personnel	Warranties	Rework	Onerous contracts	Litigation risks	Other	Total other provisions
As of 1 January 2021	**3,355**	**11,605**	**3,993**	**137**	**3,358**	**1,401**	**14,631**	**35,125**
thereof: current	**3,287**	8,078	3,309	137	3,357	1,401	12,701	**28,983**
Changes in the scope of consolidation	**259**	15	131	0	11	0	66	**223**
Currency translation differences	**2**	41	41	4	67	8	116	**277**
Additions	**2,837**	11,411	1,779	114	5,243	5	2,326	**20,878**
Consumption	**-1,854**	-3,809	-502	-25	-30	-356	-6,736	**-11,458**
Reversal	**-6**	-1,452	-1,119	-8	-1,583	-219	-1,619	**-6,000**
Interest effect	**0**	19	0	0	0	0	-3	**16**
Other changes	**0**	0	-300	0	300	0	0	**0**
As of 31 December 2021	**4,593**	**17,830**	**4,023**	**222**	**7,366**	**839**	**8,781**	**39,061**
thereof: current	**4,447**	13,947	3,274	222	7,366	839	6,750	**32,398**

The provisions for income taxes include provisions for current income taxes and provisions for taxes to be paid as a result of tax audits.

Personnel provisions include, in particular, provisions for severance payments of EUR 3,549k (previous year: EUR 7,040k) and provisions for service anniversaries of EUR 2,504k (previous year: EUR 2,675k).

The provisions for warranties cover statutory and contractual warranty obligations as well as goodwill payments. The provisions are recognised on the basis of the products sold or the projects completed, whereby the period, on which the calculation is based, is determined depending on the product, service or industry. The measurement is made on the basis of past experience for repairs and claims in the past.

Provisions for rework are obligations arising subsequently from product sales or invoiced projects.

Provisions for onerous contracts are recognised for expected contract-related losses from development and construction contracts or sales and rental contracts.

The provisions for litigation risks result from currently pending or future proceedings whose results cannot be predicted with certainty. The measurement is made on the basis of individual assessments of the most likely result.

The provisions for archiving costs as part of the other provisions amount to EUR 221k in the financial year (previous year: EUR 229k).

31. Financial liabilities

Financial liabilities break down as follows:

in EUR '000	31.12.2022 Total	Remaining maturities < 1 year	> 1 year < 5 years	> 5 years	31.12.2021 Total	Remaining maturities < 1 year	> 1 year < 5 years	> 5 years
Liabilities to banks	173,922	85,348	85,749	2,825	206,349	47,814	155,610	2,925
thereof from current accounts	2,999	2,999	-	-	1,004	1,004	-	-
thereof from loans	170,923	82,349	85,749	2,825	205,345	46,810	155,610	2,925
Loan liabilities	20,848	20,814	34	-	34,966	34,966	-	-
thereof to third parties	43	9	34	-	-	-	-	-
thereof to shareholders	-	-	-	-	15,560	15,560	-	-
thereof to related parties	17,551	17,551	-	-	18,414	18,414	-	-
thereof to investments accounted for using the equity method	3,254	3,254	-	-	992	992	-	-
Lease liabilities	319,177	52,043	118,362	148,772	259,836	41,748	94,017	124,071
Liabilities from derivative financial instruments	-	-	-	-	363	363	-	-
Total	**513,947**	**158,205**	**204,145**	**151,597**	**501,514**	**124,891**	**249,627**	**126,996**

With regard to lease liabilities, please refer to note **19. The Group as lessee**.

The table below shows the future undiscounted cash flows of financial liabilities as of 31 December 2022 that have an impact on the future liquidity status of the ATON Group:

		Cash flow in 2023			Cash flow in 2024-2026			Cash flow in 2027 and beyond			
in EUR '000	**Carrying amount**	**Fixed interest rate**	**Variable interest rate**	**Repay-ment**	**Fixed interest rate**	**Variable interest rate**	**Repay-ment**	**Fixed interest rate**	**Variable interest rate**	**Repay-ment**	**No fixed repay-ment**
Liabilities to banks	173,922	1,264	867	85,348	550	523	3,264	682	447	43,631	41,679
Lease liabilities	319,177	8,417	-	55,994	25,110	-	134,470	27,279	-	128,713	-
Loan liabilities to sharehold-ers, related parties and asso-ciates	17,551	-	-	-	-	-	-	-	-	-	17,551
Loan liabilities to investments accounted for using the equity method	3,254	-	-	3,254	-	-	-	-	-	-	-
Loan liabilities to third parties	43	1	-	23	1	-	20	-	-	-	-
Liabilities from derivative fi-nancial instruments	-	-	-	-	-	-	-	-	-	-	-
Trade payables	104,623	-	-	104,623	-	-	-	-	-	-	-
Contract Liabilities	88,740	-	-	85,460	-	-	3,177	-	-	103	-
Other liabilities (financial in-struments)	22,682	-	-	8,499	-	-	14,183	-	-	-	-
Total	**729,992**	**9,682**	**867**	**343,201**	**25,661**	**523**	**155,114**	**27,961**	**447**	**172,447**	**59,230**

The following table shows the figures as of 31 December 2021. Here, too, the future undiscounted cash flows of financial liabilities are disclosed:

		Cash flow in 2022			Cash flow in 2023-2025			Cash flow in 2026 and beyond			
in EUR'000	**Carrying amount**	**Fixed interest rate**	**Variable interest rate**	**Repay-ment**	**Fixed interest rate**	**Variable interest rate**	**Repay-ment**	**Fixed interest rate**	**Variable interest rate**	**Repay-ment**	**No fixed repay-ment**
Liabilities to banks	206,349	1,273	339	47,814	1,251	319	81,510	1,221	246	44,108	32,917
Lease liabilities	259,836	6,847	-	44,803	20,791	-	103,615	25,042	-	111,418	-
Loan liabilities to sharehold-ers, related parties and asso-ciates	33,974	122	-	15,560	-	-	-	-	-	-	18,414
Loan liabilities to investments accounted for using the equity method	992	-	-	992	-	-	-	-	-	-	-
Liabilities from derivative fi-nancial instruments	363	-	-	363	-	-	-	-	-	-	-
Trade payables	82,162	-	-	82,160	-	-	2	-	-	-	-
Contract Liabilities	156,635	-	-	152,083	-	-	4,492	-	-	54	6
Other liabilities (financial in-struments)	29,491	219	-	9,640	-	-	19,851	-	-	-	-
Total	**769,802**	**8,461**	**339**	**353,415**	**22,042**	**319**	**209,470**	**26,263**	**246**	**155,580**	**51,337**

32. Trade and other payables

in EUR '000	31.12.2022 Total	Remaining maturities < 1 year	> 1 year < 5 years	> 5 years	31.12.2021 Total	Remaining maturities < 1 year	> 1 year < 5 years	> 5 years
Trade payables								
to third parties	103,643	103,643	-	-	81,768	81,766	2	-
to related parties	205	205	-	-	87	87	-	-
to affiliated companies	775	775	-	-	307	307	-	-
	104,623	**104,623**	**-**	**-**	**82,162**	**82,160**	**2**	**-**
Other liabilities								
Other liabilities (financial instruments)								
to associates	12,360	-	12,360	-	16,184	-	16,184	-
to related parties	3	3	-	-	-	-	-	-
from business combinations	6,367	4,544	1,823	-	7,712	4,045	3,667	-
from other liabilities (financial instruments)	3,952	3,952	-	-	5,595	5,595	-	-
	22,682	**8,499**	**14,183**	**-**	**29,491**	**9,640**	**19,851**	**-**
Other liabilities (no financial instruments)								
payments received on account of orders	15,848	13,291	2,557	-	11,600	9,237	2,363	-
to employees	81,218	81,216	2	-	69,145	69,145	-	-
from social security contributions	4,086	4,086	-	-	5,657	5,657	-	-
from value added tax and other taxes	35,455	35,455	-	-	28,074	28,074	-	-
from deferred income	1,323	1,118	205	-	569	569	-	-
from other liabilities (no financial instruments)	1,019	1,019	-	-	1,173	1,173	-	-
	138,949	**136,185**	**2,764**	**-**	**116,218**	**113,855**	**2,363**	**-**
Total	**266,254**	**249,307**	**16,947**	**-**	**227,871**	**205,655**	**22,216**	**-**

Other liabilities to employees primarily include liabilities from claims of bonus agreements, current salary payments, untaken leave and overtime credits.

Liabilities from social security contributions relate, in particular, to contributions still to be paid to social security institutions.

Aside from this, other liabilities include a large number of individually immaterial items.

33. Notes to the consolidated statement of cash flows

The statement of cash flows shows how the cash and cash equivalents of the ATON Group changed in the course of the reporting period as a result of cash inflows and cash outflows. Only the effects of changes in the scope of consolidation are disclosed separately in the cash flow from investing activities, all other changes are disclosed on a net basis in the individual line items of the cash flow from operating activities and financing activities.

The cash and cash equivalents reported in the consolidated statement of cash flows comprise cash, cheques and bank balances.

Cash flow from operating activities

Income before interest, dividends and income taxes includes earnings before income taxes (EUR -43,629k; previous year's period: EUR 75,025k) adjusted by the net amount of interest expense, interest income and dividend income (EUR 6,621k; previous year's period: EUR 6,044k).

In the reporting period, the cash flow from operating activities amounts to EUR 94,408k (previous year's period: EUR 137,031k), which is EUR 42,623k lower than in the same period of the previous year. The gross cash flow of EUR 211,823k is EUR 25,863k lower than in the previous year. The change in working capital with a net increase of EUR 90,902k in the reporting period (previous year's period: EUR 70,709k) also had a negative effect on the development of the cash flow from operating activities. On the other hand, the income taxes paid, which were EUR 3,544k lower than in the previous year's period, and the dividends received, which were EUR 725k higher, had a positive effect on the cash flow from operating activities in the reporting period.

Cash flow from investing activities

The cash outflow from investing activities amounts to EUR 33,016k (previous year's period: cash outflow of EUR 158,228k). Net investments in financial assets and associated companies resulted in a cash inflow of EUR 45,397k in the reporting period, which is EUR 107,263k higher than in the previous year. In contrast, net investments in property, plant and equipment and intangible assets amounted to EUR 74,521k in the reporting period, which is EUR 8,370k higher than in the previous year. In addition, payments made for the acquisition of consolidated subsidiaries as well as the contingent purchase price for Therenva SAS, acquired in 2020, led to a cash outflow of EUR 3,892k (previous year's period: EUR 29,672k) in the reporting period.

Cash flow from financing activities

In the reporting period, the cash outflow from financing activities amounts to EUR 207,566k (previous year's period: EUR 106,096k). The cash flow from financing activities is mainly attributable to the net payments to shareholders amounting to EUR 118,827k (previous year's period: EUR 98,940k) as well as the net repayment of bank loans and lease liabilities amounting to EUR 88,739k (previous year's period: EUR 7,156k).

Reconciliation of the change in financial liabilities to the consolidated statement of cash flows

The following table shows the change in financial liabilities presented in the cash flow from financing activities in the financial year 2022:

in EUR '000	Balance as of 1 January 2022	Cash flows	non-cash changes				Balance as of 31.12.2022
			Additions and disposals (non-cash)	Currency translation differences	Changes in fair value	Reclassifica-tions / restatements	
Current liabilities to banks, from bonds and other current financial liabilities	83,143	- 63,188	2,229	- 105	2,666	81,417	**106,162**
Non-current liabilities to banks, from bonds and other non-current financial liabilities	158,535	6,576	3,526	- 778	2,166	-81,417	**88,608**
Current lease liabilities	41,748	- 58,172	41,044	- 205	5,611	22,017	**52,043**
Non-current lease liabilities	218,088	-	70,871	150	42	-22,017	**267,134**
Total	**501,514**	**- 114,784**	**117,670**	**- 938**	**10,485**	**0**	**513,947**

The cash flow from financing activities also includes the capital reduction in the amount of EUR 100,000k and the dividend payment to non-controlling interests in the amount of EUR 1,267k under payments to shareholders. These values must be taken into account when reconciling the change in financial liabilities to the cash flow from financing activities.

The non-cash additions and disposals for liabilities to banks, from bonds and other financial liabilities mainly include movements from changes in the scope of consolidation. In addition, non-cash movements in lease liabilities are also presented as non-cash additions and disposals.

The following table shows the change in financial liabilities presented in the cash flow from financing activities in the financial year 2021:

in EUR '000	Balance as of 1 January 2021	Cash flows	non-cash changes				Balance as of 31.12.2021
			Additions and disposals (non-cash)	Currency translation differences	Changes in fair value	Reclassifica-tions / restatements	
Current liabilities to banks, from bonds and other current financial liabilities	55,227	55,810	- 1,062	2,052	782	-29,666	83,143
Non-current liabilities to banks, from bonds and other non-current financial liabilities	234,539	- 107,953	1,485	686	801	28,977	158,535
Current lease liabilities	39,134	- 49,965	23,918	853	4,443	23,365	41,748
Non-current lease liabilities	212,212	- 1,460	28,891	1,550	447	-23,552	218,088
Total	**541,112**	**- 103,568**	**53,232**	**5,141**	**6,473**	**-876**	**501,514**

The non-cash additions and disposals for liabilities to banks, from bonds and other financial liabilities mainly include movements from changes in the scope of consolidation. In addition, non-cash movements in lease liabilities are also presented as non-cash additions and disposals.

34. Contingent liabilities and other financial obligations

Contingent liabilities

No provisions are made for contingent liabilities, because it is deemed unlikely at the reporting date that the risk would materialise.

in EUR '000	31.12.2022	of which to affiliated companies	31.12.2021	of which to affiliated companies
Liabilities from guarantees, bill and cheque guarantees	-	-	10,847	-
Contingent liabilities from the granting of security for third-party liabilities	13,208	-	28,726	-
Other contingent liabilities	44,057	-	26,676	-
Contingent liabilities	**57,265**	**-**	**66,249**	**-**

As of 31 December 2021, liabilities from guarantees, bill and cheque guarantees resulted mainly from the Mining segment.

The contingent liabilities from the provision of collateral for third-party liabilities as of 31 December 2022 relate to a guarantee facility provided by ATON GmbH to a related company, which is used in the amount of EUR 13,208k as of the balance sheet date (previous year: EUR 28,726k). Due to the insolvency of a subsidiary of this related company, a utilisation in the amount of EUR 6,296k (previous year: EUR 22,094k) is expected as of the balance sheet date. This risk of utilisation was taken into account in the assessment of the recoverability of the subordinated loans held to this related party and led to a pro rata reversal of the impairment of the loan (see note **22. Other financial assets**, development of risk allowance).

Other contingent liabilities exclusively comprise performance guarantees in the Mining segment (EUR 44,057k, previous year: EUR 26,676k).

Other financial obligations

In addition to provisions, liabilities and contingent liabilities, there are other financial obligations, which break down as follows:

in EUR '000	31.12.2022	31.12.2021
Obligations from non-cancellable leases	12,274	12,240
Purchase commitments and other purchase obligations	117,977	47,295
Miscellaneous other obligations	3,559	2,342
Other financial obligations	**133,810**	**61,877**

In case of fixed-term contracts, the expenses incurred during the entire term are taken into account. In the case of unlimited contracts, the expenses for the following 12 months are included in the valuation.

The change in obligations from non-cancellable leases, which are not accounted for as a right-of-use asset and a lease liability in accordance with IFRS 16, results on the one hand from an increase in the Engineering and the Mining segment and, on the other hand, from a decrease in obligations in the Holding and the Med Tech segment.

The increase in obligations from purchase commitments and other purchase obligations is primarily due to the Mining segment.

The increase in miscellaneous other obligations results mainly from the Mining and the Aviation segments. At the same time, the Med Tech segment recorded a decrease.

On the reporting date, there were three leases for the transfer of use of properties into which the Group had entered but which not yet begun. For this reason, no corresponding lease liabilities and rights of use were recognised as of the reporting date. The expected lease commencement dates and the total future cash outflows to which the Group will be exposed in connection with these agreements are shown in the table below.

in EUR '000	**expected lease commencement dates**	**future fixed cash outflows per contract year**	**non-cancellable basic term**
Real estate lease agreement 1	1 February 2023	153	7 years, 11 months
Real estate lease agreement 2	1 May 2023	112	5 years, 5 months
Real estate lease agreement 3	16 September 2023	70	5 years
Total		**335**	

35. Financial instrument disclosures

Carrying amounts, valuations and fair values of financial instruments by measurement category

Financial instruments are initially measured at fair value. Financial instruments not measured at fair value primarily include cash equivalents, trade receivables, contract assets, trade payables, contract liabilities, and other financial liabilities, bank overdrafts and non-current loans.

In the case of cash equivalents and bank overdrafts, the carrying amount approximately corresponds to the fair value because of the short maturities of these financial instruments. For receivables and payables that are subject to normal trade credit terms, the carrying amount is likewise very close to the fair value. The same applies to contract assets and contract liabilities.

The fair value of the non-current loans is based on current borrowing interest rates with matching maturity and credit rating standards. The fair value of financial liabilities largely corresponds to the carrying amount, as the agreed interest rate is regularly adjusted to the market level. For fixed-rate items, the carrying amount is at least very close to the fair value, which results by discounting with term-adequate interest rates, as the interest rate is generally in line with to the current market rates.

The fair values of assets and liabilities from derivative financial instruments are determined on the basis of market terms and conditions at the reporting date. Recognised valuation models are used for the determination. For foreign exchange futures, the fair value is based on the expected discounted future cash flows. Options are measured using valuation models on the basis of market values.

The following table shows the fair values and carrying amounts of the financial assets and financial liabilities included in the respective line items of the balance sheet as of 31 December 2022 according to IFRS 9:

in EUR '000	Carrying amount under IFRS 9						Fair Value
	Assets				Liabilities		
	Fair value through profit or loss	Amortised cost	Fair value through other comprehen-sive income	Fair Value through OCI Option	Fair value through profit or loss	Amortised cost	
Cash and cash equivalents		383,457					383,457
Financial assets at amortized cost							
Loans		105,877					105,877
Trade receivables		345,548					345,548
Other receivables (financial instruments)		16,194					16,194
Financial assets at fair value through profit and loss							
Securities	105,921						105,921
Futures	598						598
Non-consolidated investments in affiliated companies / Other investments	1,876						1,876
Financial liabilities at amortized cost							
Trade payables						104,623	104,623
Liabilities to banks						173,922	171,872
Other interest-bearing liabilities						20,848	20,848
Other liabilities (financial instruments)						22,682	22,682
Lease liabilities						319,177	319,177
Financial liabilities at fair value through profit and loss							
Foreign exchange futures					-		-
Currency options					-		-

The following table shows the fair values and carrying amounts of the financial assets and financial liabilities included in the respective line items of the balance sheet as of 31 December 2021 according to IFRS 9:

in EUR '000	Carrying amount under IFRS 9						Fair Value
	Assets				Liabilities		
	Fair value through profit or loss	Amortised cost	Fair value through other comprehen-sive income	Fair Value through OCI Option	Fair value through profit or loss	Amortised cost	
Cash and cash equivalents		529,100					529,100
Financial assets at amortized cost							
Loans		131,128					131,128
Trade receivables		309,448					309,448
Other receivables (financial instruments)		15,828					15,828
Financial assets at fair value through profit and loss							
Securities	132,583						132,583
Futures	2						2
Non-consolidated investments in affiliated companies / Other investments	1,876						1,876
Financial liabilities at amortized cost							
Trade payables						82,163	82,163
Liabilities to banks						206,349	206,831
Other interest-bearing liabilities						34,966	34,966
Other liabilities (financial instruments)						29,491	29,491
Lease liabilities						259,836	259,836
Financial liabilities at fair value through profit and loss							
Foreign exchange futures					363		363
Currency options					-		-

If circumstances occur that require a different classification, the reclassification is made on a quarterly basis.

The following table shows the gross and net amounts of the other derivative financial assets and other derivative financial liabilities as of 31 December 2022:

in EUR '000	Gross amounts reported in the balance sheet	Gross amounts offset in the balance sheet	Net amounts reported in the balance sheet	Amounts not offset in the balance sheet	Total net amount
Other financial assets					
Derivative financial assets	0	0	598	0	598
Other financial liabilities					
Derivative financial liabilities	0	0	0	0	0

The following table shows the gross and net amounts of the other financial assets and other financial liabilities as of 31 December 2021:

in EUR '000	Gross amounts reported in the balance sheet	Gross amounts offset in the balance sheet	Net amounts reported in the balance sheet	Amounts not offset in the balance sheet	Total net amount
Other financial assets					
Derivative financial assets	0	0	2	0	2
Other financial liabilities					
Derivative financial liabilities	363	0	363	0	363

Determination of the fair value of financial instruments

In the tables below, the fair values of financial instruments are allocated to the levels in accordance with the requirements of IFRS 7. The fair value measurement of a financial instrument as a whole is allocated to the level whose factor is material for determining the fair value. In level 1, the fair value of financial instruments is mainly determined by using quoted prices in active markets for identical financial assets or liabilities. The market is considered to be active if quoted prices are readily and regularly available from an exchange, a trader, broker, industry association, pricing service or a supervisory authority and those prices reflect current recurring market transactions conducted at arm’s length principle. Level 2 fair value is determined principally using valuation techniques based on observable market data for similar financial assets or liabilities. The fair value is thus determined on the basis of the results of a valuation method that relies as much as possible on market data and as little as possible on company-specific data. Fair value measurements of level 3 are mainly based on unobservable market data. In 2022 and 2021, the ATON Group determined fair values of financial instruments based on level 1 and level 2. The fair value measurement of level 3 was not used in 2022 or 2021.

The table below shows the classification of the assets and liabilities measured at fair value as of 31 December 2022:

in EUR '000	Level 1	Level 2	Level 3	Total
Assets				
Non-consolidated investments in affiliated companies		587		587
Other investments	1,289			1,289
Securities measured at fair value through profit and loss (FVTPL)	105,921			105,921
Foreign exchange futures		598		598
Liabilities				
Foreign exchange futures		-		-
Currency options		-		-

In the reporting period 2022, as in the previous reporting period, there were no transfers between level 1 and level 2 of the fair value hierarchy for assets and liabilities that whose fair value is measured on a recurring basis.

The instruments in level 1 mainly include managed securities portfolios with equity positions and European corporate bonds.

The forward exchange futures and currency options allocated to level 2 relate to derivative financial instruments, which are not included in hedge accounting.

The table below shows the classification of the assets and liabilities measured at fair value as of 31 December 2021:

in EUR '000	Level 1	Level 2	Level 3	Total
Assets				
Non-consolidated investments in affiliated companies		587		587
Other investments	1,289			1,289
Securities measured at fair value through profit and loss (FVTPL)	132,583			132,583
Foreign exchange futures		2		2
Liabilities				
Foreign exchange futures		363		363
Currency options		-		-

Net gains or losses by measurement category

The Group recognises interest on financial instruments and the other components of net gains or losses in the financial result.

All expenses and income from expected credit losses in accordance with IFRS 9 are reported separately in the income statement.

Net gains or losses from financial assets and liabilities at fair value through profit or loss include, in addition to the results from changes in fair value, interest expenses or income from these financial instruments and income from equity investments, as well as realised gains from the disposal of these investments. The interest result from financial liabilities measured at amortised cost mainly includes interest expenses from financial liabilities. It also includes interest expenses and interest income from the compounding and discounting of trade payables.

The net gains or losses by measurement category according to IFRS 9 are as follows in the financial year 2022:

in EUR '000	From interest and dividends	From subsequent measurement: Fair value	Currency translation	Allowances	From disposal	Net gain or loss 2022
Financial assets measured at amortised costs	4,875	-	2,237	13,106	-	20,218
Financial assets at fair value through profit and loss	2,730	- 21,556	257	358	547	- 17,664
Financial liabilities measured at amortised costs	- 6,377	-	- 814	-	-	- 7,191
Financial liabilities at fair value through profit and loss	- 8	418	785	-	-	1,195
Net gain / loss	**1,220**	**-21,138**	**2,465**	**13,464**	**547**	**-3,442**

The net gains or losses by measurement category according to IFRS 9 are as follows in the financial year 2021:

in EUR '000	From interest and dividends	From subsequent measurement: Fair value	Currency translation	Allowances	From disposal	Net gain or loss 2021
Financial assets measured at amortised costs	1,394	-	1,261	- 39,397	-	- 36,742
Financial assets at fair value through profit and loss	2,680	10,136	20,187	- 40,068	289	- 6,776
Financial liabilities measured at amortised costs	- 3,563	-	- 238	-	-	- 3,801
Financial liabilities at fair value through profit and loss	- 832	7	315	-	-	- 510
Net gain / loss	**-321**	**10,143**	**21,525**	**-79,465**	**289**	**-47,829**

Net interest income/expense

The total interest income and expense recognised in the financial result for financial assets and financial liabilities not classified at fair value through profit or loss are as follows:

in EUR '000	2022	2021
Interest income	5,279	3,405
Interest expense	- 6,783	- 5,576
Net interest expense	**- 1,504**	**- 2,171**

36. Objectives and methods of financial risk management

Risk management principles

The main financial instruments used by the Group – except derivative financial instruments – comprise bank loans and overdrafts, finance leases and trade payables. The main purpose of these financial instruments is to finance the Group’s operating activities. Besides, the Group has different financial assets, such as securities, trade receivables, cash and short-term deposits, which result directly from its operating activities.

With regard to its assets, liabilities and planned transactions, the Group is subject to various market risks, in particular risks from changes in exchange rates and interest rates, as well as liquidity and credit risks. The aim of financial risk management is to limit these market risks specifically by continuously taking operational and financial measures. For this purpose, selected derivative and non-derivative hedging instruments are used. In general, only risks that may have an impact on the Group’s cash flows are hedged. In particular, foreign exchange futures and currency options are used as derivative financial instruments to hedge against foreign currency risks arising from the Group companies’ operating activities.

The financial policy is defined by the Group’s management board on an annual basis. The implementation of the financial policy and the ongoing risk management are the responsibility of the subgroups and single entities. In order to monitor financial policy, the Group’s management board is informed of the scope and amount of current risk exposure in regular quarterly meetings or in the event of significant changes. In addition, certain transactions whose nature and scope exceed the normal course of business are subject to the prior approval of the Group’s management board.

Risks from exchange rate fluctuations are limited by predominantly local sourcing of materials for the manufacturing and assembly process in the respective countries.

Credit risk

As a result of their operating activities and certain financing activities, the Group companies of ATON are exposed to default risk. A creditworthiness and default risk arises when a business partner is unable to meet its obligations in a transaction involving non-derivative or derivative financial instruments, resulting in a loss of assets. As part of their operations, the Group companies conclude transactions only with third parties deemed creditworthy. Creditworthiness checks are performed for new customers. For existing customer relationships, analyses of payment behaviour are carried out on a regular basis. In addition, an analysis and classification of borrowers in the Group's internal rating takes place at each reporting date:

	ATON	S&P
Credit risk rating grades	**Description**	**Description**
A	Very good credit rating (investment grade)	AAA-BBB
B	Good to satisfactory credit rating (sub-investment grade)	BBB-BB
C	Credit rating below average	below BB

The following overview presents the gross book values of loans, trade receivables and other receivables per defined credit risk rating class as of 31 December 2022:

Credit risk rating grades	Bucket 1	Bucket 2	Bucket 3	Total
A	94,518	346,002	28,983	469,503
B	11	108	47,308	47,427
C	33	3,062	156	3,251

The following overview presents the gross book values of loans, trade receivables and other receivables per defined credit risk rating class as of 31 December 2021:

Credit risk rating grades	Bucket 1	Bucket 2	Bucket 3	Total
A	137,399	310,345	28,508	476,252
B	18	0	46,043	46,061
C	0	3,617	0	3,617

In addition, orders and receivables are secured by letters of credit from major banks amounting to EUR 871k as of 31 December 2022 (previous year: EUR 354k). Most of the Group companies have business relationships with large-scale customers (especially international OEMs). The resulting risk is considered to be low, as these customers have high credit ratings and there are no material dependencies. The end customer business in the form of private customers is of minor importance to the Group.

In the operating business, receivables are monitored on an ongoing, decentralised basis, so that the Group is not exposed to any material credit risk. The amounts of trade and other receivables of EUR 398,370k (previous year: EUR 358,599k), contract assets of EUR 75,317k (previous year: EUR 68,092k) as well as other financial assets of EUR 214,272k (previous year: EUR 265,589k) reported under assets represent the maximum default risk.

The maturity structure, the default rate applied to trade receivables and contract assets in accordance with IFRS 15 as of the current balance sheet date, which are not individually impaired (bucket 3), is shown below per segment and reconciles the gross book values to the net book values in each case:

Valuation adjustments for trade receivables – Engineering as of 31 December 2022:

Overdue in days	not overdue	< 30	30 - 60	61 - 90	91 - 180	181 - 360	> 360	Total
Loss rate	0.72%	1.44%	1.56%	3.03%	20.80%	26.44%	8.87%	
Gross book value net of payments received on account in kEUR	117,671	16,501	4,410	2,146	1,380	450	1,420	**143,978**
Expected credit loss over lifetime	-852	-238	-69	-65	-287	-119	-126	**-1,756**
Net book value after valuation adjustment in kEUR	**116,819**	**16,263**	**4,341**	**2,081**	**1,093**	**331**	**1,294**	**142,222**

Valuation adjustments for trade receivables – Mining as of 31 December 2022:

Overdue in days	not overdue	< 30	30 - 60	61 - 90	91 - 180	181 - 360	> 360	Total
Loss rate	2.48%	0.22%	0.64%	0.59%	0.47%	0.00%	-	
Gross book value net of payments received on account in kEUR	119,902	8,939	1,728	338	12,820	852	0	**144,579**
Expected credit loss over lifetime	-2,970	-20	-11	-2	-60	0	0	**-3,063**
Net book value after valuation adjustment in kEUR	**116,932**	**8,919**	**1,717**	**336**	**12,760**	**852**	**0**	**141,516**

Valuation adjustments for trade receivables – Med Tech as of 31 December 2022:

Overdue in days	not overdue	< 30	30 - 60	61 - 90	91 - 180	181 - 360	> 360	Total
Loss rate	0.12%	0.48%	0.69%	1.41%	1.59%	3.13%	10.53%	
Gross book value net of payments received on account in kEUR	42,336	3,307	4,180	637	941	32	19	**51,452**
Expected credit loss over lifetime	-51	-16	-29	-9	-15	-1	-2	**-123**
Net book value after valuation adjustment in kEUR	**42,285**	**3,291**	**4,151**	**628**	**926**	**31**	**17**	**51,329**

Valuation adjustments for trade receivables – Aviation as of 31 December 2022:

Overdue in days	not overdue	< 30	30 - 60	61 - 90	91 - 180	181 - 360	> 360	Total
Loss rate	0.10%	0.66%	1.76%	0.00%	5.49%	-	-	
Gross book value net of payments received on account in kEUR	5,238	1,970	796	1	255	0	0	**8,260**
Expected credit loss over lifetime	-5	-13	-14	0	-14	0	0	**-46**
Net book value after valuation adjustment in kEUR	**5,233**	**1,957**	**782**	**1**	**241**	**0**	**0**	**8,214**

Valuation adjustments for contract assets – Engineering as of 31 December 2022:

Overdue in days	**not overdue**
Loss rate	0.74%
Gross book value net of payments received on account in kEUR	73,703
Expected credit loss over lifetime	-542
Net book value after valuation adjustment in kEUR	**73,161**

Valuation adjustments for contract assets – Mining as of 31 December 2022:

Overdue in days	**not overdue**
Loss rate	95.54%
Gross book value net of payments received on account in kEUR	44,744
Expected credit loss over lifetime	-42,749
Net book value after valuation adjustment in kEUR	**1,995**

Valuation adjustments for contract assets – Med Tech as of 31 December 2022:

Overdue in days	**not overdue**
Loss rate	0.00%
Gross book value net of payments received on account in kEUR	161
Expected credit loss over lifetime	0
Net book value after valuation adjustment in kEUR	**161**

Valuation adjustments for contract assets – Aviation as of 31 December 2022:

Overdue in days	**not overdue**
Loss rate	#DIV/0!
Gross book value net of payments received on account in kEUR	0
Expected credit loss over lifetime	0
Net book value after valuation adjustment in kEUR	**0**

The picture as of the previous year's reporting date was as follows:

Valuation adjustments for trade receivables – Engineering as of 31 December 2021:

Overdue in days	not overdue	< 30	30 - 60	61 - 90	91 - 180	181 - 360	> 360	Total
Loss rate	0.41%	4.47%	5.21%	4.70%	0.33%	0.26%	32.18%	
Gross book value net of payments received on account in kEUR	86,544	12,872	2,381	724	18,886	12,371	1,302	**135,080**
Expected credit loss over lifetime	-352	-576	-124	-34	-63	-32	-419	**-1,600**
Net book value after valuation adjustment in kEUR	**86,192**	**12,296**	**2,257**	**690**	**18,823**	**12,339**	**883**	**133,480**

Valuation adjustments for trade receivables – Mining as of 31 December 2021:

Overdue in days	not overdue	< 30	30 - 60	61 - 90	91 - 180	181 - 360	> 360	Total
Loss rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	99.07%	
Gross book value net of payments received on account in kEUR	95,111	19,243	388	30	1,644	316	3,652	**120,384**
Expected credit loss over lifetime	0	0	0	0	0	0	-3,618	**-3,618**
Net book value after valuation adjustment in kEUR	**95,111**	**19,243**	**388**	**30**	**1,644**	**316**	**34**	**116,766**

Valuation adjustments for trade receivables – Med Tech as of 31 December 2021:

Overdue in days	not overdue	< 30	30 - 60	61 - 90	91 - 180	181 - 360	> 360	Total
Loss rate	0.12%	0.32%	0.43%	0.54%	0.76%	2.13%	10.85%	
Gross book value net of payments received on account in kEUR	30,948	5,632	1,387	2,050	5,810	2,209	691	**48,727**
Expected credit loss over lifetime	-36	-18	-6	-11	-44	-47	-75	**-237**
Net book value after valuation adjustment in kEUR	**30,912**	**5,614**	**1,381**	**2,039**	**5,766**	**2,162**	**616**	**48,490**

Valuation adjustments for trade receivables – Aviation as of 31 December 2021:

Overdue in days	not overdue	< 30	30 - 60	61 - 90	91 - 180	181 - 360	> 360	Total
Loss rate	0.08%	0.45%	1.35%	2.76%	4.71%	26.76%	-	
Gross book value net of payments received on account in kEUR	7,484	662	742	181	85	71	0	**9,225**
Expected credit loss over lifetime	-6	-3	-10	-5	-4	-19	0	**-47**
Net book value after valuation adjustment in kEUR	**7,478**	**659**	**732**	**176**	**81**	**52**	**0**	**9,178**

Valuation adjustments for contract assets – Engineering as of 31 December 2021:

Overdue in days	**not overdue**
Loss rate	0.39%
Gross book value net of payments received on account in kEUR	64,988
Expected credit loss over lifetime	-256
Net book value after valuation adjustment in kEUR	**64,732**

Valuation adjustments for contract assets – Mining as of 31 December 2021:

Overdue in days	**not overdue**
Loss rate	92.91%
Gross book value net of payments received on account in kEUR	45,851
Expected credit loss over lifetime	-42,598
Net book value after valuation adjustment in kEUR	**3,253**

Valuation adjustments for contract assets – Med Tech as of 31 December 2021:

Overdue in days	**not overdue**
Loss rate	0.00%
Gross book value net of payments received on account in kEUR	107
Expected credit loss over lifetime	0
Net book value after valuation adjustment in kEUR	**107**

Valuation adjustments for contract assets – Aviation as of 31 December 2021:

Overdue in days	**not overdue**
Loss rate	-
Gross book value net of payments received on account in kEUR	0
Expected credit loss over lifetime	0
Net book value after valuation adjustment in kEUR	**0**

For reasons of materiality, trade receivables and expected credit losses for the Holding / Consolidation segment are not presented in detail, both for the financial year and the previous year.

Default risk for financial instruments outside of the impairment requirements of IFRS 9

For securities, the book value of the securities represents the maximum default risk. Forward exchange transactions that are not included in hedge accounting are economically opposed to underlying transactions. Here, too, the book value at the balance sheet date best reflects the maximum default risk.

Risk of changes in interest rates

The Group’s financing is secured to a certain extent through external bank financing. The ATON Group is therefore generally exposed to fluctuations in market interest rates. The interest rate fluctuations mainly relate to liabilities to banks. The latter include overdraft facilities and loans with variable interest rates and are therefore directly affected by changes in interest rates. These changes affect future cash flows. In our opinion, there is no significant risk from fluctuations in market interest rates.

The table below shows the sensitivity of the Group's consolidated earnings before income taxes to a reasonably possible change in interest rates. All other variables remain unchanged.

The impact on equity includes the impact on both OCI and profit after tax:

in EUR '000	Change in interest rate in basis points	Impact on profit after tax	Impact on equity
2022	+ 100	- 345	- 345
	./. 100	345	345
2021	+ 100	- 335	- 335
	./. 100	335	335

Foreign currency risk

Foreign currency risks result from investments, financing transactions and operating activities. Significant foreign currency risks are hedged to the extent that they affect the Group's cash flows. Foreign currency risks that do not affect the Group's cash flows (i.e. risks resulting from the mere translation of the assets and liabilities of foreign entities into the Group's reporting currency) are generally not hedged.

Foreign currency risks regularly relate to receivables and liabilities denominated in currencies other than the local currencies of the ATON Group companies or those that will arise in the normal course of business. The Group is exposed to material foreign exchange risks mainly because of the development of the US dollar and the Canadian dollar.

As of the reporting date, the Group was not exposed to any material risks from investment transactions denominated in foreign currency.

The Group companies settle most of their operating activities in their respective functional currencies. For this reason, the Group's foreign currency risk from current operating activities is considered to be low. However, some Group companies are exposed to foreign currency risks in connection with planned payments not denominated in their functional currency. In some cases, derivative financial instruments (foreign exchange futures and currency options) are used to minimise the risk of changes in exchange rates. These financial instruments are only used to hedge existing or expected foreign currency risks.

As of 31 December 2022, material receivables and payables exist only in US dollars, Canadian dollars, Australian dollars and South African rand. As part of a sensitivity analysis, the non-derivative and derivative financial instruments existing at the end of the reporting period were measured in a hypothetical scenario. The effects of a 10 %

increase / decrease in a currency per currency relation on the profit after taxes and on equity as of 31 December 2022 and 31 December 2021 are as follows:

in EUR '000	change in %	EUR/CAD	EUR/AUD	EUR/ZAR	EUR/USD
2022	10	1,727	64	- 254	773
	./. 10	- 1,413	- 22	208	- 633
2021	10	4,173	- 234	216	167
	./. 10	- 3,414	77	- 177	- 137

As of the balance sheet date, for the currency risks in Canadian dollars, partly opposing hedging transactions with different maturities and different hedging rates have been concluded, for which no presentation according to hedge accounting is made. A 10 % increase of the Canadian dollar against the Euro would have an effect of EUR 2,549k (previous year: EUR 4,213k), and a 10 % decrease would have an effect of EUR -1,915k (previous year: EUR -3,008k).

In addition, as of the balance sheet date, there are translation risks mainly resulting from the currency translation of Canadian dollar balances (as functional currency of Redpath Group) into the ATON Group's reporting currency Euro. These only affect equity (other comprehensive income) and amount to EUR -18,283k (previous year: EUR -13,528k) in the case of a +10 % increase of the Canadian dollar against the Euro and EUR 14,959k (previous year: EUR 11,068k) in the case of a -10 % decrease of the Canadian dollar against the Euro.

Relevant risk variables are generally all non-functional currencies in which the Group enters into financial instruments.

The currency sensitivity analyses are based on the following assumptions: Significant non-derivative financial instruments (cash and cash equivalents, receivables, interest-bearing liabilities, liabilities from leases, non-interest-bearing liabilities) are either directly denominated in the functional currency or, in significant cases, are transferred into the functional currency by using derivatives.

Equity instruments held are non-monetary and therefore not exposed to foreign currency risk as defined by IFRS 7.

Liquidity risk

Ensuring permanent solvency is basically the responsibility and control of the respective management of the subgroups and single entities. The centrally defined goal of the Group is to ensure that financial requirements are continuously covered by using current account overdrafts, loans and leases. Central monitoring of the liquidity of the individual Group companies is performed by weekly reports to the parent company ATON 2 GmbH. The information provided is presented to the Group's management board on a weekly basis for risk management purposes. Based on the current and expected business situation, the liquidity risk is considered to be low. Nevertheless, liquidity continues to be ensured through medium-term and long-term credit lines. In general, attention is paid to sufficient free credit lines. The financing of upcoming investments is ensured in good time through appropriate measures.

Please refer to note **31. Financial liabilities** for the liquidity analysis.

Covenant Risk

Financing contracts with banks often include covenants that are based on predefined financial ratios. Essentially, the covenants are equity ratios and debt rations and, in some cases, interest coverage ratios. The obligations from the credit clauses are subject to a permanent review with regard to the current financial situation of the companies, among other things, which can be used to identify risks at an early stage. In the financial year 2022, the covenant conditions (also at the level of the subsidiaries) were fully complied with.

Other price risks

As part of the disclosure of market risks, IFRS 7 also requires information on how hypothetical changes in risk variables affect the prices of financial instruments. In particular, stock exchange prices or indices can be considered as risk variables.

in EUR '000	Change in prices in basis points	Impact on profit after tax	Impact on equity
2022	+ 100	1,059	1,059
	./. 100	- 1,059	- 1,059
2021	+ 100	1,326	1,326
	./. 100	- 1,326	- 1,326

There were no significant risk concentrations in the ATON Group as of the reporting date 2022.

Capital management / control

The main objective of the Group's capital management is to ensure that the Group's ability to repay debt and its financial strength, and thus a corresponding credit rating and equity ratio, are maintained in the future.

The Group manages its capital structure and makes adjustments taking into account changes in the economic environment.

Capital management is essentially carried out with the help of a dynamic debt ratio (I and II), which corresponds to the ratio of first- and second-degree of net financial liabilities to EBITDA. The debt ratio I to be monitored by the management board should not exceed 4 and the debt ratio II should not be higher than 10.

In the reporting period, as in the previous year, the dynamic debt ratios I and II remained within the specified ranges:

in EUR '000	2022	2021
EBITDA	228,897	155,212
Liabilities to banks	173,922	206,349
Leasing liabilities	319,177	259,836
Other financial liabilities	3,296	1,355
	496,395	**467,540**
Cash and cash equivalents	383,457	529,100
First-degree net financial assets (-) / net financial liabilities (+)	**112,938**	**- 61,560**
Liabilities to shareholders/related parties	17,551	33,974
Investments in securities that can be liquidated at short notice	105,921	132,583
Second-degree net financial assets (-) / net financial liabilities (+)	**24,568**	**- 160,169**
Dynamic debt ratio I	**0.5**	**-**
Dynamic debt ratio II	**0.1**	**-**

Effect of hedging relationships

The Group partially hedges currency risks by forming hedging relationships (hedge accounting). Hedge accounting reflects the hedging strategies outlined above for currency risk. Currency hedging is usually only carried out for longer-term and larger projects in foreign currency.

Insofar as such hedging relationships are accounted for as cash flow hedges, the effectiveness of the hedging relationship is assessed using the hypothetical derivative method. This involves modelling a derivative for the underlying transaction that exactly corresponds to its payment profile. Changes in the value of this hypothetical derivative are compared with the changes in the value of the hedging transaction. A separate hedging transaction is concluded for each hedged cash flow. Since the payment characteristics of the hypothetical derivative and the hedging derivative are opposite, fluctuations in value offset each other exactly.

Neither on the reporting date nor on the previous year's reporting date does the Group have hedging instruments that are included in cash flow hedges and are therefore presented under hedge accounting. Consequently, as in the previous year, there were effects from hedge accounting in the consolidated income statement or in the consolidated statement of comprehensive income.

37. Segment Reporting

The management board is the main decision maker of the Group. Management has determined the operating segments for purposes of resource allocation and performance assessment. The management board defines the activities from a product perspective with the Engineering, Mining, Med Tech and Aviation segments.

The range of services offered in the **Engineering segment** cover, in particular, the areas of engineering and plant construction for the automotive industry, along with other sectors of the mobility industry. In addition, high-performance electric motors are manufactured to customer requirements. Furthermore, this segment develops and offers new high-tech solutions for innovative products, primarily through the application of metallic layers to almost all kind of surfaces.

The **Mining segment** offers mining and shaft-sinking services and products worldwide.

The **Med Tech segment** provides on the one hand solutions for the healthcare market in the fields of surgery and diagnostics, specialising in X-ray diagnostics, and on the other hand products for the pharmaceuticals industry and hospitals. In addition, inhalative therapies are developed within this business segment.

The **Aviation segment** comprises business aviation and charter flights.

The 91.24 % investment in OneFiber Interconnect Germany GmbH via ATON Digital Services GmbH is currently still presented in the Holding / Consolidation segment, as the business is still ramped up.

The management board assesses the performance of the operating segments with a focus on gross revenue, EBIT and EAT.

Sales between segments are carried out in accordance with standard market practices. The revenue from external parties reported to the management board is measured in a manner consistent with that in the income statement.

The non-operating result contains the result from disposal of consolidated subsidiaries, from disposal of fixed assets, income and expenses from foreign currency translation, income from the reversal of provisions as well as other income and expenses from previous years.

The following table presents information for the Group's segments:

	Engineering		Mining		Med Tech	
in EUR '000	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**
External revenue (net)	846,532	701,551	774,415	686,655	202,506	199,873
Internal revenue (net)	139	275	-	-	-	-
Revenue	**846,671**	**701,826**	**774,415**	**686,655**	**202,506**	**199,873**
Changes in inventories and own work capitalised	3,254	1,060	321	-	11,550	6,721
Gross revenue	**849,925**	**702,886**	**774,736**	**686,655**	**214,056**	**206,594**
Non-operating result	13,026	4,875	3,589	22,424	2,373	4,174
Impairment losses / reversal of impairment losses on financial assets	973	2,140	3,240	39,988	407	676
EBITDA	**101,706**	**68,605**	**80,029**	**90,611**	**32,079**	**38,764**
Depreciation and amortisation	73,040	71,541	58,220	61,911	10,111	10,061
Impairment losses	20	1,888	5,112	165	-	-
EBIT	**28,646**	**-4,824**	**16,697**	**28,535**	**21,968**	**28,703**
Financial result	-5,216	-5,934	-96,591	66,927	-265	-798
thereof interest income	682	182	142	384	27	11
thereof interest expense	-6,973	-6,310	-5,327	-4,262	-710	-824
thereof result from at equity investments	741	305	-50,877	8,306	-	-
EBT	**23,430**	**-10,758**	**-79,894**	**95,462**	**21,703**	**27,905**
Income taxes	5,200	-3,724	7,592	13,643	6,658	8,123
EAT	**18,230**	**-7,034**	**-87,486**	**81,819**	**15,045**	**19,782**
EAT attributable to non-controlling interest	2,503	-1,913	-6,264	-2,175	-	-
EAT attributable to owners of the parent	**15,727**	**-5,121**	**-81,222**	**83,994**	**15,045**	**19,782**

	Engineering		Mining		Med Tech	
in EUR '000	**31.12.2022**	**31.12.2021**	**31.12.2022**	**31.12.2021**	**31.12.2022**	**31.12.2021**
Segment assets	775,731	749,733	577,407	666,908	263,830	258,160
Segment liabilities	637,899	636,256	253,801	213,853	84,529	82,334

	Aviation		Holding/Consolidation		ATON Group	
in EUR '000	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**
External revenue (net)	126,674	85,504	313	5,440	1,950,440	1,679,023
Internal revenue (net)	8	19	- 147	- 294	-	-
Revenue	**126,682**	**85,523**	**166**	**5,146**	**1,950,440**	**1,679,023**
Changes in inventories and own work capitalised	-	-	31	122	15,156	7,903
Gross revenue	**126,682**	**85,523**	**197**	**5,268**	**1,965,596**	**1,686,926**
Non-operating result	455	389	-138	543	19,305	32,405
Impairment losses / reversal of impairment losses on financial assets	-808	408	-16,349	36,266	-12,537	79,478
EBITDA	**7,598**	**3,262**	**7,485**	**-46,030**	**228,897**	**155,212**
Depreciation and amortisation	3,345	2,456	628	561	145,344	146,530
Impairment losses	-	-	-	-	5,132	2,053
EBIT	**4,253**	**806**	**6,857**	**-46,591**	**78,421**	**6,629**
Financial result	356	-1,374	-20,334	9,575	-122,050	68,396
thereof interest income	289	174	3,209	3,060	4,349	3,811
thereof interest expense	-365	-374	-147	-415	-13,522	-12,185
thereof result from at equity investments	1,344	- 676	- 9,514	- 1,239	-58,306	6,696
EBT	**4,609**	**-568**	**-13,477**	**-37,016**	**-43,629**	**75,025**
Income taxes	944	-118	-23,130	1,354	-2,736	19,278
EAT	**3,665**	**-450**	**9,653**	**-38,370**	**-40,893**	**55,747**
EAT attributable to non-control-ling interest	-	-	-	-	-3,761	-4,088
EAT attributable to owners of the parent	**3,665**	**-450**	**9,653**	**-38,370**	**-37,132**	**59,835**

	Aviation		Holding/Consolidation		ATON Group	
in EUR '000	**31.12.2022**	**31.12.2021**	**31.12.2022**	**31.12.2021**	**31.12.2022**	**31.12.2021**
Segment assets	68,557	57,744	577,907	704,943	2,263,432	2,437,488
Segment liabilities	42,512	35,365	953	75,820	1,019,694	1,043,628

Due to the diversification of the ATON Group, there are no significant dependencies from individual customers.

38. Auditor's fees

For the services provided by Deloitte GmbH Wirtschaftsprüfungsgesellschaft the following fees have been recognised as expenses:

in EUR '000	2022	2021
Audits	708	703
Other attestation services	-	-
Tax consultation services	-	-
Other services	-	-
Total	**708**	**703**

39. Related party transactions

In addition to the subsidiaries included in the consolidated financial statements, ATON 2 GmbH has direct or indirect relationships with the shareholders, non-consolidated affiliated subsidiaries, associates, joint ventures and other related parties in the course of normal business operations. These relationships are subject to disclosure requirements in accordance with IAS 24. Related parties have control or significant influence over the ATON Group or hold a key position in the management of the ATON Group. Furthermore, there are relationships between ATON Group and related entities (non-consolidated subsidiaries, entities accounted for using the equity method).

The volume of revenue and income realised by the ATON Group with related parties breaks down as follows:

in EUR '000	2022 Revenue, other income and interest	31.12.2022 Receivables outstanding	2021 Revenue, other income and interest	31.12.2021 Receivables outstanding
Investments accounted for using the equity method	58,988	9,642	24,730	8,640
Non-consolidated subsidiaries	9,955	848	5,767	1,346
Other related parties	2,803	93,525	3,363	119,500
Shareholders	101	11,047	8	8,989
Total	**71,847**	**115,062**	**33,868**	**138,475**

Income with companies accounted for using the equity method and income with non-consolidated subsidiaries result primarily from service revenues and from equity accounting.

Income from other related parties essentially results from interest income.

Income with shareholders mainly results from interest income.

The receivables from other related parties mostly include loans and receivables from loans.

The receivables from shareholders result from the receivables arising from loans granted from shareholders.

The volume of the ATON Group's expenses with related parties and outstanding liabilities breaks down as follows:

in EUR '000	2022 Purchased merchandise/services, other operating expenses and interest	31.12.2022 Liabilities outstanding	2021 Purchased merchandise/services, other operating expenses and interest	31.12.2021 Liabilities outstanding
Investments accounted for using the equity method	112,607	15,614	17,638	17,176
Non-consolidated subsidiaries	578	775	351	307
Other related parties	279	17,759	99	18,501
Shareholders	99	-	324	15,560
Total	**113,563**	**34,148**	**18,412**	**51,544**

Expenses with companies accounted for using the equity method result primarily from the impairment of the shares in Murray & Roberts as well as the results of the investments.

Expenses with non-consolidated subsidiaries are mainly expenses for purchased services.

Expenses with shareholders consist primarily of expenses for consulting services and interest expenses.

Liabilities to related parties mainly include loans.

Transactions with related parties are contractually agreed and conducted at arm's length conditions.

Transactions with the management board

The remuneration paid to the management board amounts to EUR 2,903k in the financial year (previous year: 2,908k). Besides, the members of the key management personnel received a variable additional remuneration in the amount of EUR 1,650 (previous year: EUR 1,500k).

There were no advances or loans to members of the management board, nor were there contingent liabilities or pension obligations as of the reporting date.

40. List of shareholdings

Concerning the list of shareholdings, please refer to the appendix, which is an integral part of these notes.

41. Events after the balance sheet date

The reduction of share capital of ATON 2 GmbH from EUR 165,025k by EUR 150,000k to EUR 15,025k, which was resolved by the shareholders' meeting on 25 March 2022, was carried out on 25 April 2023 after the expiry of the lock-up period of one year and the amount was paid out to the shareholders. In return, the shareholders repay loan liabilities (including accrued interest) to ATON 2 GmbH in the amount of EUR 18,161k and grant ATON 2 GmbH a short-term loan of EUR 30,000k.

42. Responsibility statement

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 net assets, financial position and results of operations 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 material opportunities and risks associated with the expected development of the Group.

Munich, 28 April 2023

ATON 2 GmbH
Management Board

[original German version signed by:]

Georg Denoke   Dr. Wolfgang Salzberger

List of shareholdings (direct and indirect) of ATON 2 GmbH
As of 31 December 2022

No.	Company	City	Country	Share in % direct	Share in % indirect	Currency	Equity as per 31 Dec 2022	Net Result 2022
I. Affiliated Companies								
1. Consolidated Companies								
a) Domestic companies								
1.	Antriebssysteme Faurndau GmbH	Göppingen	Germany		100.0	kEUR	9,940	1,728
2.	AspiAir GmbH	Gemünden	Germany		100.0	kEUR	597	- 2,102
3.	ATON Digital Services GmbH	Munich	Germany		100.0	kEUR	26,132	84
4.	ATON GmbH	Munich	Germany	100.0		kEUR	804,892	- 5,750
5.	ATON MedTech GmbH (bis 27.11.2022: Deilmann-Haniel Mining Systems GmbH)	Munich	Germany		100.0	kEUR	67,284	22,020
6.	ATON - Oldtimer GmbH	Munich	Germany		100.0	kEUR	16,661	- 225
7.	DC Aviation GmbH	Stuttgart	Germany		100.0	kEUR	26,045	3,666
8.	ecoCOAT GmbH	Allershausen	Germany		51.0	kEUR	2,257	- 692
9.	EDAG aeromotive GmbH	Gaimersheim	Germany		100.0	kEUR	655	42
10.	EDAG Akademie GmbH	Wiesbaden	Germany		100.0	kEUR	213	0
11.	EDAG Engineering GmbH	Wiesbaden	Germany		100.0	kEUR	248,759	0
12.	EDAG Engineering Holding GmbH	Munich	Germany		100.0	kEUR	51,184	17,001
13.	EDAG Production Solutions GmbH & Co. KG	Fulda	Germany		100.0	kEUR	1,971	1,345
14.	Krebs und Aulich GmbH	Wernigerode	Germany		100.0	kEUR	3,058	691
15.	Redpath Deilmann GmbH	Dortmund	Germany		100.0	kEUR	60,169	5,976
16.	Ziehm Imaging GmbH	Nuremberg	Germany		100.0	kEUR	150,597	13,593
b) Foreign Companies								
17.	ATON Austria Holding GmbH	Going am Wilden Kaiser	Austria		100.0	kEUR	514,320	1,878
18.	Autotest Südtirol GmbH	Franzensfeste	Italy		100.0	kEUR	7,635	- 2
19.	CKGP/PW & Associates, Inc.	Troy	USA		100.0	kUSD	3,059	255
20.	Deilmann-Haniel Schachtostroj OOO	Berezniki	Russia		100.0	kCAD	2,024	- 785
21.	EDAG do Brasil Ltda.	Sao Bernardo do Campo	Brazil		100.0	kBRL	17,409	1,376
22.	EDAG Engineering and Design (Shanghai) Co. Ltd.	Shanghai	China		100.0	kCNY	49,757	4,492
23.	EDAG Engineering CZ spol. s.r.o.	Mladá Boleslav	Czech Republic		100.0	kCZK	38,199	10,058
24.	EDAG Engineering Group AG	Arbon	Switzerland		74.7	kEUR	459,770	- 2,286
25.	EDAG Engineering Ltd.	Markyate	Great Britain		100.0	kGBP	- 225	240
26.	EDAG Engineering Polska Sp.z.o.o.	Warszawa	Poland		100.0	kPLN	10,577	4,123
27.	EDAG Engineering Scandinavia AB	Goteborg	Sweden		100.0	kSEK	24,721	7,867
28.	EDAG Engineering Schweiz GmbH	Arbon	Switzerland		100.0	kCHF	1,394	396
29.	EDAG Engineering Spain S.L.	Cornellá de Llobregat	Spain		100.0	kEUR	12,518	1,660
30.	EDAG Holding Sdn. Bhd. Malaysia	Shah Alam	Malaysia		100.0	kMYR	2,977	935
31.	EDAG Hungary Kft.	Györ	Hungary		100.0	kEUR	3,402	910
32.	EDAG Inc.	Troy	USA		100.0	kUSD	10,814	1,533
33.	EDAG Italia S.R.L.	Torino	Italy		100.0	kEUR	2,765	384
34.	EDAG Japan Co. Ltd.	Yokohama	Japan		100.0	kJPY	41,759	6,975
35.	EDAG México S.A. de C.V.	Puebla	Mexico		100.0	kMXN	68,850	4,679
36.	EDAG Netherlands B.V.	Helmond	Netherlands		100.0	kEUR	1,419	307
37.	EDAG Production Solutions India Priv. Ltd.	New Dehli	India		100.0	kINR	220,903	11,047
38.	EDAG SERVICIOS México S.A. de C.V.	Puebla	Mexico		100.0	kMXN	10	0
39.	EDAG Technologies India Priv. Ltd.	New Dehli	India		100.0	kINR	43,281	- 3,712
40.	EDAG Turkey Mühendislik Limited Şirketi	Gebze/Kocaeli	Turkey		100.0	kTRY	13,238	4,515

No.	Company	City	Country	Share in % direct	Share in % indirect	Currency	Equity as per 31 Dec 2022	Net Result 2022
b) Foreign Companies								
41.	Eroc Holdings Pty Limited	Brisbane	Australia		100.0	kCAD	4	0
42.	HRM Engineering AB	Goteborg	Sweden		100.0	kSEK	9,756	0
43.	J.S. Redpath Peru SAC	Lima	Peru		100.0	kCAD	14	0
44.	Les Entreprises Mineres Redpath Ltee.	North Bay	Canada		100.0	kCAD	79	0
45.	OrthoScan Inc.	Scottsdale	USA		100.0	kUSD	33,745	4,980
46.	PT Redpath Indonesia	Jakarta	Indonesia		100.0	kCAD	48,899	23,079
47.	Redpath Africa Limited	Ebene	Mauritius		100.0	kCAD	- 1,180	- 471
48.	Redpath Argentina Construcciones S.A.	San Juan	Argentina		100.0	kCAD	- 6	0
49.	Redpath (Australia) Holdings Pty Limited	Brisbane	Australia		100.0	kCAD	8,201	- 3,409
50.	Redpath Australia Coal Pty Ltd.	Brisbane	Australia		100.0	kCAD	146	254
51.	Redpath Australia Pty Limited	Brisbane	Australia		100.0	kCAD	32,025	- 2,125
52.	Redpath Canada Limited	North Bay	Canada		100.0	kCAD	124,887	29,051
53.	Redpath Chilena Construcciones Y Cia. Limitada	Santiago	Chile		100.0	kCAD	- 1,363	0
54.	Redpath Contract Services Pty Ltd.	Brisbane	Australia		100.0	kCAD	28,112	3,529
55.	Redpath Deilmann Belschachtostroj	Soligorsk	Belarus		99.9	kCAD	915	87
56.	Redpath Deilmann UK Limited	Birmingham	Great Britain		100.0	kCAD	7,004	6,794
57.	Redpath-Deilmann d.o.o. Beograd	Belgrade	Republic of Serbia		100.0	kCAD	0	0
58.	Redpath Global Mobility Services Inc.	North Bay	Canada		100.0	kCAD	- 729	13
59.	Redpath Greece Private Company	Athens	Greece		100.0	kCAD	48	- 33
60.	Redpath Guatemala Construc-ciones S.A.	Guatemala	Guatemala		100.0	kCAD	17	0
61.	Redpath KR LLC	Bishkek	Kyrgyzstan		100.0	kCAD	0	0
62.	Redpath Mexicana Construcciones SA de CV	Mexico City	Mexico		100.0	kCAD	2	0
63.	Redpath Mining Contractors Limited	Kitwe	Zambia		100.0	kCAD	- 32,240	- 5,357
64.	Redpath Mining Inc.	North Bay	Canada		100.0	kCAD	108,572	33,364
65.	Redpath Mining (S.A.) (Pty.) Ltd.	Johannesburg	South Africa		67.0	kCAD	- 63,621	- 23,338
66.	Redpath Mongolia LLC	Ulaanbaatar	Mongolia		100.0	kCAD	11,254	4,403
67.	Redpath Philippines Inc.	Makati	Philippines		100.0	kCAD	0	0
68.	Redpath PNG Limited	Port Moresby	Papua New Guinea		100.0	kCAD	1,085	- 1
69.	Redpath Raiseboring Limited	North Bay	Canada		100.0	kCAD	85,100	2,937
70.	Redpath USA Corporation	Sparks	USA		100.0	kCAD	29,513	3,101
71.	Redpath Venezolana C.A.	El Callao	Venezuela		100.0	kCAD	0	0
72.	Redpath Zambia Limited	Lusaka	Zambia		67.0	kCAD	1,726	- 367
73.	RGP Deilmann d.o.o. Beograd-Novi Beograd	Belgrade	Republic of Serbia		100.0	kCAD	0	0
74.	Therenva SAS	Rennes	France		100.0	kEUR	2,229	938
75.	Triple S Insurance Company Lim-ited	Bridgetown	Barbados		100.0	kCAD	32,981	2,382
76.	UnderAus Group Holdings Pty Lim-ited	Brisbane	Australia		100.0	kCAD	6,506	0
77.	Ziehm Imaging Austria GmbH	Tulln	Austria		100.0	kEUR	454	60
78.	Ziehm Imaging Finnland (OY)	Porvoo	Finland		100.0	kEUR	343	88
79.	Ziehm Imaging Japan KK	Tokyo	Japan		100.0	kJPY	14,288	1,346
80.	Ziehm Medical Do Brasil	Sao Paulo	Brazil		100.0	kBRL	86	627
81.	Ziehm Medical (Shanghai) Co. Ltd.	Shanghai	China		100.0	kCNY	12,307	9,726
82.	Ziehm Imaging Sarl	Villejust	France		100.0	kEUR	452	102
83.	Ziehm Imaging Singapore Pte. Ltd. (PTE)	Singapore	Singapore		100.0	kSGD	805	8
84.	Ziehm Imaging Spain S.L.U.	Valencia	Spain		100.0	kEUR	354	25
85.	Ziehm Imaging Srl a Socio Unico (SRL)	Reggio Emilia	Italy		100.0	kEUR	2,779	821

No.	Company	City	Country	Share in % direct	Share in % indirect	Currency	Equity as per 31 Dec 2022	Net Result 2022
2. Non-Consolidated affiliates, which are measured at fair value								
a) Domestic Companies								
86.	EDAG-Beteiligung GmbH	Fulda	Germany		100.0	kEUR	41	1
87.	EDAG Production Solutions Verwaltungs GmbH	Fulda	Germany		100.0	kEUR	21	1
88.	OneFiber Interconnect Germany GmbH	St. Wendel	Germany		91.2	kEUR	7,562	- 6,522
89.	Parkmotive GmbH	Fulda	Germany		100.0	kEUR	14	- 3
b) Foreign companies								
90.	DC Aviation Holding Ltd.	Birkirkara	Malta		99.99	kEUR	310	15
91.	DC Aviation Ltd.	Luqa	Malta		99.8	kEUR	460	332
92.	Krebs & Aulich Electromechanical Testings Machines Co. Ltd.	Shanghai	China		100.0	kCNY	- 4,893	1,652
II. Joint Ventures - Equity-method investments								
1. Consolidated Companies								
a) Domestic Companies								
93.	Arbeitsgemeinschaft BS Schachtanlage ASSE	Mühlheim an der Ruhr	Germany		50.0	kEUR	2,394	- 29
94.	Arbeitsgemeinschaft Burg Altena	Schmallenberg	Germany		50.0	kEUR	- 440	0
95.	Arbeitsgemeinschaft Konrad Versatzaufbereitung Los 1	Dortmund	Germany		50.0	kEUR	7,004	1,821
96.	Arbeitsgemeinschaft Neuhof Ellers	Dortmund	Germany		50.0	kEUR	3	0
97.	Arbeitsgemeinschaft Schacht Konrad 1	Mühlheim an der Ruhr	Germany		50.0	kEUR	9,680	2,560
98.	Arbeitsgemeinschaft Schacht Konrad 2	Mühlheim an der Ruhr	Germany		50.0	kEUR	18,252	3,073
99.	Arbeitsgemeinschaft Schacht Konrad Notfahreinrichtung	Dortmund	Germany		50.0	kEUR	- 11	0
100.	Arbeitsgemeinschaft Sanierung Schacht Zielitz 1	Mühlheim an der Ruhr	Germany		50.0	kEUR	36	- 67
101.	Arbeitsgemeinschaft Schächte Bergwerk Siegmundshall	Mühlheim an der Ruhr	Germany		50.0	kEUR	129	0
102.	Arbeitsgemeinschaft Vorbausäule Schacht Neurode	Dortmund	Germany		50.0	kEUR	- 1,024	- 1
103.	ARGE Demontagekammer Ibbenbüren Schacht 1	Dortmund	Germany		60.0	kEUR	503	63
104.	ARGE Errichtung Schachtförderanlage Konrad 2	Mühlheim an der Ruhr	Germany		50.0	kEUR	1,005	322
105.	ARGE Wasseraufbereitung Reden 4/5	Saarbrücken	Germany		33.3	kEUR	2,500	1,288
106.	JV Freezing Comol-5	Dortmund	Germany		60.0	kEUR	771	34
107.	JV Freezing HS2	Dortmund	Germany		60.0	kEUR	0	0

No.	Company	City	Country	Share in % direct	Share in % indirect	Currency	Equity as per 31 Dec 2022	Net Result 2022
b) Foreign Companies								
108.	AESA Redpath Mining S.A.C.	Lima	Peru		50.0	kCAD	1,042	824
109.	Associated Mining Construction Inc.	Regina	Canada		50.0	kCAD	461	0
110.	Dayan Contract Mining LLC	Ulaanbaatar	Mongolia		49.0	kCAD	188	55
111.	DC Aviation Al Futtaim LLC	Dubai	U.A.E.		49.0	kEUR	- 5,527	2,774
112.	DC Aviation G-OPS S.A.S.	Paris	France		50.0	kEUR	- 194	- 247
113.	Deilmann-Haniel & Drillcon Iberia ACE	Braga	Portugal		50.0	kEUR	0	0
114.	Innu-Inuit Redpath Limited Partnership	Newfoundland	Canada		33.0	kCAD	9,328	11,336
115.	TRL Mining Construction LP	Regina	Canada		33.0	kCAD	19,174	10,970

III. Investments in associates and investment measured at fair value

1. Companies accounted for using the equity method

No.	Company	City	Country	Share in % direct	Share in % indirect	Currency	Equity as per 31 Dec 2022	Net Result 2022
a) Domestic Companies								
116.	EDAG Werkzeug + Karosserie GmbH	Fulda	Germany		49.0	kEUR	22,952	648
b) Foreign Companies								
117.	Murray & Roberts Holdings Ltd. *	Bedfordview	South Africa		43.8	kZAR	2,204,000	- 2,455,000
118.	Redpath Thonket Mining Services Ghana Limited	Accra	Ghana		49.0	kCAD	1,013	315
	1. Companies accounted for at fair value							
a) Domestic Companies								
119.	Autotest Eisenach GmbH	Hörselberg-Hanich	Germany		6.0	kEUR	- 31,442	- 2,060
120.	MD 7 Immobilien GmbH	Munich	Germany		10.1	kEUR	1,195	275
121.	MD7 BV GmbH	Munich	Germany		10.1	kEUR	163	5
b) Foreign Companies								
122.	Aveng Ltd. *	Johannesburg	South Africa		2.2	kZAR	3,857,000	125,000
123.	Vist Tech GmbH **	Kaltern	Italy		26.7	kEUR	n/a	n/a

* Figures from the interim consolidated financial statements, as Murray & Roberts Holdings Ltd. and Aveng Ltd. have a different financial year.

** No figures received for fiscal year 2022. For Vist Tech GmbH bankruptcy proceedings were started in March 2023.

INDEPENDENT AUDITOR'S REPORT

To ATON 2 GmbH, Munich/Germany

Audit Opinions

We have audited the consolidated financial statements of ATON 2 GmbH, Munich/Germany, and its subsidiaries (the Group) which comprise the consolidated balance sheet as at 31 December 2022, the consolidated income statement, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the financial year from 1 January to 31 December 2022, and the notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of ATON 2 GmbH, Munich/Germany, for the financial year from 1 January to 31 December 2022.

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 International Financial Reporting Standards (IFRS), as adopted by the EU, and the additional requirements of German commercial law pursuant to Section 315e (1) German Commercial Code (HGB) 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 2022, and of its financial performance for the financial year from 1 January to 31 December 2022, 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 of the group management report.

Basis for the Audit Opinions

We conducted our audit of the consolidated financial statements and of the group management report 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). 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 audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the group management report.

Responsibilities of the Executive Directors for the Consolidated Financial Statements and the Group Management Report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRS 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, the executive directors are 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 (i.e., fraudulent financial reporting and misappropriation of assets) or error.

In preparing the consolidated financial statements, the executive directors are 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, the executive directors are 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, the executive directors are 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.

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 audit 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 audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than the risk of not detecting a material misstatement 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 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 audit opinion on the effectiveness of these systems.
- evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.

- conclude on the appropriateness of the executive directors' 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 audit 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 IFRS as adopted by the EU and with 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 audit 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 audit 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 the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors 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 audit 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.

Munich/Germany, 28 April 2023

Deloitte GmbH
Wirtschaftsprüfungsgesellschaft

Signed:	Signed:
André Bedenbecker	Cornelia Tauber
Wirtschaftsprüfer	Wirtschaftsprüferin
(German Public Auditor)	(German Public Auditor)