ATON GmbH, Munich

GROUP MANAGEMENT REPORT FOR THE FINANCIAL YEAR 2019

(Translation – the German text is authoritative)

Contents

I. GROUP PROFILE

1. Business segments

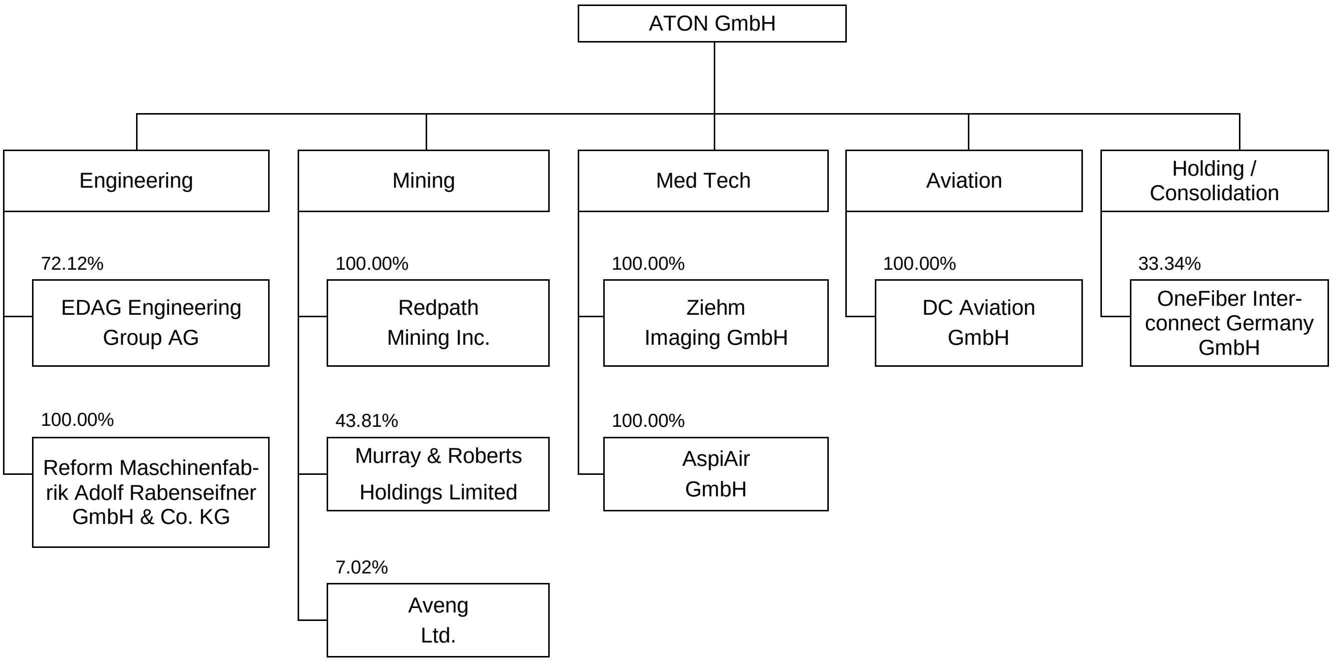
The ATON Group is an association of internationally operating companies in the business segments Engineering, Mining, Med Tech and Aviation. The newly established segment Digital Services is currently still reported within the segment Holding / Consolidation in the consolidated financial statements and is to be further expanded in the future. Consequently, the new holding company ATON Digital Services GmbH was founded in December 2019.

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

	31.12.2019	**31.12.2018**
Subsidiaries	94	125
thereof consolidated	87	113
Joint Ventures	21	19
thereof consolidated using the equity method	21	19
Investments in associates and investment measured at fair value	3	3
thereof consolidated using the equity method	2	1
Total	**118**	**147**
thereof consolidated	**110**	**133**

In the ATON Group the development of the core competencies in the individual business segments is still in focus. Strategic investments, merging similar activities and using synergies as well as selling off peripheral activities shall enhance the companies' competitive advantage, optimise the use of existing resources and thus further increase added value.

The organisational structure of the ATON Group with the operating units allocated to the relevant business segments is as follows as of 31 December 2019:



The services of the **segment Engineering** cover in particular areas of engineering and plant construction for the automotive industry, along with other sectors of the mobility industry, as well as manufacturing of specialised machines.

The **EDAG** Group serves leading national and international vehicle manufacturers as well as technologically demanding automotive suppliers with a global network of around 60 branches and more than 8,400 employees at the world's major automotive centres. The EDAG Group also offers complementary engineering services in the segments of vehicle engineering, electrics / electronics and production solutions. This extensive competence enables EDAG as an independent engineering expert to provide its customers with all-round support, from the original idea for design, through product development and prototype construction to turnkey production systems. As an innovative technological leader the Group also has competence centres for ground-breaking future technologies for the automotive industry: lightweight design, e-mobility, car IT, integral safety and new production technologies. The organisation and technological focuses are constantly adapted, so as to continue a sustained development of tailored solutions for the dynamic market environment of the mobility industry.

The **FFT** Group is a global provider of automated and flexible production systems. As a turn-key partner for manufacturers and TIER1-suppliers of the automotive industry as well as for other non-automotive sectors, the FFT Group assumes the responsibility for the implementation of complete production plants (turn-key body production and assembly lines). Process reliability, flexibility and adaptability of production facilities are in the focus of the development and implementation process of the FFT Group. By developing and implementing innovative production technologies FFT meets the requirements set by modern production technology. The integration of modern 3D technologies and digital factory tools as well as the systematic use and virtual start-up of these elements are the basis of flexible plant concepts. On 18 June 2018, a share purchase agreement was signed regarding the sale of the FFT Group. Closing, transfer of the shares and deconsolidation took place on 29 May 2019.

REFORM assembles with its specialists mechanical and electrical components, subassemblies, complete machines and complete production plants according to the design and quality specifications of the manufacturers. In addition, it manufactures turnkey automated manufacturing equipment. Since the sale is assessed as highly probable according to the current state of negotiations, all assets and liabilities are reclassified according to IFRS 5 as “non-current assets held for sale” or “liabilities associated with assets held for sale”.

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

The **Redpath** Group is a global mining service provider. The Group's core competencies include contract mining, shaft-sinking and equipment, maintenance and renovation, as well as the development, construction and management of subsurface mines and installations.

The **Murray & Roberts** Group is a global company for engineering, construction and underground mining services. The range of services covers the areas of oil & gas, underground mining and power & water. The investment is accounted for using the equity method.

The **Aveng** Group is an engineering, construction and maintenance contractor, delivering complex projects in the building, infrastructure and resources sectors. Furthermore, it is offering services across the mining value chain in open-cut contract mining.

Deilmann-Haniel Mining Systems is a plant engineer and a specialist manufacturer of machinery for the realisation and preparation of subsurface coal mines, as well as special applications for all subsurface mining operations. The activities of the company were shut down as scheduled. Since the company's internal reallocation, it is now presented within the segment Holding / Consolidation since end of 2019.

The **segment Med Tech** develops solutions for the healthcare market in the fields of surgery and diagnostics, specialising in X-ray diagnostics, basic medical diagnostics and minimally invasive surgery, as well as products for the pharmaceuticals industry and hospitals.

The **Ziehm** Group, with the now fully integrated OrthoScan, is specialised on the development, production and global marketing of mobile X-ray imaging systems solutions known as C-arms. The use of modern flat detectors reduces distortions created by standard image enhancers. These systems are primarily used in surgical and emergency care settings. The Group also develops specialised equipment for endoscopic procedures. In marketing, Ziehm continues its "always ahead" campaign, which underlines our perceived technological leadership in CMOS technology. With the Ziehm Vision FD Vario 3D and the Ziehm Vision RFD 3D, Ziehm provides mobile C-arms with state-of-the-art CMOS technology on the market, combining 2D and 3D capabilities for improved intraoperative control. The product Ziehm Solo FD is the first choice for small operating rooms and combines a compact and versatile C-arm, a full-size monitor and an intuitive touchscreen user interface in one device. So-called mini C-arms used for orthopaedic extremity (hand and foot) imaging are offered via the OrthoScan. OrthoScan's mini C-arms offer orthopaedic, casualty and hand and foot surgeons the solution they require for a high-quality, X-ray imager with small dimensions. Furthermore, OrthoScan offers the product Mobile DI. The Mobile DI is an even more compact portable, low-dosage X-ray imager, which can be used when rapid and effortless diagnostics of extremities are required. It is suitable for use in orthopaedic practices and athletic sport teams, among other applications.

AspiAir GmbH was acquired in November 2019. AspiAir has taken over patents and employees from Ventaleon GmbH as of 1 January 2020 and is focused on the development of inhalative therapies.

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

DC Aviation, as operator and charterer including aircraft technology, concentrates on the premium segment of private jets, particularly for medium and long-haul flights. As of 31 December 2019, the DC Aviation Group has 28 aircrafts under contract as an operator. The international presence is strengthened by 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 that are not operated in the ownership of DC Aviation.

On 23 December 2019, a 33.34 % stake in **OneFiber Interconnect Germany GmbH**, St. Wendel, was acquired through **ATON Digital Services GmbH**, Munich. The company plans to build a nationwide, highly secure fiber optic network with gigabit products for companies, carriers and authorities. The company is currently presented within the segment Holding / Consolidation. The **segment Digital Services** is to be further expanded within the ATON Group in the future.

ATON Group Finance GmbH and **ATON FinCo GmbH** were both merged with **ATON Austria Holding GmbH**, Going am Wilden Kaiser, Austria, retrospectively as of 1 January 2019 since both companies were no longer required as financing companies.

2. Management

ATON GmbH is a management holding company with extensive competencies regarding strategy and financing. The management of the individual subsidiaries assumes direct operative responsibility and acts within the scope agreed with the management board of ATON GmbH in order to meet the financial and strategic objectives. There is a constant exchange via a monthly reporting between the managing directors of the subsidiaries and the holding company.

3. Research and development

Several companies of the Group operate in technological fields that are constantly evolving. These companies are primarily the EDAG Group, the Ziehm Group, the Redpath Group and until end of May 2019 the FFT Group. 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 industries of the companies. Research and development expenses recognised in the income statement are at EUR 12.7 million (previous year: EUR 13.4 million). In addition, capitalised development costs of EUR 3.7 million (previous year: EUR 3.7 million) emphasize the activities for product development and product enhancement.

II. MACROECONOMIC DEVELOPMENT

Global economic growth slowed down significantly in 2019 and, at 2.6 %, it is the weakest growth since the global financial crisis a decade ago. For the first time since 2016, the real growth of the global economy dropped below 3.0 %. The slowdown affected almost all regions, but to different degrees. Growth in global trade also slowed down considerably, a development that noticeably impacted export-dependent economies in particular.

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

in %	2019 *	2018	2017	2016	2015
World	2.6	3.2	3.5	2.8	3.0
Europe	1.4	2.1	2.9	2.0	2.4
Germany	0.6	1.5	2.8	2.1	1.5
North America	2.3	2.9	2.4	1.6	2.7
South America	0.8	1.4	1.9	- 0.1	0.3
Asia/Pacific	4.3	4.8	5.3	5.0	4.9
China	6.1	6.7	6.9	6.8	7.0
Middle East	0.4	1.2	1.0	4.6	2.6
Africa	3.0	3.1	3.5	1.8	3.1

Source: Global Insight World Overview as of 18 February 2020.
* Forecast.

The industrialized countries were unable to maintain the dynamic economic growth that they had attained in the two previous years. This was also the case with the US economy. Following a robust first quarter, economic growth slowed considerably later in the year, but remained solid with approximately 2.3 % recorded for 2019 as a whole. While private consumption continued to be robust, business investment weakened substantially as the year progressed. This was due, in part, to the fading boost from tax cuts as well as ongoing insecurity regarding the trade conflict with China. Economic development slackened even more in the euro zone. The weak global demand, especially in China, as well as the trade dispute between the United States and China and the risk of a no-deal withdrawal of the UK from the European Union, had an especially negative impact on the manufacturing sector. As a result, economic growth in the euro zone dropped to just over 1 %, even though the services sector and private consumption remained resilient. Because of its pronounced dependence on industrial production and foreign trade, the German economy only grew by about 0.6 %. The ongoing Brexit uncertainty and its dampening effect on investments caused the economy of the United Kingdom to slow down to a moderate pace of 1.3 %. Slower export growth and continued low investments are also impacting the Japanese economy, which grew at approximately 1 % or about the same as in the previous year.

China's economic growth continued to lose momentum last year as a result of a weakening of both domestic and export demand. At just 6.1 %, growth for the year as a whole was noticeably lower than in 2018. As expected, the other economies in Asia were unable to disconnect themselves from the slowdown in world trade and the weakening of China's economic growth. As a result, these economies grew much more slowly than in the previous year. South America's hopes for a noticeable economic rebound were not fulfilled. The ongoing and deep-seated crisis in Argentina and the continued rather disappointing development in Brazil have slowed down economic growth in the entire region. Growth was also lower than in the prior year in Central and Eastern Europe. This was mainly due to the severe economic crisis in Turkey as well as the substantial decline in the growth of the Russian economy. The much lower average price of oil over the year compared to the prior year ensured that economic growth continued to be rather weak in the Middle East as well. All in all, the growth of about 4 % that was recorded in the emerging markets was significantly below the prior-year rate.

The oil price is one of the most important values in the commodity markets. In 2019, the average price was at USD 64.36 / barrel with a high volatility, or around 9.4 % lower than in previous year. As of 31 December 2019, a barrel of Brent crude cost USD 67.31 (year end 2018: USD 57.36) (refer to “Statista GmbH”).

The inflation rate in the Euro zone is at 1.2 % in the financial year 2019 (previous year: 1.9 %) (refer to „EU Commission: International Monetary Fund – World Economic Outlook“). Meanwhile the marginal lending facility interest rate remained unchanged at 0.0 % compared to the previous year, the interest rate on the deposit facility was lowered from -0.40 % to -0.50 % by decision of the ECB's Governing Council as of 18 September 2019.

In the heterogeneous growth environment described, exchange rates remained volatile during the financial year. Compared to the average exchange rate level of the previous year, the Euro decreased in 2019 against the most important currencies. The average exchange rate against the US Dollar was 5.2 % lower than in the previous year. On average, the Euro depreciated by 0.8 % against the British Pound. The Euro also weakened by 0.9 %, 3.7 % and 6.4 % against the Chinese Renminbi, the Swiss Franc and the Japanese Yen.

III. DEVELOPMENT OF THE BUSINESS SEGMENTS

The following figures indicate the gross revenue and results attributable to the particular segments.

1. Engineering

The majority of the gross revenue of this business segment is generated by the EDAG Group and the FFT Group (until May 2019). The customers of both groups are mainly from the automotive sector. Insofar, the development of the automotive industry has an influence on this segment. However, manufacturers need to work on long term development projects for new vehicles or technologies and the subsequent capital expenditures on new assembly lines for new vehicle models, which require a longer period in advance, also in economically weak periods.

According to a recent market study by IHS Markit, global automobile production fell by a further 5.8 % to 88.7 million units in 2019 after falling to 94.2 million units in 2018. A corresponding decline was recorded in all sales markets worldwide. The downturn is particularly strong in the regions of China (-2.3 million units or -8.4 %), Europe (-0.9 million units or -4.2 %), South Asia (-0.8 million units or -8.3 %), North America (-0.7 million units or -4.0 %) and Middle East / Africa (-0.6 million units or -22.3 %).

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

in EUR '000	**2019**	**2018**	**Change**
Gross revenue	1,057,042	1,545,827	- 488,785
EBITDA	441,693	122,478	319,215
EBITDA margin in %	41.8	7.9	33.9
EBIT	363,431	61,096	302,335
EBIT margin in %	34.4	4.0	30.4

Comparing with previous year's period, the sale of FFT Group at the end of May 2019 has to be considered.

Since Deilmann-Haniel Mining Systems no longer provides services to the FFT Group, Deilmann-Haniel Mining Systems is no longer reported in the segment Engineering, but in the segment Mining from financial year 2019 onwards. The previous year's comparing figures have been adjusted accordingly.

The segment's gross revenue overall decreased by EUR 488.8 million compared to the same period of previous year, primarily due to the sale of the FFT Group. EBIT increased by EUR 302.3 million, mainly due to the deconsolidation gain of the FFT Group.

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

The EDAG Group generated a gross revenue of EUR 781.7 million, which roughly corresponds to previous year's gross revenue (EUR 792.8 million). In a difficult market environment, EBIT reached EUR 16.9 million (previous year: EUR 42.2 million). The decline in EBIT is among other things also attributable to restructuring measures mainly for the Production Solutions division. This still positive EBIT of the EDAG Group is offset by amortisation effects for hidden reserves from the purchase price allocation at Group level amounting to EUR 24.5 million (previous year: EUR 24.5 million). As of 31 December 2019, the order backlog amounts to EUR 294.4 million (previous year: EUR 380.7 million). However, the order backlog does not include potential requests from framework contracts or from series orders.

The FFT Group recorded a decline in gross revenue by EUR 498.1 million to EUR 285.0 million. At the same time, the EBIT in the reporting period fell by EUR 32.2 million to EUR 18.6 million (previous period: EUR 50.8 million), although EBIT margin remained stable. The deconsolidation of the FFT Group resulted in an income effect on EBIT of EUR 348,4 million.

In view of the fact that the sale of REFORM is considered to be highly probable due to the ongoing sales negotiations, REFORM’s assets and liabilities were reclassified in accordance with IFRS 5 as assets / liabilities held for sale during the fourth quarter of 2019. REFORM’s gross revenue is at EUR 3.4 million (previous year: EUR 12.7 million) and therefore in line with expectations. At EUR -3.3 million (previous year: EUR -1.2 million), the EBIT is clearly negative, but was burdened above all by restructuring costs of EUR 2.9 million. As a result of the completion, invoicing and cash receipt from contracts and the related reduction in net assets, a total of EUR 7.3 million in write-ups and reversals of write-downs, respectively, on net assets could be recognised on Group level, considering the expected sale price for REFORM.

2. Mining

The gross revenue of this segment is almost exclusively generated by the Redpath Group. In addition, the Murray & Roberts Group, as associated company, contributes to the financial results of the segment. The business development of the segment depends on the development of commodity prices.

Based on the Bloomberg Commodity Index, commodity prices rose by a good 5 % during financial year 2019. However, the prices are still below the relatively higher level in 2015.

The increase is particularly evident looking at precious metals. Palladium shows an increase of 56 %, gold of 17 %, silver of 14 % and platinum of 13 % (Based on 1-month futures contracts according to "DEKA Macro - Research Economics Commodities" from December 2019 / January 2020).

By contrast, prices for industrial metals are mostly declining. The price for zinc decreased by 15 %, that of aluminum by 10 %, that of lead by 6 % and that of copper by 3 %. Only the price for nickel rose by 24 % (Based on 1-month futures contracts according to "DEKA Macro - Research Economics Commodities" from December 2019 / January 2020).

The potash price rose by 23 % during financial year 2019.

Since 2016, commodity prices are therefore undergoing a largely volatile sideways movement. The production capacities are sufficient to meet the moderately increasing global demand for raw materials. The low raw materials prices are slowing down investment activity, which is likely to have a negative impact on supply development in the future.

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

in EUR '000	**2019**	**2018**	**Change**
Gross revenue	724,741	639,972	84,769
EBITDA	102,913	81,522	21,391
EBITDA margin in %	14.2	12.7	1.5
EBIT	37,596	41,467	- 3,871
EBIT margin in %	5.2	6.5	- 1.3

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

The changes in the segment Mining are largely determined by the development of the Redpath Group, since the Murray & Roberts Group as associate is accounted for using the equity method and thus only has an effect on the financial result.

Since Deilmann-Haniel Mining Systems no longer provides services to the FFT Group, Deilmann-Haniel Mining Systems is no longer reported in the segment Engineering, but in the segment Mining from financial year 2019 onwards. The previous year's comparing figures have been adjusted accordingly.

Compared to the same period of the previous year, the Redpath Group increased its gross revenue by EUR 85.6 million or 13.4 % to EUR 724.8 million. The Group generated an EBIT of EUR 39.0 million (previous year: EUR 42.9 million), which corresponds to an EBIT margin of 5.4 % (previous year: 6.7 %). The margin decrease is mainly due to lack of contracts in certain regions / countries and the missing coverage of fixed cost. The order backlog as of 31 December 2019 amounts to EUR 917.6 million (previous year: EUR 1,086.6 million).

The gross revenue of Deilmann-Haniel Mining Systems declined from EUR 1.4 million in previous year's period to now EUR 0.5 million due to the scheduled shutdown of its business activities. The EBIT, which was impacted by an unscheduled depreciation on land, buildings and technical assets amounting to EUR -1.6 million in the reporting period, is thereby at EUR -1.3 million, unchanged to previous year.

3. Med Tech

In 2018, worldwide health expenditure was approximately USD 8.1 trillion. While expenditure rose by an average of 2.7 % per year between 2014 and 2018, an average annual growth of 5.0 % is expected for the years 2019 to 2023 (please refer to “Deloitte - 2019 Global Health Care Outlook”). As a result, worldwide health expenditure should rise to approx. USD 10.3 trillion. For comparison, the global gross domestic product was around USD 84.9 trillion in 2018 and is expected to rise at an average annual growth of 4.5 % to around USD 105.8 trillion in 2023 (please refer to “Statista - Global GDP 2014 – 2024”).

The size of the global medical technology market was approximately USD 434 billion in 2018. By the year 2024, the value is expected to grow to around USD 595 billion (an annual average of 5.4 %). Imaging diagnostics, the area in which the sub segment "mobile C-arms", served by Ziehm Group, is located, is the third largest market segment of the medical technology market after "in-vitro diagnostics" and "cardiology". Worldwide imaging diagnostics sales are expected to increase from USD 40 billion to USD 51 billion between 2017 and 2024, corresponding to an average annual growth of 3.5 % (please refer to “SSC Consult 2019 - Medical Technology M&A Market Overview”). The volume of the sub segment of mobile C-arms is estimated to be between USD 800 million and USD 900 million.

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

in EUR '000	**2019**	**2018**	**Change**
Gross revenue	186,652	206,013	- 19,361
EBITDA	29,203	186,649	- 157,446
EBITDA margin in %	15.6	90.6	- 75.0
EBIT	22,202	178,596	- 156,394
EBIT margin in %	11.9	86.7	- 74.7

The comparison to previous year’s period is possible only to a limited extent due to the sale of Haema in early June 2018.

The following comments on the individual companies of the segment are based on unconsolidated figures. It has to be considered that OrthoScan has now been integrated into the Ziehm Group also in terms of corporate law and is therefore no longer presented separately. The segment Med Tech thus currently only consists of the Ziehm Group.

The Ziehm Group (including OrthoScan) generated gross revenues of EUR 186.7 million in the financial year 2019, an increase of EUR 14.6 million compared to the previous year’s period (EUR 172.1 million). At EUR 22.2 million, EBIT is at previous year’s level (EUR 22.3 million). EBIT margin is therefore at 11.9 % (previous year: 13.0 %).

AspiAir GmbH, which was founded at the end of 2019, has not started its operations before 2020, so that it does not report any gross revenue and only an insignificant EBIT in 2019.

In the previous year period, Haema still contributed with a gross revenue of EUR 39.4 million and an EBIT of EUR 1.2 million to the segment. The sale of Haema with the closing as of 4 June 2018 additionally led to a deconsolidation gain of EUR 156.5 million at ATON Group level.

4. Aviation

The general economic slowdown is also noticeable in the business aviation sector. However, DC Aviation currently sees itself as well-positioned with its strategic business areas of aircraft management and aircraft maintenance, so that business activity should develop stably even in the event of a possible further slowdown in economic growth. The economic downturn was and is noticeable in the area of chartering flight capacities. However, these can be compensated by DC Aviation as an operator, since the main fixed cost risks are not borne by the company given the current business strategy.

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

in EUR '000	2019	2018	Change
Gross revenue	73,317	75,323	- 2,006
EBITDA	2,237	- 247	2,484
EBITDA margin in %	3.1	- 0.3	3.4
EBIT	242	- 509	751
EBIT margin in %	0.3	- 0.7	1.0

Due to an unexpected delay in addition of new managed aircrafts, fewer flight movements and lower third-party chartering, gross revenue at EUR 73.3 million is 2.7 % below previous year's reporting period and thus below expectations.

In terms of earnings, however, this was well compensated by the profitably utilised in-house hangar as well as the marketing of shared services and consulting services. Consequently, EBIT could be improved as expected to EUR 0.2 Mio (previous year: EUR -0.5 million).

In June 2019, the sale of the investment in DCA Switzerland AG, which was measured at fair value, had a positive impact on the financial result of EUR 1.4 million. As a result, DCA now has one international subsidiary based in Malta and is holding a 49 % share in a joint venture based in Dubai. After the sale of DCA Switzerland, 28 aircrafts (thereof 26 business jets and 2 helicopters) are managed within the fleet network of the DC Aviation at the end of 2019.

IV. RESULTS OF OPERATIONS, FINANCIAL AND NET ASSETS POSITION

The overall picture of the business development of the ATON Group, which results from the sum of the above-illustrated segments as well as the ATON 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 tax (EAT).

1. Results of operations

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

in EUR '000	2019		2018		Change	
Revenue	2,040,301	99.9%	2,461,602	99.8%	- 421,301	
Gross revenue	**2,041,737**	**100.0%**	**2,466,989**	**100.0%**	**- 425,252**	**- 17.2%**
Cost of materials	- 570,568	- 27.9%	- 892,370	- 36.2%	321,802	
Gross profit	**1,471,169**	**72.1%**	**1,574,619**	**63.8%**	**- 103,450**	**- 6.6%**
Personnel expenses	- 1,025,021	- 50.2%	- 1,094,259	- 44.4%	69,238	
Impairment losses / reversal of impairment losses on financial assets	- 8,025	- 0.4%	- 3,444	- 0.1%	- 4,581	
Other operating expenses ./. income	121,609	6.0%	- 146,169	- 5.9%	267,778	
EBITDA	**559,732**	**27.4%**	**330,747**	**13.4%**	**228,985**	**69.2%**
Depreciation and amortisation	- 150,998	- 7.4%	- 105,971	- 4.3%	- 45,027	
Impairment losses	- 2,006	- 0.1%	- 3,909	- 0.2%	1,903	
EBIT	**406,728**	**19.9%**	**220,867**	**9.0%**	**185,861**	**84.2%**
Net interest expense	- 18,451	- 0.9%	- 18,941	- 0.8%	490	
Other financial result	- 69,146	- 3.4%	1,136	0.0%	- 70,282	
Net financial result	**- 87,597**	**- 4.3%**	**- 17,805**	**- 0.7%**	**- 69,792**	**392.0%**
Income taxes	- 22,994	- 1.1%	- 35,084	- 1.4%	12,090	
Consolidated earnings after tax (EAT)	**296,137**	**14.5%**	**167,978**	**6.8%**	**128,159**	**76.3%**
EAT attributable to non-controlling interest	372	0.0%	1,204	0.0%	- 832	
EAT attributable to owners of the parent	**295,765**	**14.5%**	**166,774**	**6.8%**	**128,991**	**77.3%**

The results of operations are significantly influenced by the deconsolidation of the FFT Group at the end of May 2019. On the contrary, the sale of Haema took place in the same period of the previous year at the beginning of June 2018. Thus, the comparability of the consolidated income statement with the previous year's period is limited.

Gross revenue is EUR 425.3 million or 17.2 % below previous year’s period, which is mainly due to the deconsolidation of the FFT Group in May 2019 and the deconsolidation of Haema in June 2018. As a consequence, the gross revenue for the segment Engineering decreased by EUR 488.8 million to EUR 1,057.0 million in the reporting period and by EUR 19.4 million to EUR 186.7 million in the segment Med Tech. But also the segment

Aviation shows a decline in gross revenues of EUR 2.0 million to EUR 73.3 million. By contrast, gross revenue in the segment Mining increased by EUR 84.8 million to EUR 724.7 million.

The cost of materials ratio declined from 36.2 % to 27.9 %. This is primarily due to the segment Engineering (decline from 40.6 % to 28.0 %) due to the deconsolidation of the materials-intensive FFT Group. The segment Mining shows a slight decline in the cost of materials ratio from 20.9 % to 20.4 %. In the segment Aviation the ratio also declined from 64.4 % to 62.2 %. On the contrary, the ratio in the segment Med Tech increased from 39.2 % to 41.8 %.

Gross profit thus decreased by EUR 103.5 million or -6.6 % to EUR 1,471.2 million. However, the gross profit margin increased to 72.1 % (previous year's period: 63.8%).

The personnel expenses ratio increased slightly from 44.4 % to 50.2 %. This is mainly due to the segment Engineering and the deconsolidation of the FFT Group at the end of May 2019, which was more material-intensive than average and less personnel-intensive than average in the Group.

The net amount of other operating expenses / income increased by EUR 267.8 million from EUR -146.2 million to EUR 121.6 million. This increase is primarily attributable to the deconsolidation gain for the FFT Group amounting to EUR 348.4 million (previous year's period: Haema deconsolidation gain in the amount of EUR 156.5 million). In addition, other operating expenses decreased by EUR 73.8 million, which is mainly due to the deconsolidation of the FFT Group at the end of May 2019. Furthermore, the application of the new leasing standard IFRS 16 has an impact, as a result of which leasing expenses as part of other operating expenses are reduced (in contrast, more scheduled depreciation and interest expenses).

As a result of the effects described above, EBITDA increased by EUR 229.0 million to EUR 559.7 million.

Depreciation and amortization increased by 39.2 % or EUR 43.1 million to EUR 153.0 million compared to previous year's period, mainly due to the first-time application of IFRS 16 (leases) as of 1 January 2019. As a result, all leases are recognised as a right-of-use and depreciated over their term. Consequently, depreciation increased significantly, especially in the segments Mining and Engineering. Impairment losses mainly include depreciation on property and buildings in the amount of EUR 1.6 million.

EBIT increased by EUR 185.9 million to EUR 406.7 million (previous year's period: EUR 220.9 million) and, taking into account the sale of the FFT Group, essentially meets expectations. The EBIT margin thus increased from 9.0 % in previous year's period to 19.9 % in the reporting period.

In the segment Engineering, the EBIT margin rose from 4.0 % to 34.4 %, mainly as a result of the sale of the FFT Group. In the segment Mining, the EBIT margin was 5.2 % (previous year's period: 6.5 %). In the segment Med Tech, the EBIT margin declined from 86.7 % to 11.9 %, mainly due to the deconsolidation gain of Haema in the previous year. In the segment Aviation, the EBIT margin improved from -0.7 % in the previous year to 0.3 % in the reporting period.

The net interest result is negative at EUR -18.5 million, roughly the same as the previous year (EUR -18.9 million). The absence of the interest expense from the repayment of the bond in the amount of EUR

200.0 million in November 2018 and the special repayment of the remaining loan from Landesbank Hessen-Thüringen Girozentrale in the amount of EUR 225.0 million at the end of May 2019 are mainly offset by higher interest expenses from the first-time application of the new leasing standard IFRS 16 since 1 January 2019 and interest expenses from the increased financial liabilities resulting from the profit and loss transfer agreement between ATON GmbH and ATON 2 GmbH.

The other financial result declined from EUR 1.1 million in previous year's period to EUR -69.1 million in the reporting period, which is mainly due to the impairment of EUR 84.8 million on the shares in Murray & Roberts Group, which are accounted for using the equity method. This was offset by lower valuation adjustments on investments accounted for at fair value (EUR +9.8 million), an improved result from securities (EUR +1.6 million), lower expenses for hedging transactions (EUR +0.5 million) and other investment result from the sale of the DC Aviation Switzerland AG, previously accounted for at fair value, in the amount of EUR 1.4 million. At EUR 14.2 million, the result from investments accounted for using the equity method was at the previous year's level (EUR 14.2 million).

The Group tax rate declined from 17.3 % in the comparable period to 7.2 %. This very low group tax rate is mainly due to the mostly tax-free gain on disposal for the FFT Group. After adjusting for this effect and the effect of the non-tax-effective impairment on the Murray & Roberts investment, the tax rate is 31.6 % and thus roughly at the level of the expected average tax rate.

The earnings after taxes (EAT) increased by EUR 128.2 million to EUR 296.1 million and are in line with expectations overall. After deduction of EAT attributable to non-controlling interest, the EAT attributable to owners of the parent amounts to EUR 295.8 million (previous period: EUR 166.8 million).

2. Financial position

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

in EUR '000	2019	2018	Change	
Cash and cash equivalents at the beginning of the period	**559,309**	**187,371**	**371,938**	**198.5%**
Income before interest, dividends and income taxes	337,108	219,781	117,327	
Depreciation and amortisation / write-ups of assets	236,774	124,374	112,400	
Result from the disposal of property, plant and equipment and securities	- 999	- 1,372	373	
Result from the disposal / deconsolidation of consolidated subsidiaries	- 348,424	- 156,494	- 191,930	
Change in provisions	720	10,713	- 9,993	
Other non-cash transactions	- 8,156	- 8,957	801	
Gross cash flow	**217,023**	**188,045**	**28,978**	**15.4%**
Interest, dividends and income taxes paid / received	- 41,594	- 45,158	3,564	
Changes in trade working capital	- 65,361	332,536	- 397,897	
Changes in other working capital	22,161	- 249,758	271,919	
Cash flow from operating activities	**132,229**	**225,665**	**- 93,436**	**- 41.4%**
Investments in / proceeds from the disposal of intangible assets and property, plant and equipment	- 61,204	- 117,410	56,206	
Investments in / proceeds from the disposal of financial assets / associates	- 265,139	- 7,155	- 257,984	
Proceeds from the disposal of / payments for the acquisition of consolidated subsidiaries	466,182	212,495	253,687	
Cash flow from investing activities	**139,839**	**87,930**	**51,909**	**59.0%**
Proceeds from shareholder	195,000	-	195,000	
Payments to shareholders	- 262,117	- 6,467	- 255,650	
Payments for the acquisition of non-controlling interests	- 3,655	- 20,152	16,497	
Proceeds from / repayments of loans and lease liabilities	- 238,407	87,872	- 326,279	
Cash flow from financing activities	**- 309,179**	**61,253**	**- 565,432**	**> -100%**
Effect of changes in exchange rates	5,688	- 2,910	8,598	
Cash and cash equivalents at the end of the period	**527,886**	**559,309**	**- 31,423**	**- 5.6%**

The cash flow from operating activities decreased by EUR 93.4 million compared to previous year's period.

The gross cash flow is at EUR 217.0 million and therefore EUR 29.0 million above previous year's level. The income before interest, dividends and income taxes increased by EUR 117.3 million and depreciation and amortisation by EUR 112.4 million compared to the previous year's period. The result from the disposal / deconsolidation of consolidated subsidiaries is deducted in the amount of EUR 348.4 million, whereas in the previous year only EUR 156.5 million were deducted.

The deterioration in cash flow from operating activities therefore mainly results from the increase in trade working capital amounting to EUR 65.4 million (previous year: decrease in trade working capital by

EUR 332.5 million), which represents a deterioration of EUR 397.9 million compared to the previous year. On the other hand, changes in other working capital are at EUR 22.2 million, which represents a decrease of EUR 271.9 million. Overall, the increase in working capital has a negative effect amounting to EUR 43.2 million on the development of cash flow from operating activities in the reporting period. Furthermore, the decline in dividends received by EUR 6.9 million and the increase in interest paid by EUR 1.7 million had a negative impact on cash flow from operating activities. The EUR 12.3 million reduction in income taxes paid had an opposite effect.

The cash flow from investing activities shows a cash inflow of EUR 139.8 million in the reporting period (previous year: EUR 87.9 million). Net investments in property, plant and equipment and intangible assets decreased by EUR 56.2 million to EUR 61.2 million. Net cash outflows for investments in / sales from financial assets and associates amount to EUR 265.1 million in the reporting period (previous year: EUR 7.2 million). These are primarily investments in securities, which are measured at fair value through profit and loss. These investments are offset by loan repayments and the proceeds from the sale of consolidated subsidiaries. The sale of the FFT Group resulted in a net cash inflow of EUR 466.2 million.

The cash flow from financing activities shows a cash outflow of EUR 309.2 million (previous year: cash inflow of EUR 61.3 million). The cash flow from financing activities is mainly due to the net repayment of bank loans and lease liabilities amounting to EUR 238.4 million, the net payments to shareholders amounting to EUR 67.1 million as well as payments for the acquisition of minority interest in the amount of EUR 3.7 million.

Taking into account the effect of changes in currency exchange rates, a total cash outflow of EUR 31.4 million resulted in the reporting period (previous year: cash inflow of EUR 371.9 million). Accordingly, cash and cash equivalents fell from EUR 559.3 million at the beginning of the reporting period to EUR 527.9 million at the end of the reporting period.

3. Net assets position

in EUR '000	31.12.2019		31.12.2018		Change	
Assets						
Intangible assets	389,691	15.1%	434,704	17.0%	- 45,013	- 10.4%
Property, plant and equipment	546,735	21.2%	361,001	14.1%	185,734	51.4%
Financial assets	510,812	19.8%	306,196	12.0%	204,616	66.8%
Inventories	108,016	4.2%	153,571	6.0%	- 45,555	- 29.7%
Trade and other receivables	383,006	14.8%	424,606	16.6%	- 41,600	- 9.8%
Deferred tax assets	16,168	0.6%	14,699	0.6%	1,469	10.0%
Cash and cash equivalents	527,886	20.4%	559,309	21.9%	- 31,423	- 5.6%
Contract assets	92,135	3.6%	289,695	11.3%	- 197,560	- 68.2%
Other assets	8,609	0.3%	9,735	0.4%	- 1,126	- 11.6%
Total assets	**2,583,058**	**100.0%**	**2,553,516**	**100.0%**	**29,542**	**1.2%**
Equity and liabilities						
Equity	955,869	37.0%	1,178,906	46.2%	- 223,037	- 18.9%
Provisions	82,748	3.2%	86,939	3.4%	- 4,191	- 4.8%
Financial liabilities	1,135,694	44.0%	657,729	25.8%	477,965	72.7%
Trade and other payables	236,289	9.1%	350,354	13.7%	- 114,065	- 32.6%
Deferred tax liabilities	54,365	2.1%	76,104	3.0%	- 21,739	- 28.6%
Contract liabilities	107,098	4.1%	194,291	7.6%	- 87,193	- 44.9%
Other liabilities	10,995	0.4%	9,193	0.4%	1,802	19.6%
Total equity and liabilities	**2,583,058**	**100.0%**	**2,553,516**	**100.0%**	**29,542**	**1.2%**

The balance sheet total increased by EUR 29.5 million compared to 31 December 2018.

The decline of EUR 45.0 million in intangible assets is attributable to the deconsolidation of the FFT Group. This resulted in a disposal of goodwill in the amount of EUR 15.4 million and of other intangible assets in the amount of EUR 4.8 million. Moreover, scheduled depreciation and amortisation (EUR 39.1 million) exceeded the additions (EUR 9.7 million) in the reporting period.

Property, plant and equipment increased by EUR 185.7 million. This is mainly due to the disclosure of rights of use as a result of the first-time application of the leasing standard IFRS 16 in the amount of EUR 237.6 million. Additions to property, plant and equipment amount to EUR 114.5 million. Exchange rate effects also increase property, plant and equipment by EUR 8.9 million. Depreciation and amortization, which amount to EUR 113.9 million in the reporting period, reduce the overall increase. Furthermore, property, plant and equipment declined by EUR 50.0 million due to the deconsolidation of FFT Group, by EUR 9.7 million due to asset disposals and by EUR 1.4 million due to IFRS 5 reclassifications.

Financial assets increased by EUR 204.6 million. The increase is mainly attributable to the investment in a portfolio of securities in the amount of EUR 229.5 million and to the increase in loans in the amount of EUR 40.3 million. Furthermore, in the context of the deconsolidation of the FFT Group, an investment accounted for using the equity method (previously fully consolidated) is accounted for again, which is reported in the balance sheet at EUR 17.5 million as of the balance sheet date.

In contrast, the impairment of the shares in Murray & Roberts Holding Limited amounting to EUR 84.8 million (book value after impairment: EUR 131.7 million) and in Aveng Ltd. amounting to EUR 2.4 million had an opposite effect.

Trade receivables and other receivables fell by EUR 41.6 million. This is mainly due to the decrease of receivables from third parties as a result of the deconsolidation of FFT Group, which had a reducing effect of EUR 102.6 million. In contrast, trade receivables in all segments increased by EUR 59.8 million and other receivables increased by EUR 1.0 million.

Working capital declined by EUR 83.5 million, which is mainly due to the above explained EUR 41.6 million reduction of trade receivables and other receivables and the decline in contract assets by EUR 197.6 million, as a result of the deconsolidation of FFT Group. In addition, inventories decreased by EUR 45.6 million. On the contrary, trade liabilities and other liabilities fell by EUR 114.1 million as well as contract liabilities by EUR 87.2 million.

Cash and cash equivalents fell by EUR 31.4 million. Concerning information on changes in cash and cash equivalents please refer to the section “Financial position”.

Contract assets declined by EUR 197.6 million mainly because of the deconsolidation of the FFT Group. This resulted in a disposal of contract assets in the amount of EUR 181.4 million

As of balance sheet date, other assets declining by EUR 1.1 million include income tax receivables amounting to EUR 1.1 million as well as assets held for sale amounting to EUR 3.1 million due to Reform Maschinenfabrik Adolf Rabenseifner GmbH & Co. KG. The decrease in income tax receivables by EUR 4.5 million is mainly due to the deconsolidation of the FFT Group (EUR 3.3 million).

The equity ratio fell from 46.2 % at the end of the previous year to 37.0 % at the balance sheet date. Despite a consolidated result of EUR 296.1 million, equity declined by EUR 223.0 million in absolute terms. This is mainly due to the profit transfer to the shareholder ATON 2 GmbH based on the profit-and-loss transfer agreement signed in 2018 amounting to EUR 522.7 million, which has to be accounted for as an equity transaction in accordance with IFRS. In addition, dividend payments to non-controlling interest amounting to EUR 6.1 million reduced the equity. Furthermore, the acquisition of non-controlling interest in the EDAG Group led to an offset against reserves without effect on the income statement reducing equity by EUR 3.7 million. On the contrary, the other comprehensive income improved by EUR 14.1 million.

Provisions decreased by EUR 4.2 million. This decline was mainly due to lower provisions for onerous contracts (EUR -6.3 million), lower provisions for restructuring (EUR -2.6 million) as well as provisions for follow-up costs (EUR -2.6 million). In return, provisions for pensions (EUR +4.4 million) and tax provisions (EUR +2.1 million) increased.

Financial liabilities increased by EUR 478.0 million. This is primarily attributable to EUR 461.6 million higher liabilities to shareholders due to the profit-and-loss transfer to ATON 2 GmbH amounting to EUR 522.7 million and loans to shareholders amounting to EUR 85.0 million. In addition, increased lease liabilities in the amount of EUR 234.8 million due to the first-time application of the new leasing standard IFRS 16. On the contrary, the net repayments of bank loans reduced the financial liabilities by EUR 211.2 million. Furthermore, loan liabilities to related parties fell by EUR 4.3 million and liabilities from derivative financial instruments fell by EUR 2.4 million, which is mainly due to the deconsolidation of FFT Group.

Trade and other payables declined by EUR 114.1 million, mainly because of the decrease in trade payables (EUR -95.5 million), liabilities to employees (EUR -20.6 million) and VAT liabilities (EUR -6.6 million). On the contrary, other payables to associates increased by EUR 8.0 million.

Contract liabilities fell by EUR 87.2 million. This balance sheet item essentially results from the fact that customers (partly) paid the consideration before the Group provided the service over a certain period of time. The main reason for this decline is the deconsolidation of FFT Group. This leads to a decrease of EUR 96.1 million.

As of the balance sheet date, other liabilities include liabilities associated with assets held for sale at Reform Maschinenfabrik Adolf Rabenseifner GmbH & Co. KG, Fulda amounting to EUR 3.1 million as well as income tax liabilities amounting to EUR 7.9 million. The latter fell by EUR 1.3 million compared to the previous year.

The following overview presents assets and capital according to maturity:

in EUR '000	**31.12.2019**		**31.12.2018**	
Non-current assets				
Intangible assets and property, plant and equipment	936,426	36.3%	795,705	31.2%
Financial assets	241,711	9.4%	288,191	11.3%
Other assets	23,266	0.9%	20,383	0.8%
	1,201,403	**46.5%**	**1,104,279**	**43.2%**
Current assets				
Inventories	108,016	4.2%	153,571	6.0%
Receivables and contract assets	468,873	18.2%	709,159	27.8%
Other financial assets	269,101	10.4%	18,005	0.7%
Cash and cash equivalents	527,886	20.4%	559,309	21.9%
Other assets	7,779	0.3%	9,193	0.4%
	1,381,655	**53.5%**	**1,449,237**	**56.8%**
Long-term capital				
Equity	955,869	37.0%	1,178,906	46.2%
Financial liabilities	350,661	13.6%	222,378	8.7%
Provisions, liabilities and contract liabilities	123,918	4.8%	127,072	5.0%
Other liabilities	54,365	2.1%	76,104	3.0%
	1,484,813	**57.5%**	**1,604,460**	**62.8%**
Short-term capital				
Financial liabilities	785,033	30.4%	435,351	17.0%
Provisions, liabilities and contract liabilities	302,217	11.7%	504,512	19.8%
Other liabilities	10,995	0.4%	9,193	0.4%
	1,098,245	**42.5%**	**949,056**	**37.2%**

Non-current assets of EUR 1,201.4 million are financed by long-term capital by 123.6 % (previous year: 145.3 %). Including short-term financial liabilities from loan liabilities to related parties and shareholders in the amount of EUR 628.3 million (previous year: EUR 171.0 million), which are available to the Group as basic funding, the ratio amounts to 175.9 % (previous year: 160.8 %). Furthermore, current assets are financed with long-term capital at a ratio of 20.5 % (previous year: 34.5 %).

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

in EUR '000	31.12.2019	Share in total assets	31.12.2018	Share in total assets
Current assets	1,381,655	53%	1,449,237	57%
Short-term capital	1,098,245	43%	949,056	37%
Surplus cover or Coverage ratio	**283,410**	**126%**	**500,181**	**153%**

The coverage ratio shows that the Group is based upon a very sound financing as of 31 December 2019.

Net debt position as of 31 December 2019 is as follows:

in EUR '000	31.12.2019	31.12.2018	Change
Cash and cash equivalents	527,886	559,309	- 31,423
Short-term securities	230,137	5,599	224,538
Short-term loans	38,941	11,882	27,059
Financial liabilities	- 1,135,694	- 657,729	- 477,965
Net cash (+)/debt (-)	**- 338,730**	**- 80,939**	**- 257,791**

The change of this performance indicator is primarily the result from the proceeds from the sale of the FFT Group, which were partly used for repayment of bank loans and investments in securities. The first-time application of the leasing standard IFRS 16 and the resulting recognition of lease liabilities for future lease payments led to a significant increase in financial liabilities. In addition, the high disposal gain from the sale of the FFT Group causes high financial liabilities towards the shareholder due to the profit and loss transfer agreement of ATON GmbH with ATON 2 GmbH.

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 company. In selective training programmes our employees are developed in professional, methodological and social skills. Furthermore, the Group promotes a systematic professional development training programme and prepares young employees to take on managerial responsibilities.

With initial vocational training and integrated study degree opportunities in business and technical professions, the company offers a broad selection of opportunities for the professional entry. The promotion of training programmes is supplemented with the cooperation with public educational providers and university-level institutes.

In 2019, EUR 7.6 million (previous year: EUR 7.0 million) were invested in advanced training and permanent education programmes for our employees.

The ATON Group employed on average 17,330 employees during the financial year (previous year: 18,678 employees), whereby the decrease is mainly due to the consolidation of the FFT Group at the end of May 2020.

In the financial year, the breakdown of employees into categories was as follows:

	2019	in %	2018	in %
Salaried staff	11,946	69%	13,424	72%
Industrial workers	4,645	27%	4,342	23%
Trainees and interns	739	4%	912	5%
Total employees	**17,330**	**100%**	**18,678**	**100%**
Production and service	15,250	88%	16,055	86%
General administration	1,638	9%	2,019	11%
Sales and marketing	355	2%	523	3%
Research and development	87	1%	81	0%
Total employees	**17,330**	**100%**	**18,678**	**100%**
Germany	7,865	45%	9,449	51%
Europe (excluding Germany)	2,056	12%	1,903	10%
North America	2,071	12%	2,016	11%
South America	366	2%	367	2%
Australia	790	5%	705	4%
Asia	2,699	16%	2,936	16%
Africa	1,483	9%	1,302	7%
Total employees	**17,330**	**100%**	**18,678**	**100%**

VI. EXPECTED DEVELOPMENTS, OPPORTUNITIES AND RISKS

1. Expected developments

According to the ifo Institute (see "ifo Economic Forecast Spring 2020: Economic Collapsing" from 19 March 2020), it is expected that the already significantly reduced global economic growth of 2.6 % in 2019 will fall to only 0.1 % in 2020 due to the corona crisis.

World trade is also likely to be severely affected, with a decline of 1.7 %. At the beginning of the year, overall economic production will already have shrunken slightly due to the decline in real activity in China and South Korea. But also Japan is likely to slow down. With the further worsening of the pandemic, global economic output will probably collapse by 2.6 %, especially in the second quarter. Europe and the United States are contributing to this in particular. By contrast, activity in China and South Korea is likely to increase slightly again as a result of the lower infection figures. Starting in the summer, there will probably be a gradual catch-up process worldwide with growth of just under 2 % in the third quarter and 1.7 % in the fourth quarter. Similar to Germany, the production level at the end of the forecast period is likely to be 0.5 % below the pre-crisis level.

The downside risk in the present forecast is considerable, as the assumptions made by the ifo Institute in an scenario analysis show significantly more pessimistic values. It is not unlikely, for example, that the crisis will drag on for a longer period of time, for example because the pandemic is contained much more slowly or because the resumption of economic activity does not work smoothly or triggers a new wave of infections. Further infection control measures may also come into effect, which may in particular shut down production on a much larger scale than assumed here. Production downtimes will have considerable macroeconomic effects in the short term. As expected, each additional month in which production would be cut by a quarter would cost Germany just over two percentage points of a year's economic growth. It is difficult to imagine that in such a situation it would be possible to fully avoid insolvencies and thus long-term production losses. In a risk scenario, therefore, the economic downturn would be intensified, the recession prolonged and the recovery slowed down. The decline in German economic output in 2020 would rise to 6.0 %, and at the end of 2021 gross domestic product would still be 2.0 % below the level that would have arisen without the corona crisis.

In such a risk scenario, according to the ifo Institute, turbulences in the international financial system as a result of extensive credit defaults and corporate insolvencies would probably be expected, which are not assumed in ifo institute's base scenario. This reflects the assumption that, in the case of Germany, the so-called "protective shield for employees and companies" of the German government would be effective. It is built up primarily for companies that suffer a loss of revenue as a result of the measures to contain the pandemic and thus get into payment difficulties. The measures adopted include tax relief, liquidity support and state guarantees, as well as an expansion of short-time work compensation.

Similarly extensive fiscal measures have been adopted in other countries, which comes along with new risks to the stability of public finances, particularly in the Euro area. In the case of highly indebted member states, such as Italy, this could lead to a massive loss of investor confidence. The sharp rise in risk premiums for Italian government bonds already indicates this. This is to be counteracted by the expansion of the European financial stabilization mechanism ESM by making credit lines are made precautionary available to states within the single currency area.

Beyond the corona crisis, further risks exist in connection with the increasing protectionism worldwide and its effects on investments, as well as the still unclear content of a future trade agreement between the UK and the EU.

Due to the sale and deconsolidation of the FFT Group in May 2019, we expect gross revenue, EBIT and EAT to decline significantly in 2020. Even adjusting FFT Group's contribution to gross revenues, EBIT and EAT in 2019, these key figures are expected to decline year-on-year due to the effects of the corona pandemic.

The corona crisis is likely to affect the individual segments of the ATON Group to varying degrees. However, the effects of this pandemic cannot yet be finally quantified, as an estimate of the extent and duration of the pandemic is currently possible. It is to be assumed, though, that the actual development of the results of operations will be significantly below our previous expectations. In the worst-case scenario, the corona pandemic could therefore also lead to a significant decline in gross revenue, EBIT and EAT in financial year 2020 compared with the previous year's figures adjusted for the mentioned one-off effects (sale and deconsolidation of the FFT Group).

Management constantly monitors possible effects of the pandemic on the business and takes comprehensive measures to ensure that the protection of employees and going concern of business operations in the Group companies are guaranteed.

2. Risks

a) Macroeconomic risks

Regarding 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 continues to remain of central importance. The liquidity of the Group is currently secured by the available cash and bank balances as well as sufficient lines of credit. Cash, including short-term investments in bonds, amounted to EUR 758.0 million as of the end of the financial year. Including short-term loans, short-term securities and financial liabilities, the Group presents a net debt amounted to EUR -338.7 million. Financial liabilities of EUR 1,135.7 million include EUR 628.3 million of loans from related parties and shareholders. The loans from shareholders essentially result from the profit and loss transfer agreement with ATON 2 GmbH the associated loans granted back, which are in principle available on a long-term basis. In addition, the Group and the individual companies have access to sufficient lines of credit and guarantee facilities from banks and credit insurers. As of the end of December 2019, the Group has at its disposal EUR 264.3 million unutilised lines of credit at banks and credit insurers.

The development of liquidity and available liquid funds is monitored and managed via weekly cash reports. 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 optimized at the level of the entire Group 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

Interest rate risks due to changes in the market interest rates primarily result from variable-rate loan liabilities. The Group addresses the risk through a mixture of fixed- and variable-rate financial liabilities. As of the end of the year, EUR 94.3 million of financial liabilities from banks were fixed-rate liabilities and EUR 143.2 million were variable-rate liabilities. In addition, EUR 628.3 million of fixed-rate financial liabilities to related parties and shareholders exists as of the end of the year. The low level of variable-interest 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 via local financing of the subsidiaries in the respective national currency. For further protection, foreign exchange futures are concluded at the level of the subsidiaries and the parent, as well as between the parent and the subsidiaries in individual cases.

Default risks

In order to limit default risks, there are a number of protective measures at the subsidiaries. In Germany, default risks are generally addressed by credit insurers, letters of credit and prepayments. Domestically and abroad, there are established credit check procedures at the subsidiaries. In the great majority of cases, customers are companies with high credit ratings operating in the automotive, commodities or medical industries and public entities. 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 mainly are equity ratios, leverage ratios and in individual cases, interest coverage ratios. If one of the agreed threshold of the covenants is violated, the lender has the right of termination. The existing covenants were complied with.

The loan with variable interest rate from Landesbank Hessen-Thüringen Girozentrale, which still existed in the previous year in the amount of EUR 225.0 million, was repaid in full during financial year 2019. As a result, there are no more contractual clauses regarding the limitation of the financial debt of the ATON Group and the financial debt of the ATON subsidiaries.

Other price risks

Another market risk is the price risk, being that prices for financial assets change unfavourably. Eligible risk variables are stock exchange prices or indices in particular. At the end of the financial year 2019, the Group has only EUR 258.5 million in securities at fair value through profit or loss, which mainly consists of commercial papers with no material price risk. The investments are actively managed and negative developments can thus be counteracted in good time.

For further explanation regarding the risk report and the risk management system, please refer to note **35. Objectives and methods of financial risk management** of the notes to the consolidated financial statements.

c) Risks of the segments

In addition to the aforementioned macroeconomic and financial risks, the individual segments are exposed to specific risks from operating activities.

Engineering

In the segment Engineering, project risks are in the foreground. Especially, large-scale projects are complex and executed in parallel in different countries. Sometimes the scope of the services is agreed upon only after an agreement on the total price has been reached. Occasionally, the scope of the 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 defects, thus straining the company's net assets and financial position and results of operations. Companies are able to detect and address such risks at an early stage by continuous project and risk management, constant project assessments as well as detailed reporting within the context of project steering committees.

The EDAG Group is in part strongly dependent on certain automotive manufacturers and hence on their long-term strategies and sales success.

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 executed 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, are deterioration in commodity prices as this may cause mine operators to abandon or delay projects and to cut back on capital investments. Furthermore, long delivery times for machinery could lead to delays of 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 as originally planned and that the desired expansion of market shares will not be achieved, and in the worst case even market shares will be lost. The Group counters this risk through continuous market and competition observations 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 increasing 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 taken into account; in case that the requirements are not complied with, this may lead to a ban on marketing the products. The Group counters this risk by continuously expanding the internally required regulatory expertise.

A fundamental risk arises from economic developments. With a downturn in economy, spendings 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, fluctuations in demand that are decoupled from the rest of the economy may also occur. The Group addresses this risk through accelerated internationalisation in order to minimize dependence on individual national markets.

Aviation

The aviation industry, like few other industries, is generally suffering acute consequences from almost every unexpected crisis. The airlines are affected by deterioration in the macroeconomic situation, fluctuations in raw material prices and changes in environmental regulations, as well as political crises and associated sanctions or embargoes, strikes or terrorist attacks. In addition, there are very recent the corona pandemic or also natural disasters such as in Australia, which are affecting air traffic volumes. Furthermore, the aviation industry is, of course, facing technical operational risks that may cause that flight operations cannot be carried out as scheduled, as well as the risk of air accidents involving damage to property and persons. In order to reduce the risk of air accidents due to the human factor in particular, the obligatory and additional safety trainings for pilots are carried out on a regular basis. Furthermore, insurance policy coverage is also available. Internal rules of procedure and the constant further development of the internal control system through extensive internal and external quality and compliance audits ensure that risks are identified at an early stage and avoided.

DC Aviation is specialises in the management and operation of business aircrafts and in the premium charter business. Experience has shown that the business aviation sector responds immediately to the economic situation. A slowdown in the economy has a direct impact on charter capacity utilization has an immediate impact on charter occupancy, which for DC Aviation entails a certain but controllable risk on earnings, while in the area of aircraft management the cost risk lies with the aircraft owners. However, the increasing profitability of our own hangar business helps to compensate for economic fluctuations, since the compulsory maintenance intervals of the aircraft must be followed independent of economic cycles.

d) Legal risks

After the squeeze-out of the external stockholders of W.O.M. World of Medicine AG the former minority shareholders have initiated legal proceedings (“Spruchverfahren”) to verify the adequacy of the compensation (“Barabfindung”) of EUR 12.72 per share in the meantime. The legal proceedings before the Regional Court of Berlin (“Landgericht Berlin”) are still pending. The duration and the outcome of the proceedings are still open. However, we assume that a decision will be made until end of 2020.

e) 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 causes 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 the 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.

Specifically, the corona crisis may give rise to macroeconomic risks that could lead to significant declines in economic growth worldwide. Risks for the ATON Group may not only affect the development of unit sales, but may also lead to significant adverse effects on production, provision of services, the procurement markets and the supply chain.

3. Opportunities

a) Opportunities in general

The subsidiaries of the ATON Group belong to 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

According to a study by IHS Markit, global automobile production fell by 5.8 % to 88.7 million units in 2019. The decline was evident in all regions of the world. A further decline of 0.5 % is expected for 2020, although possible negative effects from the Corona Virus have not yet been taken into account. Especially in the regions of Europe (-1.8 %), Japan / Korea (-1.2 %) and China (-0.8 %) and Middle East / Africa (-2.6 %) a further decrease in production volumes is expected. In contrast, production volumes in South America (+4.2 %) and North America (+1.3 %) are expected to rebound.

From 2021 onwards, an increase in the units produced and sold is expected again. According to IHS Markit, this growth will continue to shift from mature markets to emerging markets. The Chinese market will remain the largest sales market and continue to gain weight. The effects of the corona pandemic have not yet been taken into account here.

EDAG sees itself as well positioned in the market for engineering services for the future. Significant growth impulses are mainly generated by electro mobility. In addition to electro mobility, digitisation is the second major future trend in the automotive industry. The aim is to develop vehicles and production systems that make optimal use of the advantages of networking. It is expected that our segment Engineering will participate strongly in these positive trends.

Within the automotive sector, the EDAG Group is one of the top 3 independent engineering service provider. The resulting strengthened market position and the significantly expanded range of services will open up opportunities to strengthen existing customer relationships and build new ones.

Mining

The development of commodity prices is determined over the long term by the interaction between physical supply and demand. In the short term many other variables such as e.g. market sentiment or positioning speculative market participants have an influence on the price trend. Since 2016, commodity prices have moved volatile, but followed a sideways trend. This development continued in 2019. While the outlook for the global economy was still quite good at the beginning of the year, it deteriorated significantly during the further course of the year and put downward pressure on commodity prices. The precious metals gold, silver, platinum and palladium benefited from the interest rate cuts resulting from the expansionary monetary policy of the central banks. Since such a monetary policy is not expected to repeat in 2020 and it is assumed that the global economy will pick up again, we also expect commodity prices to move sideways in 2020, although geopolitical events can cause greater price fluctuations at any time (refer to “DEKA Macro - Research Economics Commodities” from December 2019 / January 2020).

In the medium to long term we expect the demand for commodities to recover. The consequent increase in commodity prices will result in a higher demand for mining contractor services. The services of the Redpath Group and the Murray & Roberts Group will see an increasing demand, as large mining operators will expand their mining operations in the long term.

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. The pressure to cut costs in the healthcare systems and increases in efficiency have the opposite effect.

The growth potential for the companies within ATON Group’s segment Med Tech 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 is made possible by the continuous promotion of technological innovations, which aims to ensure technology leadership.

Aviation

DC Aviation is licensed to operate an airline at four international locations. The company owns its own "AOC" (Aircraft Operating Certificate) at all four destinations, i.e. it owns a national license to operate as a commercial air carrier. The same applies to the permission to handle private aircrafts under a so-called "FBO" (Fixed Base Operator) as a handling agent and to offer various ground services up to refuelling (as in the case of Dubai). The provision of technical services Finally, under an "MRO" license (maintenance, repair, overhaul) takes place in Stuttgart and the United Arab Emirates, in the case of Dubai in cooperation with Lufthansa Technik AG.

In particular, the aviation operator's certificate in Malta opens up additional market opportunities for DC Aviation to acquire European customers who do not wish to register their aircraft in Germany or, very acutely, seek a new location due to the unpredictable implications of the Brexit process. DC Aviation has a reputation for excellence and safety in the business aviation industry. Based on this, it is the company's goal to continuously expand its fleet strength by acquiring renowned corporate clients and private individuals.

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 as well as the macroeconomic 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 the spread of the coronavirus and its effects on the global economy have changed negatively the ATON Group's overall risk situation compared to the previous year. The further progress of the crisis cannot be foreseen, so that a final risk assessment is not possible at the present time. Due to the diversified composition of the Group and the available liquid funds, however, no risks should arise for the Group as a going concern.

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 initiative. A complete exclusion of those risks would only be possible by stopping business activities, insofar the acceptance of risks is part of entrepreneurial action.

The primary objective of the risk management is to ensure the success and going concern of the companies. Risks and opportunities of the individual subsidiaries have to be identified, evaluated, and any risks that potentially endanger the success of companies have to be limited or eliminated.

The subsidiaries of the ATON GmbH operate in different industries, 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 from the respective management board of the subsidiaries 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 on an ad-hoc basis to the ATON holding by the management boards of the subsidiaries. In addition, economic, legal, technical and other risks are assessed every six months and discussed with the ATON holding.

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 the individual companies respectively. For this reason, risk management and implementation of opportunities is planned and controlled by the companies and agreed with the holding company in short- and medium-term strategy and financial planning meetings. Monitoring of key financial data is performed weekly respectively monthly by means of financial reporting by the individual companies, which are analysed for deviations from the holding company. 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 internal control system of the ATON Group is designed to ensure that the (accounting-related) Group wide reporting processes are consistent, transparent and reliable as well as in compliance with legal standards and the company's own guidelines. It comprises principles, procedures and methods designed to reduce risk and ensure the effectiveness and accuracy of processes.

The Group's management board bears the overall responsibility for the internal control system and risk management with regard to the consolidated accounting process. All companies included in the consolidated financial statements are embedded in a defined management and reporting organisation. Areas of responsibility related to accounting are clearly structured and assigned by the ATON Group. The central units of the ATON

GmbH, as well as the Group companies, are responsible for carrying out the accounting processes in an adequate way. Major processes and deadlines are defined Group wide by the ATON GmbH.

Beyond that, the accounting of the ATON Group is decentralised. For the most part, accounting duties are performed by the consolidated companies at their own responsibility. The audited financial information 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 acting employees hold the necessary qualifications; case-related external experts are also involved. Control activities at Group level include analysing and, if necessary, adjusting the data reported in the financial information presented by the subsidiaries. The Group management report is centrally prepared in accordance with the applicable requirements and regulations with 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 from unauthorized access. Access rights are assigned according to the functions.

Based upon documented processes, risks and controls, the internal control 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 concerning 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 effects of the corona crisis, which cannot yet be finally assessed.

Munich, 28 April 2020

ATON GmbH
Management Board

[original German version signed by:]

Georg Denoke | Jörg Fahrenbach

ATON GmbH, Munich

CONSOLIDATED FINANCIAL STATEMENTS AS OF 31 DECEMBER 2019

(Translation – the German text is authoritative)

CONSOLIDATED INCOME STATEMENT 2019

in EUR '000	Note	2019	2018
Revenue	6	2,040,301	2,461,602
Changes in inventories and own work capitalised	7	1,436	5,387
Other operating income	8	405,616	211,648
Cost of materials	9	-570,568	-892,370
Personnel expenses	10	-1,025,021	-1,094,259
Impairment losses / reversal of impairment losses on financial assets	22, 23, 24	-8,025	-3,444
Depreciation and amortisation	17, 18	-153,004	-109,880
Other operating expenses	11	-284,007	-357,817
Earnings before interest and taxes (EBIT)		**406,728**	**220,867**
Result from investments accounted for using the equity method	12	14,208	14,155
Other investment result	13	-83,341	-25
Interest income	14	4,677	4,702
Interest expense	14	-23,128	-23,643
Other financial result	15	-13	-12,994
Financial result		**-87,597**	**-17,805**
Earnings before income taxes (EBT)		**319,131**	**203,062**
Income taxes	16	-22,994	-35,084
Profit or loss for the period from continuing operations		**296,137**	**167,978**
Profit or loss for the period (EAT)		**296,137**	**167,978**
attributable to non-controlling interest		372	1,204
attributable to owners of the parent		**295,765**	**166,774**

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME 2019

in EUR '000	Note	2019	2018
Profit or loss for the period		**296,137**	**167,978**
attributable to non-controlling interest		372	1,204
attributable to owners of the parent		295,765	166,774
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	11,337	- 7,876
Amount reclassified to profit or loss due to the sale of Group companies		3,680	-
Cash flow hedges			
Gains (+) / losses (-) from cash flow hedges recognised in other comprehensive income	36	- 6,462	- 8,039
Amount reclassified to profit or loss due to income statement impact of underlying transaction		4,148	5,689
Deferred taxes on gains / losses from cash flow hedges	16	694	705
Amount reclassified to profit or loss due to the sale of Group companies		3,265	-
		16,662	**- 9,521**
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	- 7,149	896
Deferred taxes on remeasurements of defined benefit plans	16	1,841	- 231
		- 5,308	**665**
Other comprehensive income before income taxes		**8,819**	**- 9,330**
Income taxes on other comprehensive income		**2,535**	**474**
Other comprehensive income, net of income taxes		**11,354**	**- 8,856**
attributable to non-controlling interest		- 1,465	262
attributable to owners of the parent		12,819	- 9,118
Total comprehensive income for the period		**307,491**	**159,122**
attributable to non-controlling interest		- 1,093	1,466
attributable to owners of the parent		308,584	157,656

CONSOLIDATED BALANCE SHEET AS OF 31.12.2019

Assets **in EUR '000**	**Note**	**31.12.2019**	**31.12.2018**
Goodwill	17	256,881	269,469
Other intangible assets	17	132,810	165,235
Property, plant and equipment	18	546,735	361,001
Reparable aircraft spare parts		830	542
Other financial assets	22	76,818	61,166
Investments accounted for using the equity method	21	164,893	227,025
Trade and other receivables	23	6,268	5,142
Deferred tax assets	16	16,168	14,699
Non-current assets		**1,201,403**	**1,104,279**
Inventories	25	108,016	153,571
Trade and other receivables	23	376,738	419,464
Other financial assets	22	269,101	18,005
Income tax receivables	16	4,704	9,193
Contract assets	24	92,135	289,695
Cash and cash equivalents	26	527,886	559,309
		1,378,580	1,449,237
Assets held for sale	27	3,075	-
Current assets		**1,381,655**	**1,449,237**
Total assets		**2,583,058**	**2,553,516**

CONSOLIDATED BALANCE SHEET AS OF 31.12.2019

Equity and liabilities in EUR '000	**Note**	**31.12.2019**	**31.12.2018**
Equity attributable to owners of the parent *	28	924,583	1,134,876
Non-controlling interest	28	31,286	44,030
Equity	28	**955,869**	**1,178,906**
Provisions for pensions	29	50,188	45,769
Provisions for income taxes	30	47	378
Other provisions	30	5,993	6,991
Financial liabilities	31	350,661	222,378
Trade and other payables	32	9,915	9,049
Deferred tax liabilities	16	54,365	76,104
Contract liabilities	24	57,775	64,885
Non-current liabilities		**528,944**	**425,554**
Provisions for income taxes	30	7,673	5,254
Other provisions	30	18,847	28,547
Financial liabilities	31	785,033	435,351
Trade and other payables	31	226,374	341,305
Income tax liabilities	16	7,920	9,193
Contract liabilities	24	49,323	129,406
		1,095,170	949,056
Liabilities associated with assets held for sale	27	3,075	-
Current liabilities		**1,098,245**	**949,056**
Total equity and liabilities		**2,583,058**	**2,553,516**

* Regarding the information of issued capital and reserves please refer to the statement of changes in equity.

STATEMENT OF CHANGES IN EQUITY AS OF 31.12.2019

	Equity attributable to owners of the parent								
				Other comprehensive income					
in EUR '000	**Share capital**	**Capital reserve**	**Retained earnings incl. profit or loss**	**Currency translation differ-ences**	**Cash flow hedges**	**Remea-surements of defined benefit plans**	**Total**	**Non-control-ling interest**	**Equity**
Balance as of 1st January 2018	**15,000**	**629,168**	**525,575**	**- 29,938**	**-**	**- 3,504**	**1,136,719**	**55,980**	**1,192,699**
Restatement IFRS 9 / 15	-	-	220	-	-	-	- 198	- 52	- 250
Balance as of 1st January 2018	**15,000**	**629,168**	**525,795**	**- 29,938**	**-**	**- 3,504**	**1,136,521**	**55,928**	**1,192,449**
Equity transactions with shareholders									
	-	-	- 13,255	-	-	-	- 13,255	- 6,897	- 20,152
Dividend payments	-	-	- 146,046	-	-	-	- 146,046	- 6,467	- 152,513
	-	-	- 159,301	-	-	-	- 159,301	- 13,364	- 172,665
Total comprehensive income for the period									
Other comprehensive income, net of income taxes 2018	-	-	-	- 8,089	- 1,645	616	- 9,118	262	- 8,856
Profit or loss 2018	-	-	166,774	-	-	-	166,774	1,204	167,978
	-	-	166,774	- 8,089	- 1,645	616	157,656	1,466	159,122
Balance as of 31 December 2018	**15,000**	**629,168**	**533,268**	**- 38,027**	**- 1,645**	**- 2,888**	**1,134,876**	**44,030**	**1,178,906**
Balance as of 31 December 2018	**15,000**	**629,168**	**533,268**	**- 38,027**	**- 1,645**	**- 2,888**	**1,134,876**	**44,030**	**1,178,906**
Restatement IFRS 16 *	-	-	- 50	-	-	-	- 50	11	- 39
Balance as of 1st January 2019	**15,000**	**629,168**	**533,218**	**- 38,027**	**- 1,645**	**- 2,888**	**1,134,826**	**44,041**	**1,178,867**
Equity transactions with shareholders									
Changes in the scope of consolidation	-	- 5,813	10,161	3,680	3,265	1,268	12,561	- 3,724	8,837
Acquisition of non-controlling interest	-	-	- 1,788	-	-	-	- 1,788	- 1,867	- 3,655
Profit transfer to shareholders / dividend payments	-	-	- 522,655	-	-	-	- 522,655	- 6,071	- 528,726
	-	- 5,813	- 514,282	3,680	3,265	1,268	- 511,882	- 11,662	- 523,544
Total comprehensive income for the period									
Other comprehensive income, net of income taxes 2019	-	-	-	11,479	- 1,620	- 3,985	5,874	- 1,465	4,409
Profit or loss 2019	-	-	295,765	-	-	-	295,765	372	296,137
	-	-	295,765	11,479	- 1,620	- 3,985	301,639	- 1,093	300,546
Balance as of 31 December 2019	**15,000**	**623,355**	**314,701**	**- 22,868**	**-**	**- 5,605**	**924,583**	**31,286**	**955,869**

* Please refer to the disclosures in chapter 2.2. of the notes to the interim consolidated financial statements.

CONSOLIDATED STATEMENT OF CASH FLOWS 2019

in EUR '000	Note	2019	2018
Income before interest, dividends and income taxes	33	337,108	219,781
Income taxes paid	16	- 26,593	- 38,931
Interest paid		- 22,712	- 20,978
Interest received		4,045	4,194
Dividends received		3,666	10,557
Depreciation and amortisation / write-ups of assets		236,774	124,374
Change in provisions		720	10,713
Other non-cash transactions		- 8,156	- 8,957
Result from the disposal of property, plant and equipment		- 849	- 910
Result from the disposal of securities		- 150	- 462
Result from the disposal / deconsolidation of consolidated subsidiaries	5	- 348,424	- 156,494
Change in other assets		- 43,837	71,530
Change in other liabilities		637	11,248
Cash flow from operating activities		**132,229**	**225,665**
Investments in intangible assets	17	- 11,433	- 11,779
Proceeds from the disposal of intangible assets		114	31
Investments in property, plant and equipment	18	- 63,506	- 120,550
Proceeds from the disposal of property, plant and equipment		13,621	14,888
Investments in financial assets / associates		- 310,060	- 93,966
Proceeds from the disposal of financial assets		44,921	86,811
Cash outflow from the acquisition of consolidated subsidiaries	5	- 192	-
Cash inflow (previous year: cash inflow) from the disposal of consolidated subsidiaries	5	466,374	212,495
Cash flow from investing activities		**139,839**	**87,930**
Proceeds from shareholders		195,000	-
Payments to shareholders		- 262,117	- 6,467
Payments for the acquisition of non-controlling interest	28	- 3,655	- 20,152
Repayments of lease liabilities		- 46,772	- 17,904
Proceeds from bank loans		153,936	609,139
Repayments of bank loans		- 345,571	- 503,363
Cash flow from financing activities		**- 309,179**	**61,253**
Change in cash and cash equivalents		- 37,111	374,848
Effect of changes in exchange rates		5,688	- 2,910
Cash and cash equivalents at the beginning of the period		559,309	187,371
Cash and cash equivalents at the end of the period	26	**527,886**	**559,309**

Notes to the consolidated financial statements 2019

Contents

1. General information

ATON GmbH (ATON GmbH 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 193331.

ATON GmbH and its subsidiaries (collectively, the "Group") are organised on a global basis 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 GmbH as of 31 December 2019 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, applicable on the reporting date and as adopted by the European Union, and with the interpretations of the International Financial Reporting Interpretations Committee (IFRIC).

The annual financial statements of ATON GmbH, which were certified with an unqualified auditor's report by Deloitte GmbH Wirtschaftsprüfungsgesellschaft, Munich, and the consolidated financial statements of ATON GmbH are submitted to the operator of the electronic Federal Gazette. The consolidated financial statements of ATON GmbH for the financial year 2019 were authorised for publication by a management resolution on 28 April 2020. Under the relevant statutory provisions, the shareholders still have the option in theory of making changes to the financial statements. Dr. Lutz Helmig exercises control over the Group.

The consolidated financial statements are prepared in Euro. Unless indicated otherwise, all amounts are rounded up or down to the nearest k EURO in accordance with normal commercial practice. Rounding may give rise to 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 have been combined in order to achieve greater 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 the maturity of the assets and liabilities. Assets and liabilities are treated as current if they are due within one year or within the normal business cycle of the company or of the Group, or if they are intended to be sold. Deferred tax assets and liabilities are principally presented as non-current, as are provisions for pensions.

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 accounting policies that are consistently applied throughout 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 in connection with pension obligations.

2.2. Application of new, amended and 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 all accounting pronouncements adopted by the EU and required to be applied as from 1 January 2019. The Group has not early adopted any other standard, interpretation or amendment that has been issued but is not yet effective. Only IFRS 16 “Leases” had a material effect:

IFRS 16 „Leases“

The ATON Group applies the provisions of IFRS 16 "Leases" for the first time since 1 January 2019. The standard contains a comprehensive model for identifying lease agreements and accounting for lessors and lessees. The provisions of IFRS 16 are 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 and the comparative period is not restated. The comparative period is therefore reported in accordance with IAS 17 and IFRIC 4.

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 makes 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

For lessees, the previous distinction between operating leases and finance leases is eliminated. Instead, the lessee has to recognize the right-of-use of a leased asset (so-called right-of-use 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.

The accounting for leases that are not subject to the exemptions / practical expedients is set out below. 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 recognized in profit or loss.

The ATON Group applies IFRS 16 modified retrospectively.

For leases classified as **finance leases** applying IAS 17, the carrying amount of the right-of-use asset and lease liability remain unchanged during the transition to IFRS 16 as of 1 January 2019 compared to the carrying amounts in accordance with IAS 17 as of 31 December 2018.

For leases classified as **operating leases** applying IAS 17, the Group has made use of the following practical expedients:

- Use of the short-term lease exemption for all leases with a remaining term of less than 12 months as of 1 January 2019,
- Use of the exemption for low value asset leases,
- Regarding the valuation of the right-of-use asset initial direct costs are excluded from the measurement of the right-of-use asset on transition,
- Application of a single discount rate to a portfolio of leases with reasonably similar characteristics,
- No impairment test. Instead, the right-of-use asset as of 1 January 2019 is adjusted by the amount of the provision for onerous leases as of 31 December 2018,
- Use of hindsight.

The lease liabilities recognised as of 1 January 2019 are measured at the present value of the remaining lease payments, discounted at the interest rate implicit in the lease applicable at that time. The Group has decided on the basis of the individual lease,

- whether the right-of-use asset is recognised in the amount of the lease liability or
- at the book value that would have resulted, had IFRS 16 been applied since the beginning of the lease.

The Group as a lessor

For lessors, the accounting principle known from IAS 17 "Leases" remains fundamentally unchanged making a distinction between finance and operating leases. The criteria catalogue for the assessment of a finance lease was adopted unchanged from IAS 17. For the Group as a lessor, this means that there are basically no effects regarding the accounting for leases. Sub-leases are an exception. Interim lessors classify 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 sublease rather than the underlying leased asset by the principal lessor. This change did not have any impact on the Group.

Impact of the application of IFRS 16

The modified retrospective application of IFRS 16 had the following effects on the following balance sheet items as of 1 January 2019:

in EUR '000	Change as of 1.1.2019
Intangible assets	+ 237,569
Deferred tax assets	-17
Trade and other receivables	-199
Retained Earnings	-39
Financial liabilities (from leasing)	+237,392

As a result of the increase in balance sheet total, the equity ratio fell by around 3.9 %. The application of IFRS 16 will lead to an improvement in the result from ordinary activities (EBIT) from 2019 onwards, on the other hand the financial result will be lower due to the interest effect of the lease liabilities, so that we do not expect any major effects on the consolidated profit or loss for the period (EAT).

When measuring lease liabilities for leases that were classified as operating leases, the Group discounted lease payments using its incremental borrowing rate at 1 Januar 2019. The weighted-average rate applied is 2.9 %.

The following table shows a reconciliation of the future minimum lease payments from operating leases recognized as of 31 December 2018 in accordance with IAS 17 to the lease liabilities in accordance with IFRS 16 recognized for the first time on 1 January 2019:

in EUR '000	Minimum Lease Payments according to IAS 17 as of 31.12.2018				Lease Liability according to IFRS 16 as of 1.1.2019	Explanation of the difference			
	< 1 year	1 - 5 years	over 5 years	Total		Discounting	Short-term leases	Low-value leases	Others effects
Real estate, land rights and buildings	33.514	79.769	73.554	**186.837**	230.003	-29.405	-2.081	-14	74.666
Machinery and equipment	4.262	919	174	**5.355**	1.868	-232	-48	0	-3.207
Fixtures and fittings	7.043	6.502	0	**13.545**	5.521	-576	-712	-5.126	-1.610
Total	**44.819**	**87.190**	**73.728**	**205.737**	**237.392**	**-30.213**	**-2.841**	**-5.140**	**69.849**

The other effects mainly result from the fact that extension options for leased real estate, land rights and buildings as of 31 December 2018 were not included in the disclosure requirements under IAS 17, but are now considered calculating the leasing liabilities under IFRS 16.

For further details, please refer to note **19. The Group as lessee**.

New and amended standards and interpretations not applied

Standards/ amendments		**EU Endorsement**	**Mandatory application*[1)]**	**Expected effect**
Amendments to IFRS 3	Amendments to IFRS 3 regarding the definition of a business	Yes	01.01.2020	No material effects
Amendments to IFRS 9, IAS 39 and IFRS 7	Interest Rate Benchmark Reform	Yes	01.01.2020	No material effects
Amendments to IAS 1 and IAS 8	Definition of Materiality	Yes	01.01.2020	No material effects
	Amendments to References to the Conceptual Framework in IFRS Standards	No	01.01.2020	No material effects

* Mandatory application in accordance with IFRSs 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 GmbH, the consolidated financial statements include all material subsidiaries. Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group 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 Group gains control. When the control ceases, the Group deconsolidates the subsidiary as of this date.

All business combinations are accounted for using the acquisition method. The cost of a business acquisition is measured according to the fair values of the assets acquired and the liabilities entered into 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 interest in equity. Non-controlling interest is measured either at its fair value (full goodwill method) or at its 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 interest.

Any contingent consideration to be transferred by the Group is recognised at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration that is deemed to be an asset or liability are measured and a resulting profit or loss is recorded in the income statement.

In cases where business acquisitions are achieved in stages, the equity share acquired before is remeasured at the fair value at the acquisition date. Transactions not resulting in a loss of control are recorded as equity transactions with no effect on profit or loss for non-controlling interest. At the date on which control is lost, all remaining shares are remeasured at their fair value through profit or loss.

Intercompany profit or losses and income, expenses arising from transactions within the scope of consolidation are eliminated, as are receivables and liabilities existing between consolidated companies. Unrealised gains and losses in non-current assets and in inventories arising from intra-Group transactions are removed. Consolidation entries with effect on profit or loss are recorded together with the related deferred tax effect.

Transactions with non-controlling interest that do not result in loss of control are accounted for as equity transactions – that is, as transactions with the owners in their capacity as owners. The difference between the fair value of any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary resulting from the acquisition of a non-controlling interest is recorded in equity. Gains or losses on disposals to non-controlling interest are also recorded in equity.

When the Group ceases to have control any retained interest in the entity is remeasured to its fair value at the date when control is lost, with the change in carrying amount recognised in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest 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 or liabilities. This may mean 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 which is not an interest in a joint venture. Excluded are investments in associates, which are accounted for under IFRS 5 as non-current assets held for sale and discontinued operations.

Based on the acquisition cost at the time of acquiring the shares in an associate, the relevant book value of the participation is increased or reduced to take account of the proportional profits or losses, reduced by dividends received by the ATON Group and movements in other comprehensive income as are allocable to the ATON Group. Goodwill arising from the acquisition of an associate is included in the book value of the investment and is not amortised; rather it is tested for impairment as part of the overall investment in the associate.

If the ATON Group’s share of losses of an investment accounted for using the equity method equals or exceeds its interest in the associate, no further losses are recognised, unless the Group has incurred legal or constructive obligations or made payments on behalf of the associate.

Unrealised intercompany profits and losses resulting from transactions by the Group companies with associates are eliminated proportionally in the profit or loss of the Group.

The Group tests at each reporting date whether there is any objective evidence that an impairment loss must be recognised in profit and loss regarding an investment accounted for using the equity method. If such evidence exists, the Group calculates the impairment loss as the difference between the book value and the recoverable amount.

Joint arrangements

Under IFRS 11 investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations. The ATON Group has assessed the nature of its joint arrangements and determined them to be joint ventures. Joint ventures are accounted for using the equity method. Regarding the accounting companies using the equity method, please refer to the explanations for associated companies.

The companies included in the consolidated Group as of 31 December 2019 are as follows:

	Germany	International	Total	31.12.2019
Fully consolidated companies	14	73	87	113
Associates	1	2	3	3
Joint ventures	13	8	21	19
Fully consolidated companies (at fair value)	4	3	7	12
Companies within the scope of consolidation	**32**	**86**	**118**	**147**

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 classified to be of minor significance if their cumulated share of revenue, annual results and total assets amount to less than 1 % of consolidated revenue, annual result and total assets, and therefore, they are not relevant for the presentation of a true and fair view of the Group's net assets, financial position, and profit or loss, 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 satisfied the necessary conditions in accordance with Section 264 (3) and Section 264b HGB for making use of the exemption provision and therefore do not publish their annual financial statements either:

Name of company	Registered office
EDAG Productions Solutions GmbH & Co. KG	Fulda
Reform Maschinenfabrik Adolf Rabenseifner GmbH & Co. KG	Fulda

2.4. Currency translation

The consolidated financial statements are prepared in Euro, the reporting currency of ATON 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 separate 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 expressed in a foreign currency are translated at the closing rate. Non-monetary assets and liabilities measured at fair value and whose amount is expressed 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. Changes in whose 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 with respect to the translation at closing rates are reported separately in equity and in the disclosures 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 financial statements in foreign currencies in relation to the Euro have developed as follows (in each case for 1 EUR):

Country	Currency		2019		2018	
	Units per Euro		Closing rate	Average rate	Closing rate	Average rate
Australia	Dollar	AUD	1.5995	1.6109	1.6220	1.5797
Brazil	Real	BRL	4.5157	4.4134	4.4440	4.3085
China	Renminbi	CNY	7.8205	7.7355	7.8751	7.8081
United Kingdom	Pound	GBP	0.8508	0.8778	0.8945	0.8847
India	Rupee	INR	80.1870	78.8361	79.7298	80.7332
Japan	Yen	JPY	121.9400	122.0100	125.8500	130.4000
Canada	Dollar	CAD	1.4598	1.4855	1.5605	1.5294
Korea	Won	KRW	1,296.2800	1,305.3200	1,277.9300	1,299.0700
Malaysia	Ringgit	MYR	4.5953	4.6374	4.7317	4.7634
Mexico	Peso	MXN	21.2202	21.5565	22.4921	22.7054
Namibia	Dollar	NAD	15.7328	16.1519	16.4845	15.5882
Norway	Krone	NOK	9.8638	9.8511	9.9483	9.5975
Poland	Zloty	PLN	4.2568	4.2976	4.3014	4.2615
Romania	Leu	RON	4.7830	4.7453	4.6635	4.6540
Russian Federation	Ruble	RUB	69.9563	72.4553	79.7153	74.0416
Zambia	Kwacha	ZMW	15.5485	14.4124	13.6637	12.3448
Sweden	Krona	SEK	10.4468	10.5891	10.2548	10.2583
Switzerland	Franc	CHF	1.0854	1.1124	1.1269	1.1550
Singapore	Dollar	SGD	1.5111	1.5273	1.5591	1.5926
South Africa	Rand	ZAR	15.7773	16.1757	16.4594	15.6186
Czech Republic	Koruna	CZK	25.4080	25.6700	25.7240	25.6470
Hungary	Forint	HUF	330.5300	325.3000	320.9800	318.8900
USA	Dollar	USD	1.1234	1.1195	1.1450	1.1810

3. Summary of significant accounting policies

3.1. Goodwill

Goodwill is not amortised but is tested annually for impairment. An impairment test is also carried out during the financial year if events or circumstances (triggering events) occur giving rise to indications of possible impairment. Goodwill is reported on the basis of its purchase cost at the date of acquisition and measured in subsequent periods at its purchase cost less all 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 firstly to reduce 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. 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 1.0 % p.a. Individual discount rates for the particular cash-generating units between 4.1 % and 10.0 % (previous year: 6.0 % and 9.7 %) 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 two and fifteen 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 60
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 2019 no investment properties exist.

3.7. Leases

The Group as lessee

Leases are classified as finance leases if substantially all of the risks and rewards associated with the ownership of the asset are transferred to the lessee under the lease agreement. All other leases are classified as operating leases. The rules described in this section also apply to sale and leaseback transactions.

Assets held under the terms of a finance lease are initially recognised as assets of the Group at their fair value at the start of the lease or, if lower, the present value of the minimum lease payments. The corresponding liability to the lessor is reported in the balance sheet as an obligation from finance leases. The lease payments are divided into interest expense and repayment of the lease commitment in such a way that the interest on the remaining liability remains constant. The interest expense is recorded directly in the income statement. Contingent rents are recognised as an expense in the period in which they arise.

Rental payments under operating leases are expensed on a straight-line basis over the term of the lease, unless another systematic basis is more representative of the time pattern of the lessee's benefit. Contingent rents under the terms of an operating lease are recorded as an expense in the income statement in the period in which they arise.

In cases where incentives to enter into an operating lease have been received, those incentives are recorded as a liability. The cumulative benefit of incentives is recognised on a straight-line basis as a reduction of the rental payments, unless another systematic basis is more representative of the time pattern of the benefit from the leased asset.

The Group as lessor

Leases under which substantially all the risks and rewards of ownership 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.

Since 1 January 2019, leases are accounted for in accordance with the new standard IFRS 16. We refer to our explanations in note **2.2. Application of new, amended or revised standards**.

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 recognized 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 finan-

cial 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 recognized, 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, the construction of transport frames for the aviation industry.
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.

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.
Industrial plasma	x			The Group realises revenues when made available to the customer, as the power of disposition is regularly transferred to the customer at this time. The contracts are customary in the industry, so that they do not contain a significant financing component.

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 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 recognized. 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.

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, estimates and assumptions 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 estimates and assumptions are based on the state of knowledge available at the time in the particular case. Due to the uncertainty associated with these estimates and assumptions, however, outcomes may occur, which result in future adjustments to the carrying amounts of the assets and liabilities affected.

The material estimates listed below and the associated assumptions together with the uncertainties attaching to the 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 necessary in the case of the 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 date of acquisition. The expected useful lives of the assets must also be estimated. The determination of the fair value of assets and liabilities and of the useful lives of the assets is based on the management's assessments.

Impairment of goodwill

The Group tests goodwill for possible impairment at least once a year. The calculation 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-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 most important assumptions underlying the determination of the discounted cash flows comprise estimated growth rates, weighted interest rates and tax rates. These premises can have a significant effect on the relevant amounts and therefore on the extent to which goodwill is impaired.

Impairment of property, plant and equipment and intangible assets

The identification of indications that an asset may be impaired, the estimation of future cash flows and the determination of the fair values of assets or groups of assets require significant assessments by management regarding the identification and review of signs of impairment, the expected cash flows, the appropriate discount rates, the respective useful lives and any residual values.

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

For some companies, in particular within the FFT Group (until May 2019), the EDAG Group and the Redpath Group, revenue is recognised for huge portion of the business on a time-related basis. In the construction projects business, revenue is often recognised over the period of time that the performance obligation is satisfied. In order to determine the progress towards complete satisfaction of the performance obligation, 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 under 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 scales and the default probabilities recorded there. In a changing market and competitive environment, the estimate of the creditworthiness of a debtor made at the reporting date may differ during the course of the year. The recognized risk allowance can thus be recorded too low / high. Furthermore, the probability of default represents a statistical measure, which may also require adjustments to 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-looking information. The forward-looking information has proved to be a suitable indicator of the level of impairment 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 recording of risk allowances. In addition, material effects from the past can distort the risk allowance, which may also necessitate 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 achievable at the reporting date for currency and term congruent high-quality corporate bonds. As a result of the changing situation in the market and the economy and the long-term orientation of these pension plans, the underlying premises 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 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 FFT (until May 2019), 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

Assets and liabilities from finance leases are initially recognised at the lower of their fair value and the present value of the minimum lease payments. The determination of the fair value generally requires estimates to be made with respect to the cash flows from the use of the leased asset and with respect to the discount rate applied. The present value of the minimum lease payments is calculated using the lessor's internal rate of return. If the lessor's internal rate of return is not available, it is derived from the interest rate at which the total lease payments including any unguaranteed residual value must be discounted in order for the resulting present value to be equal to the fair value of the leased asset at the inception of the lease. The estimate of the unguaranteed residual value requires assumptions to be made which may differ from the actual residual value on expiry of the lease.

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, which are selected from a variety of methods. The underlying assumptions are based, to the greatest possible extent, 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 will be able to 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 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.

5. Changes in the scope of consolidation

The following changes in the scope of consolidation and in terms of associated companies took place in the reporting period:

The Innu-Inuit Redpath Limited Partnership, North Bay / Canada, was founded as a joint venture. 33.0 % of the shares are held via Redpath Group.

Effective 1 January 2019, Ziehm Medical LLC, Reno, Nevada / USA, was dissolved.

Effective 1 January 2019, BFFT Gesellschaft für Fahrzeugtechnik mbH, Gaimersheim, was merged to BFFT Holding GmbH, Wiesbaden.

Effective 1 January 2019, BFFT Holding GmbH, Wiesbaden, was merged to EDAG Engineering GmbH, Wiesbaden.

Effective 1 January 2019, BFFT Italia S.R.L., Bolzano / Italy was merged to EDAG Italia S.R.L., Turin / Italy.

ATON TS GmbH, Munich, was merged to ATON GmbH, by the merger agreement signed on 20 February 2019. This intragroup transaction had no effect on the consolidated financial statements.

Effective 22 February 2019, Redpath Thonket Mining Services Ghana Limited, Atwima Kumasi / Ghana, was founded as a joint venture. 49.0 % of the shares are held via Redpath Group.

NextRay LLC, Wilmington, Delaware / USA, was dissolved on 25 February 2019.

Effective 8 April 2019, ATON US Inc., Scottsdale, Arizona / USA, and OrthoScan Inc., Scottsdale / Arizona, USA, were contributed into Ziehm Imaging GmbH, Nuremberg. This intragroup reorganisation had no effect on the consolidated financial statements.

ATON Group Finance GmbH, Going am Wilden Kaiser / Austria, was merged with ATON Austria Holding GmbH, Going am Wilden Kaiser / Austria, retrospectively effective as of 1 January 2019 due to the merger agreement signed on 3 April 2019. This intragroup transaction had no effect on the consolidated financial statements.

Effective 2 May 2019, DC Aviation Switzerland AG, Glattbrugg / Switzerland was sold for a price of EUR 3,550k. The subsidiary, which was previously measured at fair value in accordance with IFRS 9, was accounting for with a carrying amount of EUR 2,135k at the time of the sale. This resulted in a disposal gain of EUR 1,415k, which is presented as other investment result.

On 29 May 2019, the closing of the share purchase agreement regarding the sale of FFT GmbH & Co. KGaA, Fulda, and thus the entire FFT Group, took place. The selling price was EUR 560,938k. The resulting disposal of net assets amounts to EUR 221,841k. This included non-current assets in the amount of EUR 73,723k, current assets in the amount of EUR 427,009k (cash and cash equivalents therein with an amount of EUR 94,564k), non-current liabilities in the amount of EUR 24,383k and current liabilities in the amount of EUR 254,508k. In addition, FFT Group's other comprehensive income from currency translation adjustments and a cash flow hedge reserve were recycled through profit or loss. Furthermore, an investment accounted for using the equity method held by the EDAG Group in the amount of EUR 17,427k and previously consolidated net receivables of other Group companies from FFT in the amount of EUR 630k are recognised again. Overall, this resulted in a deconsolidation gain of EUR 348,424k.

On 3 June 2019, EDAG Holding GmbH, Munich, was acquired by ATON GmbH at a price of EUR 42k, then accounted for at fair value in accordance with IFRS 9 and consequently merged to ATON GmbH based on the merger agreement also dated 3 June 2019. At the time of the merger, the company held non-current assets amounting to EUR 35k and cash and cash equivalents amounting to EUR 35k. On the other side, the company held current liabilities of EUR 23k.

Effective 30 June 2019, VR Leasing Malakon GmbH & Co. Immobilien KG, Eschborn, was dissolved.

ATON FinCo GmbH, Going am Wilden Kaiser / Austria, was merged with ATON Austria Holding GmbH, Going am Wilden Kaiser / Austria, retrospectively effective as of 1 January 2019 due to the merger agreement signed on 4 July 2019. This intragroup transaction had no effect on the consolidated financial statements.

Associated Mining Construction UK Limited, Birmingham / Great Britain, was dissolved on 17 July 2019.

On 10 April 2018, the ATON Group made a voluntary takeover offer in cash for the listed company Murray & Roberts Holding Limited, Bedfordview, South Africa. Until the transfer of the voluntary takeover offer into a mandatory takeover offer on 5 June 2018, the interest in the target company was increased to 43.8 %. The long stop date for the voluntary takeover offer was extended twice and has expired on 30 September 2019. Thus this did not lead to the expected acquisition of control.

Effective 1 October 2019, Deilmann-Haniel GmbH was renamed and operates now under the company name of Redpath Deilmann GmbH.

On 30 October 2019, Ziehm Imaging Spain, S.L., Valencia / Spain was acquired at a purchase price of EUR 247k. The acquisition led to a net cash outflow in the amount of EUR 185k. The acquisition resulted in additional non-current assets in the amount of EUR 57k, current assets in the amount of EUR 310k (thereof cash and cash equivalents in the amount of EUR 62k), non-current liabilities in the amount of EUR 2k and current liabilities in the amount of EUR 161k. No hidden reserves or hidden liabilities were identified. A goodwill amounting to EUR 43k resulted from the initial consolidation.

On 6 November 2019 DC Aviation G-OPS S.A.S., Paris / France, was founded as a joint venture. 50.0 % of the shares are held via DC Aviation.

On 25 November 2019, ATON Digital Services GmbH, Munich, was acquired as a shelf company, which is a direct subsidiary of ATON GmbH. The acquisition price was EUR 28.5k, the net assets amounted to EUR 25k. The difference from initial consolidation in the amount of EUR 3.5k was recognised in profit or loss for reasons of materiality.

On 26 November 2019, AspiAir GmbH, Munich, was acquired as a shelf company, which is a direct subsidiary of ATON GmbH. The purchase price was EUR 28.5k, the net assets amounted to EUR 25k. The difference from initial consolidation in the amount of EUR 3.5k was recognised in profit or loss for reasons of materiality.

Effective 11 November 2019, Deilmann-Haniel Belschachtostroj, Soligorsk / Belarus was renamed and operates now under the name of Redpath Deilmann Belschachtostroj, Soligorsk / Belarus.

Deilmann Thyssen Schachtbau Sp. z.o.o., Katowice / Poland, was dissolved on 10 December 2019.

On 23 December 2019, ATON Digital Services GmbH acquired a share of 33.34 % (6.25 % through the acquisition of existing shares, 27.09 % through issue of new shares) in One Fiber Interconnect Germany GmbH, St. Wendel.

Deilmann-Haniel RUS OOO, Meschduretschensk / Russia, which was not fully consolidated due to materiality reasons, was sold on 26 December 2019 at a price of EUR 1, which corresponded to the amount accounted for at fair value.

Effective 31 December 2019, Ziehm Imaging Inc., Orlando / USA and ATON US Inc., Scottsdale / USA were merged to OrthoScan Inc., Scottsdale / USA. This intragroup transaction to simplify the corporate structure had no impact on the consolidated financial statements.

Until balance sheet date as of 31 December 2019, additional 363,455 shares of EDAG Engineering Group AG have been acquired and therefore the share in the EDAG Engineering Group AG increased to 72.12 %.

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

6. Revenue

The breakdown of reported 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	662,792	18,783	39,213	50,090	- 15	770,863
Asia	94,796	215,548	58,134	377	-	368,855
North America	142,591	184,852	26,626	2,104	-	356,173
Europe (excluding Germany)	147,645	67,980	46,575	19,211	-	281,411
Australia	2,827	160,321	2,087	-	-	165,235
Africa	2,856	68,501	2,550	1,535	-	75,442
South America	9,160	9,514	3,648	-	-	22,322
Total revenue	**1,062,667**	**725,499**	**178,833**	**73,317**	**- 15**	**2,040,301**
Type of revenues						
Revenue from rendering of services	1,062,667	720,641	17,983	73,317	-	1,874,608
Revenue from sales of goods	-	4,735	160,249	-	- 15	164,969
Other operating revenue	-	123	601	-	-	724
Total revenue	**1,062,667**	**725,499**	**178,833**	**73,317**	**- 15**	**2,040,301**
Revenue recognition						
Over a period of time	983,627	725,060	7,803	73,317	-	1,789,807
At a point in time	79,040	439	171,030	-	- 15	250,494
Total revenue	**1,062,667**	**725,499**	**178,833**	**73,317**	**- 15**	**2,040,301**

Since financial year 2019, Deilmann-Haniel Mining Systems is no longer reported within the segment Engineering, but within the segment Mining, since Deilmann-Haniel Mining Systems is no longer providing services to FFT. Previous year's figures have been adjusted accordingly.

The breakdown of reported 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	796,444	18,270	46,120	48,679	- 146	909,367
North America	242,112	175,811	53,504	4,624	-	476,051
Asia	242,706	191,972	25,103	3,189	-	462,970
Europe (excluding Germany)	238,055	42,553	73,763	17,275	-	371,646
Australia	150	149,871	893	-	-	150,914
Africa	9,173	51,370	3,664	1,556	-	65,763
South America	10,737	12,406	1,748	-	-	24,891
Total revenue	**1,539,377**	**642,253**	**204,795**	**75,323**	**- 146**	**2,461,602**
Type of revenues						
Revenue from rendering of services	1,539,377	634,968	13,647	75,323	- 146	2,263,169
Revenue from sales of goods	-	7,285	190,336	-	-	197,621
Other operating revenue	-	-	812	-	-	812
Total revenue	**1,539,377**	**642,253**	**204,795**	**75,323**	**- 146**	**2,461,602**
Revenue recognition						
Over a period of time	1,511,133	639,475	5,605	75,323	-	2,231,536
At a point in time	28,244	2,778	199,190	-	- 146	230,066
Total revenue	**1,539,377**	**642,253**	**204,795**	**75,323**	**- 146**	**2,461,602**

7. Changes in inventories and own work capitalised

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

in EUR '000	2019	2018
Changes in inventories of goods and services	-2,272	1,398
Own work capitalised	3,708	3,989
Changes in inventories and own work capitalised	**1,436**	**5,387**

Changes in inventories reflect the increase / decrease in unfinished and finished goods and services calculated on the basis of the acquisition cost method.

The decrease in inventories compared to the previous year results from a decrease in unfinished and thus products and services not yet invoiced, particularly within the segments Engineering. In contrast, there is an increase in unfinished and finished products and services in the segments Med Tech and Mining.

Own work capitalised in the reporting period mainly contains own work of the Ziehm Group amounting to EUR 3,250k (previous year: EUR 3,804k).

8. Other operating income

The other operating income comprises the following:

in EUR '000	2019	2018
Operating income		
Monetary advantage company cars	5,284	6,178
Government grants	4,079	3,413
Miscellaneous operating income	4,016	3,469
Income from subleases	2,074	-
Rental and lease income	1,551	4,042
Income from insurance compensation payments	619	554
Income from compensation and agreements for terminating contracts	375	401
Income from external services and cost transfers third parties	286	132
Income from recycling / scrap disposal	240	619
Income from catering / canteen	206	164
Income from cost reimbursements	25	215
Operating income	**18,755**	**19,187**
Non-operating income		
Income from the disposal / deconsolidation of consolidated companies	348,424	156,494
Currency translation gains	25,084	21,406
Income from the reversal of provisions / derecognition of liabilities	8,394	6,888
Income from other periods	2,462	1,423
Income from the disposal and write-ups of intangible assets and property, plant and equipment	1,706	2,329
Miscellaneous non-operating income	619	2,982
Income from hedging transactions	105	936
Income from the disposal and write-ups of current assets	67	3
Non-operating income	**386,861**	**192,461**
Other operating income	**405,616**	**211,648**

The increase in other operating income is mainly due to income from disposal / deconsolidation of consolidated companies. The income of EUR 348,424k mainly results from the deconsolidation of the FFT Group in May 2019.

The decrease in rental and lease income (EUR -2,491k) is mainly due to the segment Engineering. The new account earnings from sublease relationships in the amount of EUR 2,074k was introduced as part of IFRS 16 and results entirely from the segment Engineering.

Government grants mainly consist of government grants in the form of training subsidies and research and development grants.

Miscellaneous operating income and non-operating income consists of a large number of small individual items.

9. Cost of materials

The cost of materials breaks down as follows:

in EUR '000	2019	2018
Cost of raw materials, consumables and supplies and of purchased merchandise	359,516	524,498
Cost of purchased services	211,052	367,872
Cost of materials	**570,568**	**892,370**

Since financial year 2019, Deilmann-Haniel Mining Systems is no longer reported within the segment Engineering, but within the segment Mining, since Deilmann-Haniel Mining Systems is longer providing services to FFT. Previous year's figures have been adjusted accordingly.

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

in EUR '000	2019	2018
Engineering	164,661	355,285
Mining	109,511	81,099
Med Tech	74,156	77,509
Aviation	7,820	9,374
Holding/Consolidation	3,368	1,231
Cost of materials	**359,516**	**524,498**

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

The cost of purchased services can be allocated as follows:

in EUR '000	2019	2018
Engineering	130,839	272,845
Mining	38,610	52,666
Med Tech	3,923	3,304
Aviation	37,762	39,165
Holding/Consolidation	- 82	- 108
Cost of purchased services	**211,052**	**367,872**

The cost of purchased services primarily consists of costs for subcontractors.

10. Personnel expenses

The personnel expenses are attributable to the following items:

in EUR '000	2019	2018
Wages and salaries	859,274	924,988
Expenses for social security, retirement and other employee benefit expenses	165,747	169,271
Personnel expenses	**1,025,021**	**1,094,259**

The expenses for retirement include the cost of defined benefit pension commitments, among other items. Due to its financial character the net interest expense of the provisions for pensions is recorded in the financial result. For the presentation of the pension commitments, please see Note **29**. **Provisions for pensions**.

Wages and salaries as part of personnel expenses include EUR 1,103k of government grants from short-time working compensation (previous year: EUR 145k), which are netted within personnel expenses.

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

Number	2019	2018
Industrial workers	4,645	4,342
Salaried staff	11,946	13,424
Total employees excluding trainees	**16,591**	**17,766**
Trainees	739	912

11. Other operating expenses

The other operating expenses comprise the following:

in EUR '000	2019	2018
Operating expenses		
Travelling expenses	53,424	61,859
Administration costs	40,489	41,860
Legal and consulting costs, audit costs	20,702	39,850
Maintenance	29,546	32,365
Selling and marketing costs	19,542	28,754
Expenses from additions to provisions	15,220	6,721
Other expenses for leasing contracts	12,895	62,408
Other incidental personnel expenses	12,224	14,181
Miscellaneous operating expenses	8,718	8,944
Leasing expenses from short-term leases	8,795	-
Education and training costs	7,643	7,030
Other taxes and levies	6,132	6,407
Insurances	4,988	5,895
Leasing expenses from low-value leases	3,602	-
Expenses from cost transfers third parties	3,157	5,690
Car expenses	3,115	3,689
Expenses from security services	2,027	2,120
Incidental rental costs and cleaning expenses	943	1,985
Incidental costs of monetary transactions	223	1,420
Research and development costs	576	639
Variable leasing expenses (not included in lease liabilities)	381	-
Non-deductible input tax	369	428
Operating expenses	**254,711**	**332,245**
Non-operating expenses		
Currency translation losses	25,104	23,082
Miscellaneous non-operating expenses	2,349	722
Expense from hedging transactions	890	-
Expenses from the disposal of property, plant and equipment	857	1,419
Expenses from other periods	96	349
Non-operating expenses	**29,296**	**25,572**
Other operating expenses	**284,007**	**357,817**

The decrease in the other operating expenses mainly results sale of the FFT Group in May 2019.

Legal and consulting costs as well as audit costs were higher in the previous year, in particular due to the consulting costs for the sale of the FFT as well as activities related to the acquisition of shares in the listed Murray & Roberts Holdings Limited.

Expenses from additions to provisions increased compared to previous year. The can be traced to higher restructuring provisions at EDAG.

The decline in expenses for leasing contracts / leases can be traced in particular to the segment Engineering and is attributable to the application of the new leasing standard IFRS 16. Since the future obligations from most leases for property, plant and equipment are now recognised on the balance sheet, the only items remaining under other operating expenses are lease expenses from short-term leases, lease expenses from low-value leases, variable lease expenses and lease expenses for intangible assets.

The miscellaneous operating expenses and miscellaneous non-operating expenses comprise a large number of small, 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 14,208k (previous year: EUR 14,155k). 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	2019	2018
Expenses from the impairment of investments	- 84,757	- 25
Result from the sale of investments	1,416	-
Other investment result	**- 83,341**	**- 25**

The expenses from the impairment of investments result from the impairment of the investment in Murray & Roberts to the stock market price as of balance sheet date.

The result from the sale of investments is due to the disposal of the DCA Switzerland AG, which was previously measured at fair value.

14. Net interest expense

The net interest expense comprises the following:

in EUR '000	2019	2018
Interest income		
Interest income from credit institutions	2,946	3,114
Interest and similar income from related parties	1,194	1,276
Other interest income	537	312
	4,677	**4,702**
Interest expense		
Interest expense to credit institutions and bondholders	9,098	15,226
Interest expense of lease agreements	6,436	1,402
Net interest expense from defined benefit pension plans	861	748
Interest and similar expense to related parties	346	617
Other interest expense	6,387	5,650
	23,128	**23,643**
	- 18,451	**- 18,941**

15. Other financial result

The other financial result comprises the following:

in EUR '000	2019	2018
Other financial income		
Gains from fair value measurement	1,881	1,378
Interest and dividend income from securities	872	2,715
Income from sale of securities	150	919
Other financial income	35	126
	2,938	**5,138**
Other financial expense		
Losses from fair value measurement	2,889	16,946
Losses from sales of securities	1	457
Write-downs on securities	-	3
Other financial expense	61	726
	2,951	**18,132**
Other financial result	**- 13**	**- 12,994**

16. Income taxes

The income taxes reported include the actual taxes on income in the respective countries as well as deferred taxes.

The income taxes for the financial years 2019 and 2018 break down as follows:

in EUR '000	2019	2018
Income taxes		
Income taxes for the current year	43,143	37,349
Income taxes for previous years	- 1,020	599
Income from the reversal of provisions for income taxes	- 20	- 70
	42,103	**37,878**
Deferred taxes		
Deferred taxes from temporary differences	- 18,260	20
Deferred taxes on losses carried forward	- 849	- 2,814
	- 19,109	**- 2,794**
Income taxes	**22,994**	**35,084**

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 since 2018 and the tax expense is thus reported at the level of the parent company ATON 2 GmbH. For the purpose of the tax reconciliation, however, a tax rate at the level of ATON GmbH is assumed, which would result if there were no tax group.

Unchanged from the 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 % for Germany. 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 profit generated by foreign subsidiaries is calculated based on the regulation of the national tax law and using the country-specific tax rate. Tax rates applied by the foreign companies vary between 5.5 % and 35.0 % (in previous year between 9.0 % and 35.0 %).

The income taxes of the reporting period amounting to EUR 22,994k (previous year: EUR 35,084k) are reconciled as follows from the expected income tax expense, that would have resulted if the parent's statutory income tax rate had been applied to the earnings before income taxes (EBT):

	2019		2018	
	EUR '000	**in %**	**EUR '000**	**in %**
Earnings before income taxes (EBT)	**319,131**		**203,062**	
Income tax rate of the parent		32.98%		32.98%
Expected income tax expense	**105,233**		**66,970**	
Tax-free income and non-deductible expenses, incl. the effect of sections 8a / 8b of the KStG (corporate tax law)	- 97,503	-30.55%	- 49,311	-24.28%
Income taxes for previous years	- 404	-0.13%	473	0.23%
Tax rate variances	3,853	1.21%	- 6,477	-3.19%
Amount of tax losses carried forward and other deferred tax assets not recognised or impaired	6,439	2.02%	19,131	9.42%
Effects from the recognition of previously unused tax loss carry forwards	1,868	0.59%	- 3,841	-1.89%
Non-deductible withholding taxes	3,965	1.24%	3,415	1.68%
Other tax effects	- 457	-0.14%	4,724	2.33%
Income taxes reported in the consolidated income statement	**22,994**		**35,084**	
Effective tax rate		**7.21%**		**17.27%**

Tax-free income in current and previous year mainly result from the income from the sale of affiliates.

The current and deferred taxes in the consolidated statement of financial position changed as follows:

in EUR '000	**31.12.2019**	**31.12.2018**
Current income taxes in the consolidated statement of financial position		
Income tax assets	4,704	9,193
Income tax liabilities	- 7,920	- 9,193
Provisions for income taxes	- 7,720	- 5,632
	- 10,936	**- 5,632**
Deferred taxes in the consolidated statement of financial position		
Deferred tax assets	16,168	14,699
Deferred tax liabilities	- 54,365	- 76,104
	- 38,197	**- 61,405**
Income taxes in the consolidated statement of financial position	**- 49,133**	**- 67,037**

The deferred tax assets and liabilities are attributable to the following items in the consolidated statement of financial position:

in EUR '000	31.12.2019	31.12.2018
Deferred tax assets		
Intangible assets	321	1,884
Property, plant and equipment	686	450
Financial assets	232	1,621
Inventories	7,945	17,139
Receivables and other assets	4,548	4,782
Provisions for pensions	8,863	6,811
Other provisions	2,918	4,631
Other liabilities	85,228	66,686
Losses carried forward	16,330	17,325
Netting	- 110,903	- 106,630
	16,168	**14,699**
of which: non-current before netting	**26,432**	**28,091**
Deferred tax liabilities		
Intangible assets	39,123	48,910
Property, plant and equipment	72,165	17,210
Financial assets	310	44
Inventories	43	37
Receivables and other assets	39,319	90,195
Provisions for pensions	0	0
Other provisions	13,469	25,595
Other liabilities	839	743
Netting	- 110,903	- 106,630
	54,365	**76,104**
of which: non-current before netting	**111,598**	**66,164**
Deferred taxes, net	**- 38,197**	**- 61,405**

The deferred taxes changed as follows:

in EUR '000	2019	2018
Deferred taxes as of 31.12.2018	- 61,405	- 66,483
Restatement IFRS 9 / IFRS 15	1,268	96
Deferred taxes at the beginning of the financial year	- 60,137	- 66,387
Changes in the scope of consolidation	1,142	- 990
Recognised in profit or loss	19,109	2,794
Recognised directly in equity	2,535	474
Currency translation differences	- 1,903	2,704
Reclassification IFRS 5	1,057	-
Deferred taxes at the end of the financial year	**- 38,197**	**- 61,405**

The changes in the scope of consolidation in the current year in the amount to EUR 1,142k and relate to the disposal of the FFT Group. The reclassification according to IFRS 5 relate exclusively to REFORM. The changes in the scope of consolidation in the previous year in the amount of EUR -990k mainly related to the deconsolidation of Haema.

Deferred taxes are 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 use tax losses carried forward before they expire. Deferred tax assets are recognised to the extent to which it is probable that taxable profit will be available against which deductible temporary differences can be utilised and where the assumption can be made that they will reverse in the foreseeable future.

Deferred tax assets and liabilities are offset, where 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 and have to be levied by the same tax authority.

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

in EUR '000	**2019**	**2018**
Losses carried forward (total)		
Losses carried forward expire within		
1 year	16,789	17,715
2 to 5 years	34,644	46,173
over 5 years	26,492	36,275
carried forward indefinitely	110,652	97,905
	188,577	**198,068**
Losses carried forward (not usable)		
Losses carried forward expire within		
1 year	-	3
2 to 5 years	658	277
over 5 years	23,108	36,275
carried forward indefinitely	110,652	97,905
	134,418	**134,460**
Expected use of usable tax losses carried forward		
1 year	16,789	17,712
2 to 5 years	33,986	45,896
over 5 years	3,384	-
	54,159	**63,608**

As of 31 December 2019, trade tax losses carried forward amount to EUR 95,263k (previous year: EUR 79,583k); thereof deferred tax assets were not recognised for an amount of EUR 69,370k (previous year: EUR 79,482k).

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 2019	**275,858**	16,627	300,612	664	**317,903**
Changes in the scope of consolidation	**-15,399**	22	-12,018	0	**-11,996**
Additions	**0**	2,192	6,985	568	**9,745**
Disposals	**0**	0	-2,207	0	**-2,207**
Reclassifications	**0**	1,530	292	-134	**1,688**
Reclassification under IFRS 5	**0**	0	-1,833	0	**-1,833**
Currency translation differences	**2,811**	2	942	0	**944**
As of 31 December 2019	**263,270**	**20,373**	**292,773**	**1,098**	**314,244**
Accumulated depreciation, amortisation and impairment losses					
As of 1 January 2019	**6,389**	7,089	145,579	0	**152,668**
Changes in the scope of consolidation	**0**	22	-7,264	0	**-7,242**
Depreciation, amortisation and impairment 2019	**0**	2,898	36,230	0	**39,128**
Depreciation and amortisation	**0**	2,898	36,230	0	**39,128**
Impairment losses	**0**	0	0	0	**0**
Disposals	**0**	0	-2,093	0	**-2,093**
Reclassifications	**0**	0	0	0	**0**
Reclassifications under IFRS 5	**0**	0	-1,833	0	**-1,833**
Currency translation differences	**0**	8	798	0	**806**
As of 31 December 2019	**6,389**	**10,017**	**171,417**	**0**	**181,434**
Carrying amounts					
As of 1 January 2019	269,469	9,538	155,033	664	165,235
As of 31 December 2019	256,881	10,356	121,356	1,098	132,810

The development of goodwill and other intangible assets is 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 2018	**292,292**	19,547	320,571	838	**340,956**
Changes in the scope of consolidation	**- 14,641**	-	- 10,996	- 15	**- 11,011**
Additions	**-**	3,744	7,617	464	**11,825**
Disposals	**-**	- 6,681	- 17,257	-	**- 23,938**
Reclassifications	**-**	-	596	- 624	**- 28**
Reclassification under IFRS 5	**-**	-	-	-	**-**
Currency translation differences	**- 1,793**	17	81	1	**99**
As of 31 December 2018	**275,858**	**16,627**	**300,612**	**664**	**317,903**
Accumulated depreciation, amortisation and impairment losses					
As of 1 January 2018	**6,389**	11,118	132,722	-	**143,840**
Changes in the scope of consolidation	**-**	-	- 9,493	-	**- 9,493**
Depreciation, amortisation and impairment 2018	**-**	2,635	39,476	-	**42,111**
Depreciation and amortisation	**-**	2,635	39,424	-	**42,059**
Impairment losses	**-**	-	52	-	**52**
Disposals	**-**	- 6,681	- 17,226	-	**- 23,907**
Reclassifications	**-**	-	18	-	**18**
Reclassifications under IFRS 5	**-**	-	-	-	**-**
Currency translation differences	**-**	17	82	-	**99**
As of 31 December 2018	**6,389**	**7,089**	**145,579**	**-**	**152,668**
Carrying amounts					
As of 1 January 2018	285,903	8,429	187,849	838	197,116
As of 31 December 2018	269,469	9,538	155,033	664	165,235

The changes in the scope of consolidation for the acquired goodwill, reflect the disposal of the goodwill of the FFT Group with its sale on 29 May 2019 (EUR -15,443k). This is offset by the addition of acquired goodwill from a newly acquired company within the Ziehm Group as of 30 October 2019 (EUR 44k). In the previous year, the disposal from changes in the scope of consolidation resulted from the sale of Haema AG with effect from 4 June 2018.

Capitalised development costs relate to various smaller amounts for intangible assets internally generated by the affiliated companies. In addition to the capitalised development costs, research and development costs of EUR 12,713k (previous year: EUR 13,367k) were recognised as expenses.

The disposal of other acquired intangible assets resulting from changes in the scope of consolidation in the financial year 2019 relates to the sale of the FFT Group with effect from 29 May 2019. The additions and disposals of other acquired intangible assets are mainly attributable to EDAG and relate to software licences.

No borrowing costs were capitalised in the financial year.

The purchase commitments for intangible assets amounted to EUR 4,268k as of 31 December 2019 (previous year: EUR 1,151k).

As in the previous year, intangible assets are not subject to any restrictions on title. The intangible assets do not include any assets acquired as leases. No government grants were deducted from acquisition and production cost either in the reporting period or in the previous year.

Government grants in the amount of EUR 2,820k (previous year: EUR 2,313k) were recognised in the income statement of the financial year 2019.

No government grants were deducted directly from the acquisition and production cost of intangible assets in financial year 2019 (previous year: EUR 4k).

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

in EUR '000	**31.12.2019**	**31.12.2018**
EDAG	166,032	166,003
FFT / Reform	-	15,443
Goodwill Engineering	**166,032**	**181,446**
Goodwill Mining	**45,422**	**42,639**
Ziehm/OrthoScan	45,427	45,384
Goodwill Med Tech	**45,427**	**45,384**
Goodwill	**256,881**	**269,469**

The Group tests its goodwill for impairment at least once a year. As of 31 December 2019, all goodwill items were subject to an impairment test conducted as presented in note **3.1 Goodwill** by comparing the carrying amounts with the value in use as recoverable amount. The value in use is determined using the discounted cash flow method. For the financial year 2019 there is no impairment.

The decline in goodwill in the segment Engineering is mainly due to the sale of the FFT Group with effect from 29 May 2019. The remaining changes in goodwill in the segment are due to exchange rate effects.

Within the segment Mining the increase in goodwill is only related to currency translation effects.

Within the segment Med Tech, the increase in goodwill results from the initial consolidation of Ziehm Imaging Spain, S.L., Valencia / Spain, with acquisition on 30 October 2019.

The determination of the recoverable amounts for the goodwill impairment tests is based on the following basic assumptions:

	2019	2018
Planning period	3 years	3 years
Growth rate	1.00%	1.00% - 1.50%
Expected market return	6.15% to 7.70%	6.75% to 9.36%
Return for risk-free investments	0.00% to 1.45%	1.25% to 3.36%
Post-tax discount rate	4.11% to 10.03%	5.87% to 9.71%

The recoverable amounts are significantly above the carrying amounts as of balance sheet date and thus, no detailed presentation of sensitivity analysis is considered necessary.

18. Property, plant and equipment and investment properties

The development of property, plant and equipment and investment properties 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 construc-tion in progress	Total property, plant and equipment
Acquisition and production cost					
As of 1 January 2019	98,380	289,328	138,001	79,509	**605,218**
Restatement	230,165	1,947	2,930	0	**235,042**
As of 1 January 2019 restated	328,545	291,275	140,931	79,509	**840,260**
Changes in the scope of consolidation	-41,425	-35,783	-29,968	-159	**-107,335**
Additions	24,340	57,339	20,645	12,139	**114,463**
Disposals	-8,715	-21,857	-15,168	-2,292	**-48,032**
Reclassifications	129	84,319	-606	-74,512	**9,330**
Reclassifications under IFRS 5	-6,018	0	0	0	**-6,018**
Currency translation differences	1,154	15,652	705	1,483	**18,994**
As of 31 December 2019	**298,010**	**390,945**	**116,539**	**16,168**	**821,662**
Accumulated depreciation, amortisation and impairment losses					
As of 1 January 2019	44,080	108,714	90,205	1,218	**244,217**
Restatement	0	0	-2,527	0	**-2,527**
As of 1 January 2019 restated	44,080	108,714	87,678	1,218	**241,690**
Changes in the scope of consolidation	-14,047	-24,031	-19,266	0	**-57,344**
Depreciation, amortisation and impairment 2019	29,729	66,762	17,284	101	**113,876**
Depreciation and amortisation	28,200	66,414	17,255	0	**111,869**
Impairment losses	1,529	348	29	101	**2,007**
Write-up	-1,433	0	0	0	**-1,433**
Disposals	-4,661	-18,828	-13,628	-1,264	**-38,381**
Reclassifications	5	10,117	896	0	**11,018**
Reclassifications under IFRS 5	-4,585	0	0	0	**-4,585**
Currency translation differences	557	9,054	475	0	**10,086**
As of 31 December 2019	**49,645**	**151,788**	**73,439**	**55**	**274,927**
Carrying amounts					
As of 1 January 2019	54,300	180,614	47,796	78,291	361,001
As of 31 December 2019	248,365	239,157	43,100	16,113	546,735

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 2018	112,305	297,629	158,966	21,115	**590,015**
Changes in the scope consolidation	-15,507	-16,599	-28,403	-54	**-60,563**
Additions	2,813	46,624	19,883	78,840	**148,160**
Disposals	-774	-35,057	-12,658	-9,815	**-58,304**
Reclassifications	132	11,068	243	-11,416	**27**
Currency translation differences	-589	-14,337	-30	839	**-14,117**
As of 31 December 2018	**98,380**	**289,328**	**138,001**	**79,509**	**605,218**
Accumulated depreciation, amortisation and impairment losses					
As of 1 January 2018	40,344	117,903	107,023	42	**265,312**
Changes in the scope consolidation	-3,053	-10,822	-21,281	0	**-35,156**
Depreciation, amortisation and impairment 2018	7,558	41,993	16,761	1,457	**67,769**
Depreciation and amortisation	5,587	41,656	16,669	0	**63,912**
Impairment losses	1,971	337	92	1,457	**3,857**
Disposals	-387	-31,340	-12,240	-314	**-44,281**
Reclassifications	16	-57	23	0	**-18**
Currency translation differences	-398	-8,963	-81	33	**-9,409**
As of 31 December 2018	**44,080**	**108,714**	**90,205**	**1,218**	**244,217**
Carrying amounts					
As of 1 January 2018	71,961	179,726	51,943	21,073	324,703
As of 31 December 2018	54,300	180,614	47,796	78,291	361,001

Land and buildings increased from EUR 54,300k to EUR 248,365k. This is essentially due to the first-time application of the new leasing standard IFRS 16, which had a particular impact on the segments Engineering and Aviation.

In the Engineering segment, land and buildings were reclassified in accordance with IFRS 5 as assets held for sale in the amount of EUR 1,433k. Please refer to note **27. Assets held for sale / liabilities associated with assets held for sale** for further information.

The other additions and disposals to land and buildings are mainly attributable to the segment Engineering.

The additions to and disposals of technical equipment and machinery, as well as advance payments and construction in progress primarily relate to technical equipment for major projects in the segment Mining.

Impairment losses on land and buildings in the amount of EUR 1,529k. Since the land and the buildings will no longer be used in the operational process in the future, they were impaired to the current market value.

Property, plant and equipment in the amount of EUR 30,890k (previous year: EUR 25,835k) was used as collateral for liabilities. Property, plant and equipment is subject to restrictions on title in the amount of EUR 44,528k (previous year: EUR 25,442k) which mainly results from the segment Mining.

Property, plant and equipment includes assets in the amount of EUR 272,945k (previous year: EUR 40,457k) acquired as leases.

The purchase commitments for property, plant and equipment amount to EUR 11,409k as of 31 December 2019 (previous year: EUR 29,243k).

No government grants were deducted directly from the acquisition and production cost of property, plant and equipment in fiscal year 2019 (previous year: EUR 21k).

There are no investment properties in financial year 2019 nor in 2018.

In financial year 2019 as well as in previous year no borrowing costs were capitalised.

19. The Group as lessee

The carrying amounts of right-of-use-assets capitalized under property, plant and equipment, other than sale-and-lease-back arrangements, are as follows as of 31 December 2019 and 31 December 2018:

in EUR '000	**31.12.2019**	**31.12.2018**
Land and buildings	219,905	-
Technical equipment and machinery	45,796	36,686
Other equipment, operating and office equipment	7,243	3,770
Total net carrying amount of right-of-use assets / of capitalised leased assets	**272,944**	**40,456**

All technical equipment and machinery, which amount to EUR 45,796k, is leased by Redpath Group. As in previous year, the lease terms vary between two and five years.

The increase in net carrying amount of right-of-use assets is mainly due to the first-time application of the new leasing standard IFRS 16, which had a particular impact on the segments Engineering and Aviation.

The additions to right-of-use assets amounted to EUR 50,957k in the financial year. Total cash outflow from leases amounted to EUR 46,722k in the financial year.

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

in EUR '000	31.12.2019
Land and buildings	25,627
Aircraft	-
Technical equipment and machinery	15,487
Other equipment, operating and office equipment	4,375
Depreciation charge for right-of-use assets	**45,489**
Interest expense on lease liabilities	6,436
Other lease expenses	
Lease expense relating to short-term leases	8,795
Lease expense relating to leases of low-value assets	3,602
Expense relating to variable lease payments (not included in the measurement of lease liabilities)	381
Income from subleasing right-of-use assets	- 2,074
Total Lease Expense	**62,629**

As of the balance sheet date, the following future obligations exist from leasing contracts recognised as liabilities (contracts accounted for as finance leases in the previous year under IAS 17):

in EUR '000	31.12.2019	31.12.2018
Maturity		
Up to 1 year	45,021	16,372
1 to 5 years	101,791	18,201
Over 5 years	122,570	-
Total lease liabilities	**269,382**	**34,573**

Renewal or purchase option clauses regarding finance leases are taken in to account when accounting according to IFRS 16.

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

in EUR '000	2019	2018
Other expenses from leases	12,893	62,408
Future lease payments (maturity)		
Up to 1 year	7,935	44,819
1 to 5 years	1,761	87,190
Over 5 years	520	73,728
Total	**10,216**	**205,737**

Other expenses from leasing contracts mainly include the incidental cost components of leasing contracts recognized in the statement of comprehensive income, for the leasing components of which a right of use and a leasing liability were recognized in accordance with IFRS 16, and for which the practical remedy as indication in IFRS 16.15 was not used, which were incurred particularly in the segment Engineering. They also 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.

20. The Group as lessor

The Group acts as lessor in operating leases, most of which relate to building premises. The contracts are normally short term without renewal options. Operating lease income recognised in profit or loss amounts to EUR 3,624k in the financial year (previous year: EUR 4,042k). Income relating to variable lease payments that do not depend on an index or a rate amounts to EUR 581k in the financial year.

The undiscounted future minimum lease payments under non-cancellable operating leases mature as follows:

in EUR '000	2019
Operating leases under IFRS 16	
Up to 1 year	1,722
Up to 2 years	924
Up to 3 years	883
Up to 4 years	556
Up to 5 years	38
Over 5 years	97
Total of the amounts for the remaining years	**4,220**

in EUR '000	2018
Operating leases under IAS 17	-
Up to 1 year	2,522
1 to 5 years	1,481
over 5 years	-
Total of the amounts for the remaining years	**4,003**

Furthermore, the Group acts as lessor under a finance lease. The lease involved is a sublease for a building and property at EDAG Group. For this lease, the right of use resulting from the main rental contract was derecognized at the beginning of the reporting year and a leasing receivable recognized. This resulted in a gain on disposal of EUR 275k in the financial year, which was recognized through profit and loss in the statement of comprehensive income. Interest income on net investment in finance lease amounts to EUR 40k in the financial year. The leasing instalments are split into a repayment and an interest component, and carried forward using the effective interest method.

The due dates of the leasing receivables as of 31 December 2019 are as follows:

in EUR '000	2019
Up to 1 year	240
Up to 2 years	240
Up to 3 years	240
Up to 4 years	60
Up to 5 years	-
Over 5 years	-
Total undiscounted minimum lease payments	**780**
Unearned finance income	- 59
Net investment in the lease	**721**

21. Investments accounted for using the equity method

The Group has investments in joint ventures and associates. The amounts recognised in the balance sheet in investments accounted for using the equity method are as follows:

in EUR '000	31.12.2019	31.12.2018
Investments accounted for using the equity method		
Associates	149,119	214,300
Joint Ventures	15,774	12,725
	164,893	**227,025**

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

in EUR '000	**2019**	**2018**
Result from investments accounted for using the equity method		
Associates	9,193	8,999
Joint Ventures	5,015	5,156
	14,208	**14,155**

Already in 2018, the interest in Murray & Roberts Holdings Limited, Bedfordview, South Africa, was increased to 43.8 % through several additional purchases. Murray & Roberts Holdings Limited is listed in South Africa and is accounted for using the equity method in the present consolidated financial statements. The Group operates worldwide in engineering, construction and underground mining services. The range of services covers the areas of oil & gas, underground mining and power & 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 2019.

The 50.0 % interest in the joint venture Schacht Konrad 1, Dortmund, and the joint venture Schacht Konrad 2, Dortmund, are also accounted for using the equity method. These joint ventures are strategic partnerships for the Group between Deilmann-Haniel GmbH, Dortmund, and Thyssen Schachtbau GmbH. Schacht Konrad 1 and Schacht Konrad 2 offer access to the former iron ore mine in Salzgitter, which is converted at present.

The 50.0 % interest in the joint venture Associated Mining Construction Inc., Saskatchewan, Canada, is also accounted for using the equity method. Associated Mining Construction Inc. is a strategic partnership for the Group between Redpath Group and Thyssen Mining Inc. The Joint Venture was established in 2008 and offers shaft sinking solutions for challenging ground conditions.

The 49.0 % interest in EDAG Werkzeug + Karosserie GmbH, Fulda, is also accounted for as an associated company using the equity method. The investment held by the EDAG Group was recognised again in the context of the deconsolidation of the FFT Group in the amount of EUR 17,427k.

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. The joint venture was founded for the Jansen Potash Project Saskatchewan, Canada, in 2018.

Summarised financial information for the most significant investments accounted for using the equity method as of 31 December 2019 are presented in the following tables.

The summarised balance sheet is as follows:

in EUR '000				
Company	**Murray & Roberts Holdings Limited**		**Joint Venture Schacht Konrad 1**	
Nature of the relationship	Associate		Joint Venture	
	31.12.2019	**31.12.2018**	**31.12.2019**	**31.12.2018**
Interest held in %	43.8	43.8	50.0	50.0
Current				
Cash and cash equivalents	196,295	136,092	1,668	339
Other current assets (excluding cash)	522,586	386,162	5,785	4,625
Total current assets	**718,881**	**522,254**	**7,453**	**4,964**
Financial liabilities (excluding trade and other payables, provisions and tax liabilities)	-99,954	-41,132	0	0
Other liabilities (including trade and other payables, provisions and tax liabilities)	-548,826	-395,215	-1,913	-859
Total current liabilities	**-648,780**	**-436,347**	**-1,913**	**-859**
Non-current				
Assets	**402,604**	**306,755**	**431**	**500**
Financial liabilities (excluding trade and other payables, provisions and tax liabilities)	-104,454	-31,957	0	0
Other liabilities (including trade and other payables and provisions and tax liabilities)	-17,937	-19,563	0	0
Total non-current liabilities	**-122,391**	**-51,520**	**0**	**0**
Net assets	**350,314**	**341,142**	**5,971**	**4,605**

in EUR '000				
Company	**Joint Venture Schacht Konrad 2**		**Associated Mining Construction Inc.**	
Nature of the relationship	Joint Venture		Joint Venture	
	31.12.2019	**31.12.2018**	**31.12.2019**	**31.12.2018**
Interest held in %	50.0	50.0	50.0	50.0
Current				
Cash and cash equivalents	3,451	538	0	914
Other current assets (excluding cash)	10,043	11,911	2,345	3,081
Total current assets	**13,494**	**12,449**	**2,345**	**3,995**
Financial liabilities (excluding trade and other payables, provisions and tax liabilities)	0	0	-1,804	-189
Other liabilities (including trade and other payables, provisions and tax liabilities)	-4,438	-7,046	-196	0
Total current liabilities	**-4,438**	**-7,046**	**-2,000**	**-189**
Non-current				
Assets	**1,120**	**1,433**	**0**	**0**
Financial liabilities (excluding trade and other payables, provisions and tax liabilities)	0	0	0	0
Other liabilities (including trade and other payables and provisions and tax liabilities)	0	0	0	0
Total non-current liabilities	**0**	**0**	**0**	**0**
Net assets	**10,176**	**6,836**	**345**	**3,806**

in EUR '000				
Company	**EDAG Werkzeug + Karosserie GmbH**		**TRL Mining Construction LP**	
Nature of the relationship	Joint Venture		Joint Venture	
	31.12.2019	**31.12.2018**	**31.12.2019**	**31.12.2018**
Interest held in %	49.0	100.0	33.0	33.0
Current				
Cash and cash equivalents	4,049	0	18,540	10,767
Other current assets (excluding cash)	15,924	0	23,122	5,262
Total current assets	**19,973**	**0**	**41,662**	**16,029**
Financial liabilities (excluding trade and other payables, provisions and tax liabilities)	-1,038	0	0	0
Other liabilities (including trade and other payables, provisions and tax liabilities)	-7,474	0	-33,076	-13,579
Total current liabilities	**-8,512**	**0**	**-33,076**	**-13,579**
Non-current				
Assets	**10,472**	**0**	**0**	**0**
Financial liabilities (excluding trade and other payables, provisions and tax liabilities)	-81	0	0	0
Other liabilities (including trade and other payables, provisions and tax liabilities)	-1,240	0	0	0
Total non-current liabilities	**-1,321**	**0**	**0**	**0**
Net assets	**20,612**	**0**	**8,586**	**2,450**

The summarised statement of comprehensive income is as follows:

in EUR '000				
Company	**Murray & Roberts Holdings Limited**		**Joint Venture Schacht Konrad 1**	
Nature of the relationship	Associate		Joint Venture	
	31.12.2019	**31.12.2018**	**31.12.2019**	**31.12.2018**
Interest held in %	43.8	43.8	50.0	50.0
Revenue	1,308,691	1,269,000	6,331	4,198
Depreciation and amortisation	-39,936	-28,876	-96	-109
Interest income	0	0	0	0
Interest expense	-8,531	-2,049	0	0
Profit (+) or loss (-) from continuing operations	**46,860**	**55,319**	**1,407**	**730**
Income tax expense (-) / income (+)	-17,372	-19,976	0	0
Profit (+) or loss (-) after tax from continuing operations	**29,488**	**35,343**	**1,407**	**730**
Profit (+) or loss (-) after tax from discontinuing operations	-10,510	-12,997	0	0
Other comprehensive income	-3,029	17,479	0	0
Total comprehensive income	**15,949**	**39,825**	**1,407**	**730**
Dividends received	6,426	5,670	0	0

in EUR '000				
Company	**Joint Venture Schacht Konrad 2**		**Associated Mining Construction Inc.**	
Nature of the relationship	Joint Venture		Joint Venture	
	31.12.2019	**31.12.2018**	**31.12.2019**	**31.12.2018**
Interest held in %	50.0	50.0	50.0	50.0
Revenue	19,736	15,541	3	22,983
Depreciation and amortisation	-457	-481	0	0
Interest income	0	0	0	346
Interest expense	0	0	0	0
Profit (+) or loss (-) from continuing operations	**3,310**	**2,759**	**-208**	**859**
Income tax expense (-) / income (+)	0	0	-79	0
Profit (+) or loss (-) after tax from continuing operations	**3,310**	**2,759**	**-287**	**859**
Other comprehensive income	0	0	0	0
Total comprehensive income	**3,310**	**2,759**	**-287**	**859**
Dividends received	0	0	1,750	0

in EUR '000				
Company	**EDAG Werkzeug + Karosserie GmbH**		**TRL Mining Construction LP**	
Nature of the relationship	Joint Venture		Joint Venture	
	31.12.2019	**31.12.2018**	**31.12.2019**	**31.12.2018**
Interest held in %	49.0	100.0	33.0	33.0
Revenue	44,499	0	53,592	13,787
Depreciation and amortisation	-1,828	0	0	0
Interest income	0	0	0	0
Interest expense	-41	0	0	0
Profit (+) or loss (-) from continuing operations	**2,850**	**0**	**5,978**	**2,499**
Income tax expense (-) / income (+)	-913	0	0	0
Profit (+) or loss (-) after tax from continuing operations	**1,937**	**0**	**5,978**	**2,499**
Profit (+) or loss (-) after tax from discontinuing operations	0	0	0	0
Other comprehensive income	-164	0	0	0
Total comprehensive income	**1,773**	**0**	**5,978**	**2,499**
Dividends received	570	0	0	0

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

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

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 Schacht Konrad 1**		**Joint Venture Schacht Konrad 2**		**Associated Mining Construction Inc.**	
	2019	**2018**	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**
Net assets as of 1 January	489,269	486,124	4,606	3,833	6,836	4,103	3,806	8,444
Additions	0	0	0	0	0	0	0	0
Profit (+) / loss (-) for the period	18,979	22,345	1,407	730	3,310	2,759	-287	859
Other comprehensive income	-3,029	17,479	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	-14,033	-13,510	0	0	0	0	-3,500	-5,230
Currency translation differences	2,790	-23,169	-42	43	29	-26	326	-267
Net assets as of 31 December	**493,976**	**489,269**	**5,971**	**4,606**	**10,175**	**6,836**	**345**	**3,806**
Interest held in %	43.8	30.0	50.0	50.0	50.0	50.0	50.0	50.0
Interest in investments accounted for using the equity method	216,411	214,300	2,986	2,303	5,088	3,418	172	1,903
Allocatable hidden reserves/burden as a result of the PPA	0	0	0	0	0	0	0	0
Impairment	-84,756	0	0	0	0	0	0	0
Goodwill	0	0	0	0	0	0	0	0
Carrying value	**131,655**	**214,300**	**2,986**	**2,303**	**5,088**	**3,418**	**172**	**1,903**
investments accounted for using the equity method	131,655	214,300	2,986	2,303	5,088	3,418	172	1,903
Receivables (+) / liabilities (-) to investments accounted for using the equity method	0	0	-2,803	-1,428	-4,668	-2,047	0	0

in EUR '000								
Company	**EDAG Werkzeug + Karosserie GmbH**		**TRL Mining Con-struction LP**		**Other investments accounted for using the equity method**		**Total**	
	2019	**2018**	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**
Net assets as of 1 January	0	0	2,450	0	8,595	3,212	515,562	505,716
Additions	20,002	0	0	0	33	2,135	20,035	2,135
Profit (+) / loss (-) for the period	1,937	0	5,978	2,499	4,599	4,889	35,923	34,081
Other comprehensive income	-164	0	0	0	0	0	-3,193	17,479
Increase in capital	0	0	0	0	0	0	0	0
Adjustments / Disposals	0	0	0	0	-2,084	-1,048	-2,084	-1,048
Dividends received	-1,163	0	0	0	-1,746	-102	-20,442	-18,842
Currency translation differences	0	0	158	-49	-407	-491	2,854	-23,959
Net assets as of 31 December	**20,612**	**0**	**8,586**	**2,450**	**8,990**	**8,595**	**548,655**	**515,562**
Interest held in %	50.0	50.0	33.0	0.00	33.3 resp. 49.0 resp. 50.0	49.0 resp. 50.0	33.0 resp. 33.3 resp. 43.8 resp. 49.0 resp. 50.0	33.0 resp. 43.4 resp. 49.0 resp. 50.0
Interest in investments accounted for using the equity method	10,100	0	2,833	808	4,695	4,293	242,285	227,025
Allocatable hidden reserves/burden as a result of the PPA	0	0	0	0	0	0	0	0
Impairment	0	0	0	0	0	0	-84,756	0
Goodwill	7,364	0	0	0	0	0	7,364	0
Carrying value	**17,464**	**0**	**2,833**	**808**	**4,695**	**4,293**	**164,893**	**227,025**
investments accounted for using the equity method	17,464	0	2,833	808	4,695	4,293	164,893	227,025
liabilities to investments accounted for using the equity method	83	0	0	0	1,963	-299	-5,425	-3,774

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	**31.12.2019**			**31.12.2018**		
	Remaining maturity			**Remaining maturity**		
	> 1 year	**< 1 year**	**Total**	**> 1 year**	**< 1 year**	**Total**
Non-consolidated investments in affiliated companies	437	-	437	2,597	-	2,597
Loans	48,018	38,941	86,959	34,769	11,882	46,651
Other investments	0	-	0	4,130	-	4,130
Securities measured at fair value through profit and loss	28,363	230,137	258,500	19,670	5,598	25,268
Fair values of derivative financial instruments	-	23	23	-	525	525
Other financial assets	**76,818**	**269,101**	**345,919**	**61,166**	**18,005**	**79,171**

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

Securities, which are measured at fair value through profit and loss, mainly include European commercial papers, managed assets by the Royal Bank of Canada Investment Management (UK) Limited, a securities depot consisting of European corporate bonds and share positions.

Cash flow hedges are generally used to hedge against foreign currency risks from future procurement transactions. Option and future contracts serve as hedging instruments. Fair value changes of hedging instruments relating to the effective portion are recognised in other comprehensive income until the underlying hedged item is realised. The ineffective portion of the fair value changes is recognised in the income statement. For further information please refer to note **28. Equity**.

When the hedged item is realised, the fair value changes in the hedging relationship recognised under other comprehensive income are reclassified to the income statement. The recognised fair value of the hedging instruments used for cash flow hedges amounts to EUR 0k as at the balance sheet date (previous year: EUR -2,405k).

The development of risk allowance for loans during financial year 2019 is as follows:

in EUR '000	Bucket 1	Bucket 2	Bucket 3	Total
As of 01 January 2019	**-138**	**0**	**0**	**-138**
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	-41	0	0	**-41**
Disposal due to settlement / Consumption	75	0	0	**75**
Reversal / Write-up	19	0	0	**19**
Change in the scope of consolidation	0	0	0	**0**
Currency translation differences and other changes	0	0	0	**0**
As of 31 December 2019	**-85**	**0**	**0**	**-85**

The development of the gross book value of loans during financial year 2019 is as follows:

in EUR '000	Bucket 1	Bucket 2	Bucket 3	Total
As of 01 January 2019	**46,789**	**0**	**0**	**46,789**
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	27,820	0	44,440	**72,260**
Disposal due to settlement / Consumption	-32,018	0	0	**-32,018**
Change in the scope of consolidation	0	0	0	**0**
Currency translation differences and other changes	13	0	0	**13**
As of 31 December 2019	**42,604**	**0**	**44,440**	**87,044**

The loans of EUR 86,959k (previous year: EUR 46,651k) were not overdue as of the reporting date and will be repaid as planned. There was no significant change in the gross book values, which would have led to a change in risk allowance. Individual allowances for loans were not necessary in the reporting period neither in previous year. The net increase in loans results in particular from the loan receivables from CETERUM-Holding GmbH, which were already acquired at current market value.

The development of risk allowance for loans as of 31 December 2018 is as follows:

in EUR '000	Bucket 1	Bucket 2	Bucket 3	Total
As of 01 January 2018	**-92**	**0**	**0**	**-92**
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	-63	0	0	**-63**
Disposal due to settlement / Consumption	0	0	0	**0**
Reversal / Write-up	17	0	0	**17**
Change in the scope of consolidation	0	0	0	**0**
Currency translation differences and other changes	0	0	0	**0**
As of 31 December 2018	**-138**	**0**	**0**	**-138**

The development of the gross book value for loans as of 31 December 2018 is as follows:

in EUR '000	Bucket 1	Bucket 2	Bucket 3	Total
As of 01 January 2018	**49,043**	**0**	**0**	**49,043**
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	12,331	0	0	**12,331**
Disposal due to settlement / Consumption	-15,085	0	0	**-15,085**
Change in the scope of consolidation	0	0	0	**0**
Currency translation differences and other changes	500	0	0	**500**
As of 31 December 2018	**46,789**	**0**	**0**	**46,789**

23. Trade and other receivables

in EUR '000	31.12.2019		31.12.2018	
	current	non-current	current	non-current
Trade receivables	320,468	231	363,226	74
Receivables from construction contracts	0	0	0	0
Other receivables (financial instruments)	14,088	6,037	10,308	5,059
Other receivables (non-financial instruments)	42,182	0	45,930	9
Carrying amount (net)	**376,738**	**6,268**	**419,464**	**5,142**

Risk allowances for receivables from goods and services developed as follows during financial year 2019:

in EUR '000	Bucket 2	Bucket 3	Total
As of 01 January 2019	**-2,774**	**-4,446**	**-7,220**
Transfer to Bucket 2	441	-441	**0**
Transfer to Bucket 3	0	0	**0**
Additions	-7,603	-1,864	**-9,467**
Disposal due to settlement / Consumption	1,469	801	**2,270**
Reversal / Write-up	1,128	270	**1,398**
Change in the scope of consolidation	1,546	149	**1,695**
Reclassification under IFRS 5	0	-38	**-38**
Currency translation differences and other changes	-104	-12	**-116**
As of 31 December 2019	**-5,897**	**-5,581**	**-11,478**

The gross book values of trade receivables developed as follows during financial year 2019:

in EUR '000	**Bucket 2**	**Bucket 3**	**Total**
As of 01 January 2019	**362,140**	**8,380**	**370,520**
Transfer to Bucket 2	-461	441	**-20**
Transfer to Bucket 3	-1,751	1,771	**20**
Additions	732,420	-119	**732,301**
Disposal due to settlement / Consumption	-659,055	-3,276	**-662,331**
Change in the scope of consolidation	-110,077	-38	**-110,115**
Reclassification under IFRS 5	292	0	**292**
Currency translation differences and other changes	1,510	0	**1,510**
As of 31 December 2019	**325,018**	**7,159**	**332,177**

There have not been 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 during financial year 2018:

in EUR '000	**Bucket 2**	**Bucket 3**	**Total**
As of 01 January 2018	**-1,891**	**-5,147**	**-7,038**
Transfer to Bucket 2	-60	60	**0**
Transfer to Bucket 3	41	-41	**0**
Additions	-1,534	-2,223	**-3,757**
Disposal due to settlement / Consumption	279	2,873	**3,152**
Reversal / Write-up	391	84	**475**
Change in the scope of consolidation	0	0	**0**
Currency translation differences and other changes	0	-52	**-52**
As of 31 December 2018	**-2,774**	**-4,446**	**-7,220**

The gross book values of trade receivables developed as follows during financial year 2018:

in EUR '000	**Bucket 2**	**Bucket 3**	**Total**
As of 01 January 2018	**422,021**	**7,288**	**429,309**
Transfer to Bucket 2	-691	-60	**-751**
Transfer to Bucket 3	-3,175	3,926	**751**
Additions	408,331	579	**408,910**
Disposal due to settlement / Consumption	-454,703	-3,382	**-458,085**
Change in the scope of consolidation	-9,616	0	**-9,616**
Currency translation differences and other changes	-27	29	**2**
As of 31 December 2018	**362,140**	**8,380**	**370,520**

Other receivables break down as follows:

in EUR '000	31.12.2019	31.12.2018
Current		
financial instruments		
Creditors with debit balances	91	67
Other receivables	14,027	10,366
Allowances (Buckets 1-3)	- 30	- 125
	14,088	**10,308**
No financial instruments		
Value added tax receivables	23,765	26,682
Receivables from employees	1,510	1,735
Other tax receivables	535	811
Other receivables	17,650	18,414
Allowances	- 1,278	- 1,712
	42,182	**45,930**
	56,270	**56,238**
Non-current		
financial instruments		
Other receivables	**7,046**	**6,060**
Allowances (Buckets 1-3)	- 1,009	- 1,001
	6,037	**5,059**
No financial instruments		
Other receivables	-	9
Allowances	-	-
	-	**9**
	6,037	**5,068**
Other receivables	**62,307**	**61,306**

Risk allowances for other receivables (financial instruments) developed as follows during financial year 2019:

in EUR '000	Bucket 1	Bucket 2	Bucket 3	Total
As of 01 January 2019	**-45**	**0**	**-1,081**	**-1,126**
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	-25	0	0	**-25**
Disposal due to settlement / Consumption	1	0		**1**
Reversal / Write-up	15	0	63	**78**
Change in the scope of consolidation	30	0	0	**30**
Currency translation differences and other changes	-3	0	6	**3**
As of 31 December 2019	**-27**	**0**	**-1,012**	**-1,039**

The gross carrying amounts of other receivables (financial instruments) developed as follows during financial year 2019:

in EUR '000	Bucket 1	Bucket 2	Bucket 3	Total
As of 01 January 2019	**14,331**	**0**	**2,162**	**16,493**
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	24,273	0	44	**24,317**
Disposal due to settlement / Consumption	-15,752	0	-1,153	**-16,905**
Change in the scope of consolidation	-3,033	0	0	**-3,033**
Currency translation differences and other changes	291	0	1	**292**
As of 31 December 2019	**20,110**	**0**	**1,054**	**21,164**

There have not been 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 during financial year 2018:

in EUR '000	Bucket 1	Bucket 2	Bucket 3	Total
As of 01 January 2018	**-87**	**0**	**-1,052**	**-1,139**
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	-166	0	-30	**-196**
Disposal due to settlement / Consumption	2	0		**2**
Reversal / Write-up	55	0	0	**55**
Change in the scope of consolidation	-19	0	0	**-19**
Currency translation differences and other changes	170	0	1	**171**
As of 31 December 2018	**-45**	**0**	**-1,081**	**-1,126**

The gross carrying amounts of other receivables (financial instruments) developed as follows during financial year 2018:

in EUR '000	Bucket 1	Bucket 2	Bucket 3	Total
As of 01 January 2019	**9,962**	**0**	**2,104**	**12,066**
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	10,588	0	60	**10,648**
Disposal due to settlement / Consumption	-4,834	0	0	**-4,834**
Change in the scope of consolidation	0	0	0	**0**
Currency translation differences and other changes	-1,385	0	-2	**-1,387**
As of 31 December 2018	**14,331**	**0**	**2,162**	**16,493**

24. Contract Assets and Liabilities

The contractual assets and liabilities are composed as follows:

in EUR '000	31.12.2019	31.12.2018
Contract assets	92,135	289,695
Engineering	70,824	267,422
Mining	21,238	22,201
Med Tech	73	72
Aviation	0	0
Contract liabilities	107,098	194,291
Engineering	45,500	124,871
Mining	55,776	64,138
Med Tech	5,822	5,282
Aviation	0	0

Risk allowances for contract assets developed as follows during financial year 2019:

in EUR '000	Bucket 2	Bucket 3	Total
As of 01 January 2019	**-43**	**-1**	**-44**
Transfer to Bucket 2	0	0	**0**
Transfer to Bucket 3	0	0	**0**
Additions	-69	0	**-69**
Disposal due to settlement / Consumption	0	0	**0**
Reversal / Write-up	8	1	**9**
Change in the scope of consolidation	59	0	**59**
Currency translation differences and other changes	0	0	**0**
As of 31 December 2019	**-45**	**0**	**-45**

The gross carrying amounts of contract assets developed as follows during financial year 2019:

in EUR '000	Bucket 2	Bucket 3	Total
As of 01 January 2019	**289,739**	**0**	**289,739**
Transfer to Bucket 2	0	0	**0**
Transfer to Bucket 3	0	0	**0**
Additions	238,262	0	**238,262**
Disposal due to settlement / Consumption	-278,754	**0**	**-278,754**
Change in the scope of consolidation	-158,984	0	**-158,984**
Currency translation differences and other changes	1,917	0	**1,917**
As of 31 December 2019	**92,180**	**0**	**92,180**

There is no significant change in the gross carrying amounts, which has led to a change of allowance for contract assets.

Risk allowances for contract assets developed as follows during the financial year 2018:

in EUR '000	Bucket 2	Bucket 3	Total
As of 01 January 2018	**-28**	**0**	**-28**
Transfer to Bucket 2	0	0	**0**
Transfer to Bucket 3	0	0	**0**
Additions	-23	-1	**-24**
Disposal due to settlement / Consumption	0	0	**0**
Reversal / Write-up	8	0	**8**
Change in the scope of consolidation	0	0	**0**
Currency translation differences and other changes	0	0	**0**
As of 31 December 2018	**-43**	**-1**	**-44**

The gross carrying amounts of contract assets developed as follows during financial year 2018:

in EUR '000	Bucket 2	Bucket 3	Total
As of 01 January 2018	**346,135**	**0**	**346,135**
Transfer to Bucket 2	0	0	**0**
Transfer to Bucket 3	0	0	**0**
Additions	86,100	0	**86,100**
Disposal due to settlement / Consumption	-142,496	**0**	**-142,496**
Change in the scope of consolidation	0	0	**0**
Currency translation differences and other changes	0	0	**0**
As of 31 December 2018	**289,739**	**0**	**289,739**

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

in EUR '000	31.12.2019	31.12.2018
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 the scope of change in the transaction price cannot be determined without considering adjustments of performance obligation.

Contract assets exist in the segments Engineering, Mining and Med Tech 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. Thereby, the Group receives advance payments from customers, which are presented net with contract assets or 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	2019		2018	
	Contract Assets	**Contract Liabilities**	**Contract Assets**	**Contract Liabilities**
Contract asset / Contract liability at the beginning of the reporting period	**289,695**	**-194,291**	**346,107**	**-224,511**
Revenue recognised in the reporting period that was included in the contract liability balance at the beginning of period	0	117,752	**0**	**139,582**
Reclassification of contract assets at the beginning of period to accounts receivable (due to invoicing)	-156,849	0	**-268,740**	**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	-89,495	58,130	**-152,639**	**-246,743**
Increase due to change in measure of progress (which have still not resulted in accounts receivable)	298,160	0	**507,266**	**0**
Net changes in allowances / impairment for contract assets	-41	0	**16**	**0**
Changes due to business combinations	0	0	**0**	**0**
Reclassifications between contract assets and contract liabilities since the net amount of contract asset and payments received is changing the sign (+/-)	-114,088	-180,365	**-136,423**	**133,227**
Currency translation difference for contract assets / liabilities	1,919	-44	**-1,325**	**-1,351**
other significant changes in contract balances	21,759	-4,348	**-4,567**	**5,505**
Changes in the scope of consolidation	-158,925	96,068	**0**	**0**
Contract asset / Contract liability at the end of the reporting period	**92,135**	**-107,098**	**289,695**	**-194,291**

The transaction price allocated to the outstanding performance obligations as of 31 December 2019 is as follows:

in EUR '000	up to 1 year	1 - 5 years	> 5 years	Total
	49,323	57,673	102	107,098

The transaction price allocated to the outstanding performance obligations as of 31 December 2018 is as follows:

in EUR '000	up to 1 year	1 - 5 years	> 5 years	Total
	129,406	64,757	128	194,291

As revenues in the segment Mining are recognised for satisfied performance obligations in accordance with IFRS 15.B16, use is made of the practical expedient in IFRS 15.121 (b) and therefore no disclosure is made for the open transaction price for unsatisfied performance obligations as required by IFRS 15.120.

In financial year 2019 there are no incremental costs of obtaining a contract with a customer or costs to fulfil a contract, which should be capitalized.

25. Inventories

The carrying amount of the inventories amounting to EUR 108,016k (previous year: EUR 153,571k), breaks down as follows:

in EUR '000	31.12.2019	31.12.2018
Raw materials, consumables and supplies	23,984	38,877
Unfinished goods, work in progress	9,703	14,456
Finished goods	17,040	14,559
Merchandises	56,272	54,221
Advance payments	1,017	31,458
Inventories	**108,016**	**153,571**

Inventories are written down to the lower net realisable value if this amount is lower than the acquisition or production costs. The carrying amount of the inventories measured at the net realisable value amounts to EUR 17,518k (previous year: EUR 22,085k). Total write-downs amounted to EUR 9,494k (previous year: EUR 11,392k). As in the previous year, the impairment losses were fully recognised in cost of materials.

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

26. Cash and cash equivalents

in EUR '000	31.12.2019	31.12.2018
Cash and bank balances	524,617	559,291
Other cash equivalents	18	18
Cash in transit	3,251	0
Cash and cash equivalents	**527,886**	**559,309**

For details of changes in cash and cash equivalents, please refer to the consolidated statement of cash flows. As of 31 December 2019, the Group cannot freely dispose over a portion amounting to EUR 298k (previous year: EUR 274,326k).

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

In the segment **Engineering** the following assets and liabilities of REFORM Maschinenfabrik Adolf Rabenseifner GmbH & Co. KG were classified as assets held for sale / liabilities associated with assets held for sale as of 31 December 2019 (fair value hierarchy measurement level 1):

in EUR '000	**31.12.2019**
Property, plant and equipment	1,433
Trade and other receivables	352
Inventories	254
Cash and cash equivalents	1,036
Assets held for disposal	**3,075**

in EUR '000	**31.12.2019**
Provisions for pensions	40
Other provisions	830
Financial liabilities	29
Trade and other payables	892
Deferred tax liabilities	1,284
Liabilities associated with assets held for disposal	**3,075**

The sale of the company is considered highly probable. Concrete sales negotiations already started before the balance sheet date. The expected sales price is EUR 1. The sale is expected to take place during financial year 2020 subject to the expected approval from the antitrust authorities.

As of 31 December 2018, valuation allowances on REFORM Maschinenfabrik Adolf Rabenseifner GmbH & Co. KG's assets of amounted to EUR 10,795k due to the impairment test carried out. Due to the significant decrease in the company's assets, EUR 7,292k of these allowances were dissolved step-by-step in the course of the financial year 2019, so that the valuation allowances for the assets amount to EUR 3,503k as of the balance sheet date.

As of balance sheet date, no items are classified as assets held for sale or liabilities associated with assets held for sale within the other segments.

As of 31 December 2018, none of the segments had assets held for sale or liabilities associated with assets held for sale in accordance with IFRS 5.

28. Equity

Details of the development of the equity between 1 January and 31 December 2019 and the previous period are presented in the Group's statement of changes in equity.

Subscribed capital

The subscribed capital of EUR 15,000k (previous year: EUR 15,000k) corresponds to the equity of the parent company. As of 31 December 2019, the share capital of EUR 15,000k is fully paid in.

Capital reserve

The capital reserve as of 31 December 2019 is at EUR 623,355k (previous year: EUR 629,168k).

Other reserves

In the other reserves, the revenue reserves and profit or loss of previous years attributable to shareholders (profit or loss carried forward), the current net profit or loss attributable to shareholders, reserves from the transition from HGB (German GAAP) to IFRS accounting, reserves from the transition to IFRS 9, IFRS 15 and IFRS 16 and total other comprehensive income are reported.

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

In 2019 no payments to shareholders at ATON GmbH were made. However, a profit and loss transfer agreement exists since 30 November 2018 between ATON 2 GmbH and ATON GmbH. This transfer of profit and loss in the amount of EUR 522,655k is represented as a transaction with owners in IFRS. To minority shareholders at the level of affiliates EUR 6,071k were distributed in the current financial year (previous year: EUR 6,467k).

in EUR '000	31.12.2019	31.12.2018
Retained earnings including profit or loss		
Revenue reserves and profit (+) or loss (-) carried forward	18,789	366,250
Profit attributable to the owners	295,765	166,774
Reserve from the transition to IFRS / from application of IFRS 9, 15 and 16	147	244
	314,701	**533,268**
Other comprehensive income		
Currency translation differences	-22,868	-38,027
Remeasurements of defined benefit plans	-5,605	-2,888
Effective part of changes from cash flow hedges	0	-1,645
	-28,473	**-42,560**
Other reserves	**286,228**	**490,708**

The reserves from cash flow hedges relates to the effective portion of the hedging relationship from currency hedging and developed as follows:

in EUR '000	31.12.2019	31.12.2018
Reserves from cash flow hedges as of 1 January (net of tax)	**- 1,645**	**-**
Change due to effective hedge relationship	-6,462	-8,039
Termination of hedge relationships due to P&L impact of underlying transaction	4,148	5,689
Change in deferred taxes	694	705
Change in scope of consolidation	3,265	0
Reserves from cash flow hedges as of 31 December (net of tax)	**0**	**-1,645**

Due to the disposal of the FFT Group during the year, there are no more cash flow hedge relationships as of balance sheet date.

Non-controlling interests

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

in EUR '000	31.12.2019	31.12.2018
EDAG subgroup	37,271	43,469
ATM subgroup	-5,985	-3,501
FFT subgroup	0	4,062
Total non-controlling interests	**31,286**	**44,030**

Non-controlling interests in the EDAG subgroup result from the fact that the ATON Group only holds 72.1 % (previous year: 70.7 %) of the interest in EDAG Engineering Group AG, Arbon, Switzerland.

As a result of the sale of the FFT Group, there were no more non-controlling interests in this regard as of the balance sheet date. The non-controlling interests in the ATM subgroup are not material as in previous year, so that no information is presented for balance sheet, income statement and cash flow statement for subsidiaries with non-controlling interests.

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

in EUR '000	31.12.2019	31.12.2018
Percentage of non-controlling interests	**27.9**	**29,3**
Non-current assets	409,096	227,841
Current assets	299,155	289,077
Non-current liabilities	-367,467	-199,291
Current liabilities	-216,909	-174,217
Net assets	**123,875**	**143,410**
Net assets corresponding to non-controlling interests	**34,561**	**42,076**
Revenue	777,798	758,614
Profit or loss for the period	4,132	8,127
Other comprehensive income, net of income taxes	-4,414	123
Total comprehensive income to non-controlling interest	**-282**	**8,250**
Profit or loss for the period corresponding to non-controlling interests	2,546	2,786
Other comprehensive income (net of taxes) corresponding to non-controlling interests	-1,232	36
Cash flow from operating activities	72,174	64,863
Cash flow from investing activities	-22,863	-21,224
Cash flow from financing activities	-42,762	6,942
Net reduction of cash and cash equivalents	**6,549**	**50,581**

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

in EUR '000	2019	2018
As of 1 January (before restatements)	**44,030**	**55,980**
Restatement due to application of IFRS 16	**11**	**-**
Restatement due to application of IFRS 9 / 15	**-**	**- 52**
As of 1 January (restated)	**44,041**	**55,928**
Changes in equity recognised directly in equity		
Dividend payments	- 6,071	- 6,467
Changes in the scope of consolidation	- 3,724	0
Change in non-controlling interest due to step acquisition	- 1,867	- 6,897
Remeasurement of defined benefit plans	- 1,323	218
Currency translation differences from translation of financial statements of foreign subsidiaries	- 142	44
	- 13,127	**- 13,102**
Changes in equity recognised in profit or loss	372	1,204
As of 31 December	**31,286**	**44,030**

During the financial year, ATON Group increased its share in the EDAG Group from 70.7 % to 72.1 %. Due to this additional acquisition of shares in the EDAG Group non-controlling interests declined.

With regard to the changes in the scope of consolidation, these are the effects of the sale of the FFT Group.

29. Provisions for pensions

The Group has occupational pension systems in the form of defined contribution plans and defined benefit plans.

Defined contribution plans take the form of old-age, disability and survivor's benefits. The employer contributions to the statutory pension insurance scheme payable in Germany should be treated as defined contribution plans of this type. The payments to defined contribution pension plans in the Group primarily relate to contributions to the statutory pension insurance schemes in Germany. The Group has no further payment obligations once the contributions have been paid. In the reporting period, current contributions of EUR 64,193k (previous year: EUR 66,989k) were paid. Other long-term employee benefits according to IAS 19.153 amount to EUR 1,292k in 2019 (previous year: EUR 1,259k).

The defined benefit obligations relate to direct pension commitments and indirect pension commitments through VKE Versorgungkasse EDAG-Firmengruppe e.V. (VKE) for companies of the FFT Group and the EDAG Group. The direct pension commitments obligate the employer to 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 supported 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:

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

The exclusive and unalterable purpose of VKE is to manage a special pension fund, which grants voluntary, one-time, repeated or recurring benefits to beneficiaries according to the benefit plan of VKE when they need support, become disabled or incapable to work and in 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. Individuals who find or found themselves in a comparable situation to that of employees of the funding companies are also classified as members of the funding companies. For employees recruited after 1 June 2006, there are no pension commitments.

Employees receive old-age, disability and survivor's benefits in the form of a lump sum payment in accordance with the provisions of the applicable pension plan. The benefit due in each case is paid as a lump sum. 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 to a lesser extent defined benefit obligations at Deilmann-Haniel Mining Systems GmbH, Dortmund. Beneficiaries are employees which are not member of the miner's pension insurance not miners and salaried employees who joined the company until 30 June 1995.

In Germany, the provisions of the German Company Pensions Act apply to the pension commitments. Due to the legally prescribed pension adjustment, the pension obligations are subject to inflation risk. Furthermore, there is a risk that the actual payment obligations differ from the obligations expected at the time of the commitment, which is caused by changes in lifetime, disablement probabilities, and mortality rates.

In Switzerland, the Group joins the Swiss Life Collective BVG Foundation since 1 January 2019 (until 31 December 2018: AXA foundation for occupational benefits). 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 with Swiss Life.

In Italy, it concerns termination benefits (Trattamento di Fine Rapporto [TFR]). Every employee is entitled to benefits. 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) during the year to the Italian social institution or to an external pensions fund. 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 by a legally required index (1.5 % plus 75 % increase of the consumer price index for families of workers and employees based on the last 12 month).

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.

In Mexico, employees also have a settlement claim. There is a payment of 12 days per year of service. In addition, in the event of unjustified termination at retirement age, compensation for the years of service paid must be paid. The compensation amounts to three month’s salary.

In addition, in Indonesia there are other post-employment benefit plans in accordance with Indonesian law who applies to employed Indonesian nationals. The obligation is to pay a severance at completion of the employment contract. The benefit amount for each individual employee varies according to length of service and other factors such as age and position.

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 estimated future salary and pension trends.

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

in EUR '000	2019	2018
Present value of funded obligations	43,651	47,715
Fair value of plan assets	- 22,876	- 27,909
Deficit of funded plans	**20,775**	**19,806**
Present value of unfunded obligations	29,413	25,963
Total deficit of defined benefit pension plans	**50,188**	**45,769**
Provisions for pensions as of 31 December	**50,188**	**45,769**

The provisions for pensions changed as follows:

in EUR '000	2019	2018
Provisions for pensions as of 1 January	45,769	42,826
Changes in the scope of consolidation	-4,753	0
Current service cost	1,377	3,351
Past service cost	480	-582
Net interest cost (+) / income (-)	861	748
Remeasurements	7,149	-896
from changes in demographic assumptions	-427	698
from changes in financial assumptions	7,538	-1,504
from experience gains (-) / losses (+)	38	-90
Currency translation differences	125	-223
Employer contributions	-224	-208
Benefit payments	-561	751
thereof from settlements	0	1,486
Administration cost	2	2
Reclassification under IFRS 5	-37	0
Provisions for pensions as of 31 December	**50,188**	**45,769**

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

in EUR '000	**2019**	**2018**
Present value of the defined benefit obligation as of 1 January	73,678	72,169
Changes in the scope of consolidation	-8,735	0
Current service cost	1,377	3,351
Past service cost	480	-582
Interest cost	1,352	1,257
Remeasurements of defined benefit plans		
from changes in demographic assumptions	-427	698
from changes in financial assumptions	7,306	-1,464
from experience gains (-) / losses (+)	38	-90
Currency translation differences	212	-124
Contributions by plan participants	121	116
Benefit payments	-2,215	-1,654
thereof from settlements	-771	0
Administration cost	2	1
Reclassification under IFRS 5	-125	0
Present value of the defined benefit obligation as of 31 December	**73,064**	**73,678**

The fair value of plan assets developed as follows:

in EUR '000	**2019**	**2018**
Fair value of plan assets as of 1 January	27,909	29,343
Changes in the scope of consolidation	-3,981	0
Interest income	492	508
Return on (-) / loss from (-) plan assets excluding amounts included in interest income	-232	40
Currency translation differences	85	99
Employer contributions	224	208
Contributions by plan participants	121	116
Benefit payments	-1,654	-2,405
thereof payments from settlements	-771	-1,486
Reclassification under IFRS 5	-88	0
Fair value of plan assets as of 31 December	**22,876**	**27,909**

The asset allocation of the fair value of the plan assets is as follows:

in EUR '000	**2019**	**in %**	**2018**	**in %**
Debt instruments (Germany)	20,611	90%	24,891	89%
thereof without a quoted market price in an active market	0		0	
thereof investments in employer company or related parties	20,611		24,891	
Asset values of reinsurance cover pension trust (Germany)	212	1%	432	2%
thereof without a quoted market price in an active market	212		432	
Collective foundation (Switzerland)	2,053	9%	2,586	9%
thereof without a quoted market price in an active market	2,053		2,586	
Plan assets as of 31 December	**22,876**	**100%**	**27,909**	**100%**

Neither as of 31 December 2019 nor as of 31 December 2018, asset ceiling regulations had an effect regarding plan assets to be recorded.

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

	2019	**2018**
Average discount rate		
Germany	1.12%	2.03%
India	7.12%	7.57%
Indonesia	7.40%	8.10%
Italy	1.10%	1.57%
Mexico	8.00%	9.25%
Switzerland	0.35%	1.10%
Biometric accounting bases		
Germany	Richttafeln 2018 G	2018 G mortality tables
India	IALM 2012 - 14	IALM 2006 - 08
Indonesia	TMI 3 (2011)	TMI 3 (2011)
Italy	RG 48	RG 48
Mexico	ENOE 2010 - INEGI	EMSSA 2009
Switzerland	BVG 2015 GT	BVG 2015 GT

The following sensitivity analyses present the impact on the present value of the defined benefit obligation of an increase or decrease in the actuarial assumptions:

in EUR'000		**2019**	**in %**	**2018**	**in %**
Average discount rate	+ 0,50 %	- 64,722	-188.58	- 66,416	-190.14
	- 0,50 %	73,720	0.90	74,354	0.92
Average life expectancy	+ 1 year	69,593	4.75	70,475	4.35
	- 1 year	- 68,553	-193.83	- 69,848	-194.80

The above sensitivity analyses were calculated in analogy to the defined benefit obligation by changing one assumption while holding all other assumptions and the valuation method constant. If several assumptions change at the same time, the total effect does not have to be the same as the sum of the individual effects. In addition, the effects of the individual changes in assumptions are not linear. The assumptions for salary and pension increases do not have a material impact on the present value of the defined benefit obligation. Hence sensitivities for these assumptions are not disclosed.

For the financial year 2019, the Group expects contributions to defined benefit pension plans amounting to EUR 4,617k (previous year: EUR 1,987k) in total.

The weighted average duration of the defined benefit obligation of ATON's defined benefit plans is 12 years as of 31 December 2018 (previous year: 13 years).

30. Provisions for income taxes and other provisions

Provisions for income taxes and other provisions developed as follows:

in EUR '000	Income taxes	Personnel	Warran-ties	Rework	Onerous contracts	Litigation risks	Other	Total other provi-sions
As of 31 December 2018	**5,632**	**9,608**	**2,716**	**2,751**	**11,535**	**1,161**	**7,767**	**35,538**
Restatement IFRS 15	0	0	0	0	0	0	0	**0**
As of 1 January 2019	**5,632**	**9,608**	**2,716**	**2,751**	**11,535**	**1,161**	**7,767**	**35,538**
thereof: current	**5,254**	5,417	1,988	2,751	11,534	1,161	5,696	**28,547**
Changes in the scope of consolidation	**- 10,478**	- 1,421	-	- 1,748	- 6,491	-	- 342	**- 10,002**
Currency translation differences	**16**	- 5	7	32	466	9	11	**520**
Additions	**14,310**	2,598	1,891	65	4,189	205	9,527	**18,475**
Consumption	**- 1,783**	- 3,901	- 723	- 17	- 2,823	- 105	- 3,346	**- 10,915**
Reversal	**- 20**	- 597	- 1,569	- 849	- 1,600	- 48	- 3,296	**- 7,959**
Interest effect	**-**	19	-	-	-	-	- 6	**13**
Reclassification under IFRS 5	**0**	-243	0	0	0	0	-587	**-830**
Other changes	**43**	-	-	-	-	-	-	**-**
As of 31 December 2019	**7,720**	**6,058**	**2,322**	**234**	**5,276**	**1,222**	**9,728**	**24,840**
thereof: current	**7,673**	2,737	1,737	234	5,276	1,222	7,641	**18,847**

in EUR '000	Income taxes	Personnel	Warran-ties	Rework	Onerous contracts	Litigation risks	Other	Total other provisi-ons
As of 31 December 2017	**7,822**	8,479	2,768	530	12,050	928	4,672	**29,427**
Restatement IFRS 15	**0**	0	0	491	2,444	0	1,805	**4,740**
As of 1 January 2018	**7,822**	**8,479**	**2,768**	**1,021**	**14,494**	**928**	**6,477**	**34,167**
thereof: current	**7,447**	4,617	1,983	1,021	14,494	928	4,033	**27,076**
Changes in the scope of consolidation	**-2**	-5	0	0	0	-65	-309	**-379**
Currency translation differences	**-23**	-148	10	-4	59	-34	-45	**-162**
Additions	**1,884**	5,242	1,463	645	3,684	407	3,522	**14,963**
Consumption	**-3,979**	-3,345	0	-230	-2,422	-72	-160	**-6,229**
Reversal	**-70**	-637	-1,536	-264	-4,282	-3	-167	**-6,889**
Interest effect	**0**	22	0	0	0	0	1	**23**
Other changes	**0**	0	11	1,583	2	0	-1,552	**44**
As of 31 December 2018	**5,632**	**9,608**	**2,716**	**2,751**	**11,535**	**1,161**	**7,767**	**35,538**
thereof: current	**5,254**	5,417	1,988	2,751	11,534	1,161	5,696	**28,547**

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 in particular relate to provisions for severance payments EUR 1,731k (previous year: EUR 4,296k) and service anniversaries provisions EUR 2,037k (previous year: EUR 2,110k).

The provisions for warranties are recognised for statutory and contractual warranty obligations as well as goodwill services. The provisions were recognised based on the products sold with the period being selected depending on the product and the industry. The measurement is made on the basis of past experience for repairs and complaints.

The provisions for rework comprise subsequent obligations from sales of machinery.

Provisions for onerous contracts are recognised for expected contract-related losses from construction, sales and lease contracts.

The provisions for litigation risks result from current or future legal action of which the related outcome cannot be predicted with certainty. They are measured on the basis of individual assessments of the most likely result.

The provisions for archiving costs are part of the other provisions amount to EUR 430k in the financial year (previous year: EUR 167k).

31. Financial liabilities

Financial liabilities break down as follows:

in EUR '000	31.12.2019 Total	31.12.2019 Remaining maturities < 1 year	31.12.2019 Remaining maturities > 1 year < 5 years	31.12.2019 Remaining maturities > 5 years	31.12.2018 Total	31.12.2018 Remaining maturities < 1 year	31.12.2018 Remaining maturities > 1 year < 5 years	31.12.2018 Remaining maturities > 5 years
Liabilities to banks	237,510	111,210	83,300	43,000	448,698	244,521	164,677	39,500
thereof from current accounts	-	-	-	0	60	60	-	0
thereof from loans	237,510	111,210	83,300	43,000	448,638	244,461	164,677	39,500
Loan liabilities	628,524	628,524	0	0	171,295	171,295	0	0
thereof to shareholders	607,661	607,661	0	0	146,086	146,086	0	0
thereof to related parties	20,610	20,610	0	0	24,888	24,888	0	0
thereof to associates	0	0	0	0	85	85	0	0
thereof to investments accounted for using the equity method	253	253	0	0	236	236	0	0
Lease liabilities	269,382	45,021	101,791	122,570	34,573	16,372	18,201	0
Liabilities from derivative financial instruments	278	278	0	0	2,655	2,655	0	0
Liabilities from bills	0	0	0	0	508	508	0	0
Total	**1,135,694**	**785,033**	**185,091**	**165,570**	**657,729**	**435,351**	**182,878**	**39,500**

For details of lease liabilities, please refer to note **19. The Group as lessee**. For details regarding liabilities from derivative financial instruments, please refer to note **22. Other financial assets**.

The table below shows the future undiscounted cash flows of financial liabilities as of 31 December 2019 that have an impact on the future liquidity status of the ATON Group:

		Cash flow in 2020			Cash flow in 2021-2023			Cash flow in 2024 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	237,510	2,164	5,595	120,315	1,684	319	3,599	4,352	761	113,596	0
Lease liabilities	269,382	4,730	0	47,513	5,140	0	39,771	9,878	0	52,204	129,894
Loan liabilities to sharehol-ders, related parties and associates	628,271	0	0	-	0	0	0	0	0	0	628,271
Loan liabilities to investments accounted for using the equity method	253	0	0	253	0	0	0	0	0	0	0
Liabilities from derivative financial instruments	278	0	0	278	0	0	0	0	0	0	0
Trade payables	110,444	29	0	110,430	0	0	14	0	0	0	0
Contract Liabilities	107,098	0	0	57,775	0	0	49,221	0	0	102	0
Other liabilities (financial instruments)	12,341	0	0	4,307	0	0	8,034	0	0	0	0
Total	**1,365,577**	**6,923**	**5,595**	**340,871**	**6,824**	**319**	**100,639**	**14,230**	**761**	**165,902**	**758,165**

The following table shows the figures as of 31 December 2018, also disclosing the future undiscounted cash flows of the financial liabilities:

		Cash flow in 2019			Cash flow in 2020-2022			Cash flow in 2023 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	448,698	1,034	315	244,521	1,487	5,196	68,787	4,159	854	135,390	0
Lease liabilities	34,573	1,049	18	16,372	575	0	13,922	141	0	4,279	0
Loan liabilities to sharehold-ers, related parties and associates	171,059	2,921	0	171,059	0	0	0	0	0	0	-
Loan liabilities to investments accounted for using the equity method	236	0	0	236	0	0	0	0	0	0	0
Liabilities from derivative financial instruments	2,655	0	0	2,655	0	0	0	0	0	0	0
Trade payables	205,988	0	0	199,862	0	0	5,929	0	0	197	0
Contract Liabilities	194,291	0	0	129,406	0	0	64,885	0	0	0	0
Other liabilities (financial instruments)	6,558	0	0	3,476	0	0	3,057	0	0	0	25
Total	**1,064,058**	**5,004**	**333**	**767,587**	**2,062**	**5,196**	**156,580**	**4,300**	**854**	**139,866**	**25**

32. Trade and other payables

	31.12.2019				31.12.2018			
	Total	Remaining maturities			Total	Remaining maturities		
in EUR '000		< 1 year	> 1 year < 5 years	> 5 years		< 1 year	> 1 year < 5 years	> 5 years
Trade payables								
to third parties	110,396	110,383	13	-	200,056	200,056	-	-
to related parties	16	16	-	-	-	-	-	-
to affiliated companies	31	31	-	-	3	3	-	-
to associates	1	-	1	-	5,929	-	5,929	-
	110,444	**110,430**	**14**	**-**	**205,988**	**200,059**	**5,929**	**-**
Other liabilities								
Other liabilities (financial instruments)								
to affiliated companies	-	-	-	-	61	36	25	-
to associates	8,034	-	8,034	-	-	-	-	-
to related parties	5	5	-	-	-	-	-	-
from company purchase agreements	1,267	1,267	-	-	2,226	996	1,230	-
from other liabilities (financial instruments)	3,035	3,035	-	-	4,271	4,271	-	-
	12,341	**4,307**	**8,034**	**-**	**6,558**	**5,303**	**1,255**	**-**
Other liabilities (no financial instruments)								
payments received on account of orders	12,859	10,992	1,867	-	9,784	8,000	1,784	-
to employees	65,484	65,484	-	-	86,046	86,046	-	-
from social security contributions	3,775	3,775	-	-	3,882	3,882	-	-
from value added tax and other taxes	29,417	29,417	-	-	36,018	36,018	-	-
from deferred income	1,314	1,314	-	-	1,427	1,346	81	-
from other liabilities (no financial instruments)	655	655	-	-	651	651	-	-
	113,504	**111,637**	**1,867**	**-**	**137,808**	**135,943**	**1,865**	**-**
Total	**236,289**	**226,374**	**9,915**	**-**	**350,354**	**341,305**	**9,049**	**-**

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 to be paid to social security institutions.

Aside from this, other liabilities contain a large number of items that are individually insignificant.

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. The impact of changes in the scope of consolidation is disclosed separately only 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 from 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 319,131k; previous year: EUR 203,062k) adjusted by the net amount of interest expense, interest income and dividend income (EUR 17,977k; previous year: EUR 16,719k).

In the reporting period, the cash flow from operating activities amounts to EUR 132,229k (previous period: cash inflow of EUR 225,665k) and thus declined by EUR 93,436k compared to previous year. The gross cash flow amounting to EUR 217,023k is EUR 28,978k above previous year. On the contrary, the change in other assets and liabilities with an increase of EUR 43,200k in the reporting period had a negative impact on the development of the cash flow from operating activities (previous year: decrease by EUR 82,778k).

Cash flow from investing activities

The cash inflow from investing activities amounts to EUR 139,839k (previous year: EUR 87,930k). The increased net cash inflow is mainly driven by the net proceeds from the disposal of consolidated subsidiaries amounting to EUR 466,182k (previous year: EUR 212,495k). The net investments in financial assets and associates amount to EUR 265,139k in the reporting period and are therefore EUR 257,984k above previous year's level. On the contrary, the net investments in intangible assets and property, plant and equipment are at EUR 61,204k and thus EUR 56,206k below previous year.

Cash flow from financing activities

In the reporting period, the cash outflow from financing activities amounts to EUR 309,179k (previous year: cash inflow of EUR 61,253k). The cash flow from financing activities is mainly due to the net repayment of bank loans and lease liabilities amounting to EUR 238,407k (previous year: net proceeds of EUR 87,872k) and the net payment of loans to shareholders amounting to EUR 67,117k (previous year: EUR 6,467k). In addition there were payments for the acquisition of non-controlling interest in the amount of EUR 3,655k (previous year: EUR 20,152k), which had a negative impact on the development of cash flow from financing activities.

Reconciliation of changes financial liabilities to consolidated statement of cash flows

The following table shows the changes of financial liabilities which are presented within the cash flow from financing activities during financial year 2019:

in EUR '000	Balance as of 1 January 2019	Cash flows	non-cash changes				Balance as of 31.12.2019
			Acquisitions and disposals (non-cash)	Currency translation differences	Changes in fair value	Reclassifications / restatements / additions and disposals of leases	
Current liabilities to banks, from bonds and other current financial liabilities	418,979	- 297,085	501,041	2,353	348	114,376	**740,012**
Non-current liabilities to banks, from bonds and other non-current financial liabilities	204,177	44,404	- 11,232	3,327	-	-114,376	**126,300**
Current lease liabilities	16,372	- 45,396	15,118	535	0	58,392	**45,021**
Non-current lease liabilities	18,201	- 1,376	27,656	861	0	179,019	**224,361**
Total	**657,729**	**- 299,453**	**532,583**	**7,076**	**348**	**237,411**	**1,135,694**

The column acquisitions and disposals (non-cash) includes the disposal of current liabilities to banks, from bonds and other current financial liabilities in the amount of EUR 21,614k, the disposal of non-current liabilities to banks, from bonds and other non-current financial liabilities in the amount of EUR 11,232k, the disposal of current lease liabilities in the amount of EUR 3,373k as well as the disposal of non-current lease liabilities in the amount of EUR 2,275k due to the deconsolidation of FFT Group.

The following table shows the changes of financial liabilities which are presented within the cash flow from financing activities during financial year 2018:

in EUR '000	Balance as of 1 January 2018	Cash flows	non-cash changes				Balance as of 31.12.2018
			Acquisitions and disposals (non-cash)	Currency translation differences	Changes in fair value	Reclassifications / restatements / additions and disposals of leases	
Current liabilities to banks, from bonds and other current financial liabilities	289,233	- 380,190	146,087	510	10,503	352,836	418,979
Non-current liabilities to banks, from bonds and other non-current financial liabilities	73,230	485,966	-	- 2,216	-	-352,803	204,177
Current lease liabilities	11,628	- 17,193	21,220	- 701	-	1,418	16,372
Non-current lease liabilities	14,931	- 711	6,391	- 985	-	-1,425	18,201
Total	**389,022**	**87,872**	**173,698**	**- 3,392**	**10,503**	**26**	**657,729**

34. Contingent liabilities and other financial obligations

Contingent liabilities

For the contingent liabilities listed below no provisions were recognised, because at the reporting date it was deemed unlikely that the risk would materialise:

in EUR '000	31.12.2019	of which to affiliated companies	31.12.2018	of which to affiliated companies
Contingent liabilities from the granting of security for third-party liabilities	-	-	0	-
Other contingent liabilities	0	-	1,541	0
Contingent liabilities	**0**	**0**	**1,541**	**0**

The change in other contingent liabilities results from the sale of the FFT Group within the segment Engineering.

Other financial obligations

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

in EUR '000	31.12.2019	31.12.2018
Obligations from non-cancellable operating leases	10,264	205,737
Purchase commitments and other purchase obligations	21,115	83,862
Miscellaneous other obligations	1,015	2,241
Other financial obligations	**32,394**	**291,840**

For fix-term contracts the expenses during the entire term of the contract are taken into account, whereas for permanent contracts only the expenses of the following 12 months are taken into the valuation.

The change in obligations from non-cancellable operating leases is primarily due to the decline in the segments Engineering and Aviation. The decrease is mainly due to the first-time application of IFRS 16, as the obligations from these leases are now already largely recognized in the balance sheet and are therefore not additionally reported as other financial obligations.

The decrease in purchase commitments and other purchase obligations is mainly attributable to the segment Mining.

The decrease in miscellaneous other obligations results from the segment Engineering due to the sale of the FFT Group.

35. Financial instrument disclosures

Carrying amount, valuation and fair values of financial instruments by measurement categories

Financial instruments are initially measured at fair value. Financial instruments not measured at fair value primarily include cash equivalents, trade receivables, contract assets within the scope of IFRS 15, trade payables, contract liabilities in the scope of IFRS 15, and other financial liabilities, overdrafts and long-term loans.

In the case of cash equivalents and 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 similar to the fair value. The same applies to contract assets and contract liabilities.

The fair value of the non-current loans are based on current borrowing interest rates with matching maturity and credit standards. The fair value of financial liabilities largely corresponds to their carrying amount, because the agreed interest rate is regularly adjusted to market levels. For fixed-rate items, the carrying amount is likewise very similar to the fair value, which results by discounting with a term-adequate interest rate, because the interest rate principally corresponds 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 prevailing as of the reporting date. For the determination, recognised valuation models are used. 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 items of the balance sheet as of 31 December 2019 according to IFRS 9:

in EUR '000	Carrying amount under IFRS 9						Fair Value
	Assets				Liabilities		
	Fair value through profit or loss	Amortized cost	Fair value through other comprehen-sive income	Fair Value through OCI Option	Fair value through profit or loss	Amortized cost	
Cash and cash equivalents		527,886					527,886
Financial assets at amortized cost							
Loans		86,959					86,959
Trade receivables		320,699					320,699
Other receivables (financial instruments)		20,125					20,125
Financial assets at fair value through profit and loss							
Securities	258,500						258,500
Futures	23						23
Non-consolidated investments in affiliated companies / Other investments	436						436
Financial liabilities at amortized cost							
Trade payables						110,445	110,445
Liabilities to banks						237,510	237,510
Other interest-bearing liabilities						628,524	628,524
Other liabilities (financial instruments)						12,341	12,341
Lease liabilities						269,382	269,382
Financial liabilities at fair value through profit and loss							
Foreign exchange futures					278		278
Currency options					-		-

The following table shows the fair values and carrying amounts of the financial assets and financial liabilities included in the respective items of the balance sheet as of 31 December 2018 according to IFRS 9:

in EUR '000	Carrying amount under IFRS 9						Fair Value
	Assets				Liabilities		
	Fair value through profit or loss	Amortized cost	Fair value through other comprehen-sive income	Fair Value through OCI Option	Fair value through profit or loss	Amortized cost	
Cash and cash equivalents		559,309					559,309
Financial assets at amortized cost							
Loans		46,651					46,651
Trade receivables		363,300					363,300
Non-consolidated investments in affiliated companies / Other investments		15,367					15,367
Financial assets at fair value through profit and loss							
Securities	25,268						25,268
Futures	525						525
Other investments	6,727			-			6,727
Financial liabilities at amortized cost							
Trade payables						205,988	205,988
Liabilities to banks						448,698	448,698
Other interest-bearing liabilities						171,295	171,295
Other liabilities (financial instruments)						6,558	6,558
Lease liabilities						34,573	34,573
Liabilities from bills						508	508
Financial liabilities at fair value through profit and loss							
Foreign exchange futures					250		250
Currency options					2,405		2,405

If circumstances occur that require a different classification, the reclassification is performed 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 2019:

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	23	0	23	-23	
Other financial liabilities					
Derivative financial liabilities	278	0	278	-23	255

The following table shows the gross and net amounts of the other financial assets and other financial liabilities as of 31 December 2018:

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	525	0	525	- 525	
Other financial liabilities					
Derivative financial liabilities	2,655	0	2,655	- 525	2,130

Determination of the fair value of financial instruments

In the tables below the fair values of financial instruments are allocated to the relevant levels in accordance with IFRS 7. Thereby, the fair value measurement of a financial instrument is allocated in its entirety to the level for which inputs are material to determine its fair value. In level 1, fair values are mainly determined by using quoted prices in active markets for identical financial assets or liabilities. The market is considered active, if quoted prices are easily available and at regular intervals at an exchange, from a trader, broker, industry association, price calculation service or a supervisory authority and the prices reflect current recurring market transactions conducted at arm's length principle. The basis to determine fair values of level 2 are mainly observable quoted prices for similar financial assets or liabilities. Fair value is determined on the basis of the results of a valuation method that uses market data to the largest possible extent, avoiding company-specific data as far as possible. Fair value measurements of level 3 are mainly based on unobservable market data. In 2019 and 2018, 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 2019 nor 2018.

The table below shows the classification of the assets and liabilities measured at fair value as of 31 December 2019:

in EUR '000	Level 1	Level 2	Level 3	Total
Assets				
Non-consolidated investments in affiliated companies		437		437
Other investments	0			0
Securities measured at fair value through profit and loss (FVTPL)	258,500			258,500
Foreign exchange futures		23		23
Currency options		-		-
Liabilities				
Foreign exchange futures		278		278
Currency options		-		-

In the reporting period 2019 (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 are measured at fair value on a recurring basis.

The instruments in level 1 mainly include commercial papers for short-term investment, managed securities portfolios and individual equity investments.

The forward exchange futures and currency options allocated at 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 2018:

in EUR '000	Level 1	Level 2	Level 3	Total
Assets				
Non-consolidated investments in affiliated companies		2,597		2,597
Other investments	4,130			4,130
Securities measured at fair value through profit and loss (FVTPL)	25,268			25,268
Foreign exchange futures		525		525
Currency options		-		-
Liabilities				
Foreign exchange futures		250		250
Currency options		2,405		2,405

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 are reported in a separate line of the income statement in accordance with IFRS 9.

Net gains or losses on financial assets and liabilities at fair value through profit or loss include 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 costs mainly includes interest expenses from financial liabilities. It also includes interest expenses and interest income from the compounding and discounting of trade payables.

The gains or losses by measurement category according to IFRS 9 during financial year 2019 are as follows:

	From interest	From subsequent measurement			From	Net gain or loss
in EUR '000	**and dividends**	**Fair value**	**Currency translation**	**Allowances**	**disposal**	**2019**
Financial Assets measured at amortised costs	- 2,788	-	12,296	- 8,812	1,415	2,111
Financial Assets at Fair Value through profit and loss	-	- 2,869	0	- 21	99	- 2,791
Financial Liabilities measured at amortised costs	- 5,149	-	- 11,240	-	-	- 16,389
Financial Liabilities at Fair Value through profit and loss	114	1,015	- 1,015	-	51	165
Financial Assets at Fair Value through OCI	-	-	-	-	-	-
Financial Liabilities at Fair Value through OCI	-	-	-	-	-	-
Net gain / loss	**-7,823**	**-1,854**	**41**	**-8,833**	**1,565**	**-16,904**

The gains or losses by measurement category according to IFRS 9 during financial year 2018 are as follows:

	From interest	From subsequent measurement			From	Net gain or loss
in EUR '000	**and dividends**	**Fair value**	**Currency translation**	**Allowances**	**disposal**	**2018**
Financial Assets measured at amortised costs	- 705	-	- 1,284	- 3,067	-	- 5,056
Financial Assets at Fair Value through profit and loss	2,926	- 14,721	842	- 3	462	- 10,494
Financial Liabilities measured at amortised costs	- 16,300	-	- 871	-	-	- 17,171
Financial Liabilities at Fair Value through profit and loss	- 109	- 588	- 452	- 113	-	- 1,262
Financial Assets at Fair Value through OCI	-	-	-	-	-	-
Financial Liabilities at Fair Value through OCI	-	-	-	-	-	-
Net gain / loss	**-14,188**	**-15,309**	**-1,765**	**-3,183**	**462**	**-33,983**

Net interest income/expense and allowances

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

in EUR '000	2019	2018
Interest income	4,321	4,310
Interest expense	- 12,260	- 21,317
Net interest expense	**- 7,939**	**- 17,007**

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, risks are hedged only if they may have an impact on the Group’s cash flows. 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.

Financial policy is defined by the Group’s management board on an annual basis. The implementation of financial policy and ongoing risk management are the responsibility of the subgroups and single entities. To monitor financial policy, the Group’s management board is regularly informed in quarterly meetings respectively in the event of material changes about the current risk exposure in terms of the extent and amount. In addition, certain transactions exceeding the nature and extent of normal business transactions are subject to prior approval by the Group’s management board.

Risks from exchange rate fluctuations are limited by locally procuring most materials needed in the manufacturing and assembly processes 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 credit risk. Credit risk exists where a business partner involved in a transaction with non-derivative or derivative financial instruments cannot meet its obligations and this causes a loss of assets. As part of their operations, the Group companies enter into transactions only with third parties rated as creditworthy. Credit checks are performed for new customers. In the case of existing customer relationships, the customer’s payment behaviour is analysed on a regular basis. In addition, an analysis and classification of the borrowers into 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 2019:

Credit risk rating grades	Bucket 1	Bucket 2	Bucket 3	Total
A	62,692	320,183	6,981	389,856
B	23	0	44,483	44,506
C	0	6,023	0	6,023

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 2018:

Credit risk rating grades	Bucket 1	Bucket 2	Bucket 3	Total
A	61,121	360,332	10,544	431,997
B	0	0	0	0
C	0	1,796	9	1,805

In addition, orders and receivables are secured with letters of credit from major banks amounting to EUR 1,872k as of 31 December 2019 (previous year: EUR 1,536k). Most of the Group companies have business relationships with large-scale customers (especially international OEMs). The resulting risk is considered low, because these customers have high degrees of solvency and in addition there are no material dependencies. The end customer business with private individuals is of minor importance to the Group.

In the operating business, receivables are continuously monitored on a divisional, i.e. decentralised, basis, so that the Group is not exposed to any material credit risk. The trade and other receivables in the amount of EUR 383,006k (previous year: EUR 424,606k), contract assets in the amount of EUR 92,135k (previous year: EUR 289,695k) as well as other financial assets in the amount of EUR 345,919k (previous year: EUR 79,171k) reported in assets represent the maximum credit risk.

The maturity structure, the default rate on trade receivables and on active contractual assets in accordance with IFRS 15 is shown below per segment and derives from the gross book values to the net book value:

Valuation adjustments for trade receivables – Engineering

Overdue in days	not overdue	< 30	30 - 60	61 - 90	91 - 180	181 - 360	> 360	Total
Loss rate	0.06%	0.16%	0.34%	0.55%	0.89%	3.36%	16.93%	
Gross book value net of payments received on account in kEUR	90,750	16,524	4,129	1,999	6,071	15,241	1,926	**136,640**
Expected credit loss over lifetime	-50	-27	-14	-11	-54	-512	-326	**-994**
Net book value after valuation adjustment in kEUR	**90,700**	**16,497**	**4,115**	**1,988**	**6,017**	**14,729**	**1,600**	**135,646**

Valuation adjustments for trade receivables – Mining

Overdue in days	not overdue	< 30	30 - 60	61 - 90	91 - 180	181 - 360	> 360	Total
Loss rate	1.67%	26.21%	81.33%	0.81%	1.44%	0.00%	0.00%	
Gross book value net of payments received on account in kEUR	111,147	7,635	2,528	2,977	3,119	347	164	**127,917**
Expected credit loss over lifetime	-1,859	-2,001	-2,056	-24	-45	0	0	**-5,985**
Net book value after valuation adjustment in kEUR	**109,288**	**5,634**	**472**	**2,953**	**3,074**	**347**	**164**	**121,932**

Valuation adjustments for trade receivables – Med Tech

Overdue in days	not overdue	< 30	30 - 60	61 - 90	91 - 180	181 - 360	> 360	Total
Loss rate	0.06%	0.22%	0.40%	0.46%	0.52%	1.02%	1.54%	
Gross book value net of payments received on account in kEUR	34,359	5,919	1,497	5,216	2,881	391	1,362	**51,625**
Expected credit loss over lifetime	-21	-13	-6	-24	-15	-4	-21	**-104**
Net book value after valuation adjustment in kEUR	**34,338**	**5,906**	**1,491**	**5,192**	**2,866**	**387**	**1,341**	**51,521**

Valuation adjustments for trade receivables – Aviation

Overdue in days	not overdue	< 30	30 - 60	61 - 90	91 - 180	181 - 360	> 360	Total
Loss rate	0.02%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	
Gross book value net of payments received on account in kEUR	4,825	1,512	103	1	0	20	0	**6,461**
Expected credit loss over lifetime	-1	-1	0	0	0	0	0	**-2**
Net book value after valuation adjustment in kEUR	**4,824**	**1,511**	**103**	**1**	**0**	**20**	**0**	**6,459**

Valuation adjustments for contract assets – Engineering

Overdue in days	**not overdue**
Loss rate	0.06%
Gross book value net of payments received on account in kEUR	70,863
Expected credit loss over lifetime	-39
Net book value after valuation adjustment in kEUR	**70,824**

Valuation adjustments for contract assets – Mining

Overdue in days	**not overdue**
Loss rate	0.03%
Gross book value net of payments received on account in kEUR	21,244
Expected credit loss over lifetime	-6
Net book value after valuation adjustment in kEUR	**21,238**

Valuation adjustments for contract assets – Med Tech

Overdue in days	**not overdue**
Loss rate	0.00%
Gross book value net of payments received on account in kEUR	73
Expected credit loss over lifetime	0
Net book value after valuation adjustment in kEUR	**73**

Valuation adjustments for contract assets – Aviation

Overdue in days	**not overdue**
Loss rate	0.00%
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**

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

In the case of securities, the book value of the securities represents the maximum default risk. Currency forwards that are not included in hedge accounting are in principle economically offset by opposing effects from underlying transactions. Again, the book value as of balance sheet date best reflects the maximum default risk.

Risk of changes in interest rates

Most of the Group’s financing is mostly based external bank financing. The ATON Group is generally exposed to fluctuations in market interest rates. Fluctuations in interest rates primarily concern liabilities to banks. These include among other things current account overdrafts as well as variable-rate loans and are therefore directly affected by changes in interest rates. These changes have an impact on future cash flows. In our opinion, no material risks arise from the fluctuations in market interest rates.

The table below shows the sensitivity of consolidated earnings before income taxes to a change in interest rates that is deemed reasonably possible. All other variables have remained unchanged.

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

in EUR '000	Change in interest rate in basis points	Impact on profit after tax	Impact on equity
2019	+ 100	- 1,431	- 1,431
	./. 100	1,431	1,431
2018	+ 100	- 2,506	- 2,506
	./. 100	2,506	2,506

Foreign currency risk

Foreign currency risks result from investments, financing transactions and operating activities. Significant risks from foreign currencies are hedged, if 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 corporate units into the Group's reporting currency) are not hedged.

The foreign currency risks regularly relate to current receivables and liabilities denominated in currencies other than the local currencies of the companies in the ATON Group 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, Canadian dollar, Australian dollar and South African Rand.

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 operating activities is considered 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 used to hedge only existing or expected foreign currency risks.

As of 31 December 2019, material receivables and payables only exist in US dollar, Canadian dollar, Australian dollar and South African Rand. The non-derivative and derivative financial instruments existing at the end of the reporting period were measured in a hypothetical scenario as part of a sensitivity analysis. The effects of a 10 % increase / decrease in a currency per exchange rate to profit after taxes and equity as of 31 December 2019 and 31 December 2018 are as follows:

in EUR '000	change in %	EUR/USD	EUR/CAD	EUR/AUD	EUR/ZAR
2019	+ 10	2,566	- 5,631	150	- 53
	./. 10	-3,136	6,882	- 184	65
2018	+ 10	- 7,726	- 6,326	212	- 85
	./. 10	9,442	7,732	- 259	104

As of balance sheet date, for the currency risks in Canadian dollars partially offsetting exchange rate hedging transactions with different maturities and different hedging rates were concluded, for which no hedge accounting is applied. If there was a 10 % increase of the Canadian dollar against the EUR, this would have an effect of EUR 1,442k, and there was a 10 % decrease, the effect would be EUR -1,762k.

Relevant risk variables are all non-functional currencies in which the Group enters into financial instruments.

The currency sensitivity analyses are based on the following assumptions: Material non-derivative financial instruments (cash and cash equivalents, receivables, interest-bearing liabilities, finance lease liabilities, non-interest-bearing liabilities) are either denominated directly in the functional currency or, in material circumstances, they are transferred into the functional currency by using derivatives.

Equity instruments held by the Group are non-monetary and therefore not associated with foreign currency risk as defined in IFRS 7.

Liquidity risk

Ensuring permanent solvency is the responsibility of the respective management teams of the subgroups and single entities. The central objective specified for the Group is to continuously ensure that financial requirements are covered by using current account overdrafts, loans and leases. Central monitoring of the liquidity of the individual Group companies is performed with weekly reports to the parent ATON. 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 low. Nevertheless, liquidity continues to be ensured through medium-term and long-term lines of credit. In general, it is ensured that there are sufficient free lines of credit. Appropriate measures are taken on time to ensure the financing of planned investments.

Please refer to note **31. Financial liabilities** for the liquidity analysis.

Covenant Risk

The majority of financing contracts with banks include covenants that are based on predefined financial ratios. Essentially, the covenants are equity ratios and gearing and in some cases interest cover ratios. The obligations under the credit clauses are subject to a permanent review, i.e. in relation to the current financial situation of the companies, by means of which risks can be identified at an early stage. In the financial year 2019, the covenant conditions 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 impact on the prices of financial instruments. Eligible risk variables are exchange prices or indices in particular.

in EUR '000	Change in prices in basis points	Impact on profit after tax	Impact on equity
2019	+ 100	2,585	2,585
	./. 100	- 2,585	- 2,585
2018	+ 100	253	253
	./. 100	- 253	- 253

There are no material concentration of risks in the ATON Group as of the 2019 reporting date.

Capital management / control

The main objective of the Group's capital management system is to ensure that the Group's ability to repay debt and its financial strength are maintained, combined with the corresponding credit rating and equity ratio.

The Group manages its capital structure and makes adjustments in line with changes in economic conditions.

Capital is primarily managed on the basis of a dynamic debt ratio (I and II), which corresponds to the ratio of first and second degree net financial liabilities to EBITDA. The debt ratio I 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 previous year, the dynamic debt ratios I and II are within the specified range:

in EUR '000	**2019**	**2018**
EBITDA	559,732	330,747
Liabilities to banks	237,510	448,698
Leasing liabilities	269,382	34,573
Other financial liabilities	531	3,484
	507,423	**486,755**
Cash and cash equivalents	527,886	559,309
First-degree net financial assets (-) / net financial liabilities (+)	**- 20,463**	**- 72,554**
Liabilities to shareholders/related parties	628,271	170,974
Investments in securities that can be liquidated at short notice	258,500	25,268
Second-degree net financial assets (-) / net financial liabilities (+)	**349,308**	**73,152**
Dynamic debt ratio I	**-**	**-**
Dynamic debt ratio II	**0.6**	**0.2**

Effect of hedging relationships

The Group hedges currency risks by the use of hedge accounting. Hedge accounting reflects the hedging strategies outlined above for currency risk. Hedging is usually only for longer-term and larger projects in foreign currency.

The effectiveness of the hedging relationship is assessed using the hypothetical derivative method. In doing so, a derivative is modelled for the underlying transaction that corresponds exactly to its payment profile. Changes in the value of this hypothetical derivative are compared with changes in the value of the hedging transaction. For each secured cash flow, a separate hedging transaction is made. Since the payment characteristics of the hypothetical derivative and the hedging derivative are opposite, fluctuations in value exactly balance each other out.

As of the reporting date, the Group has the following hedging instruments:

	Nominal amount	due	due	due	Average hedging rate		Fair Value	
in EUR '000	**31.12.2019**	**< 1 year**	**between 1 and 5 years**	**> 5 years**	**31.12.2019**	**31.12.2018**	**31.12.2019**	**31.12.2018**
Currency forward exchange transactions (within cash flow hedges)	0	0	0	0	0	0	0	0
Currency options (within cash flow hedges)	0	0	0	0	0.00	1.00	0	-2,405

The hedging instruments that the Group has designated as hedges have the following effects on the balance sheet as of 31 December 2018:

	Carrying amount of the hedging instruments					
in EUR '000	**debit**	**credit**	**Nominal amount of hedging instruments**	**Presentation in the following balance sheet item**	**Change in fair value used as the basis for recognising hedge ineffectiveness**	**Average hedging rate (USD / EUR)**
Information about hedging instruments within cash flow hedges as of 31 December 2019	0	0	0	-	0	0.00
Information about hedging instruments within cash flow hedges as of 31 December 2018	0	-2,405	31,104	Financial Liabilities	-2,350	1.22

The aforementioned hedging relationships have the following effects on the income statement and other comprehensive income in the financial year 2019:

in EUR '000	**Hedging gain or loss of the reporting period that were recognised in other comprehensive income**	**Hedging gain or loss of the reporting period that were recognised in profit and loss due to ineffectiveness**	**Income statement position where the ineffectiveness is accounted for**	**Amount reclassified from the cash flow hedge reserve (OCI) into profit and loss**	**Income statement position where the reclassified amounts are accounted for**
Effects from hedging in the statement of comprehensive income 2019	-6,462	0	-	4,148	Revenue
Effects from hedging in the statement of comprehensive income 2018	-8,039	0	-	-5,689	Revenue

No planned transactions were used for hedge accounting, that turned out to be no longer probable during the financial year.

With regard to the impact on the other comprehensive income from the use of hedge accounting in the financial year 2019, we refer to the consolidated statement of comprehensive income, the presentation of the changes in the reserves from cash flow hedges in note **28. Equity** and the further explanations in note **22. Other financial assets**.

37. Segment reporting

The management board is the main decision maker of the Group. Management has determined the operating segments for the purpose of allocating resources and assessing performance. The management board defines the business from a product perspective with the segments Engineering, Mining, Med Tech and Aviation.

The services of the segment **Engineering** cover in particular the areas of engineering and plant construction for the automotive industry, along with other sectors of the mobility industry.

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

The segment **Med Tech** 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, activities aimed at developing inhalation therapies have been launched in this business segment.

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

The 33.34 % investment in OneFiber Interconnect Germany GmbH via ATON Digital Services GmbH is currently still presented in the segment Holding / Consolidation, as the business is currently ramped up.

The management board assesses the performance of the operating segments based on gross revenue, EBIT and EAT (profit or loss for the period).

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.

Since financial year 2019, Deilmann-Haniel Mining Systems is no longer reported within the segment Engineering but within the segment Mining, since the company is no longer providing services to the FFT Group and, therefore, the company is no longer related to the segment Engineering. The previous year's comparing figures have been adjusted accordingly.

The following table presents information for the Group's segments:

	Engineering		Mining		Med Tech	
in EUR '000	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**
External revenue (net)	1,062,512	1,539,253	725,499	642,215	178,833	204,795
Internal revenue (net)	155	124	-	38	-	-
Revenue	**1,062,667**	**1,539,377**	**725,499**	**642,253**	**178,833**	**204,795**
Changes in inventories and own work capitalised	-5,625	6,450	-758	- 2,281	7,819	1,218
Gross revenue	**1,057,042**	**1,545,827**	**724,741**	**639,972**	**186,652**	**206,013**
Non-operating result	350,458	5,909	871	6,646	1,084	158,372
Impairment losses / reversal of impairment losses on financial assets	2,198	1,729	6,007	828	131	617
EBITDA	**441,693**	**122,478**	**102,913**	**81,522**	**29,203**	**186,649**
Depreciation and amortisation	77,884	61,349	63,689	36,248	7,001	8,050
Impairment losses	378	33	1,628	3,807	-	3
EBIT	**363,431**	**61,096**	**37,596**	**41,467**	**22,202**	**178,596**
Financial result	-7,064	-10,602	-80,290	-4,675	-447	-770
thereof interest income	974	1,061	454	501	25	99
thereof interest expense	-8,627	-10,966	-8,677	-7,078	-473	-869
thereof result from at equity investments	0	0	14,196	13,909	-	-
EBT	**356,367**	**50,494**	**-42,694**	**36,792**	**21,755**	**177,826**
Income taxes	487	19,124	14,643	13,473	7,022	3,834
EAT	**355,880**	**31,370**	**-57,337**	**23,319**	**14,733**	**173,992**
EAT attributable to non-controlling interest	2,679	3,138	-2,307	-1,934	-	-
EAT attributable to owners of the parent	**353,201**	**28,232**	**-55,030**	**25,253**	**14,733**	**173,992**

	Engineering		Mining		Med Tech	
in EUR '000	**31.12.2019**	**31.12.2018**	**31.12.2019**	**31.12.2018**	**31.12.2019**	**31.12.2018**
Segment assets	720,656	987,750	729,022	754,919	193,527	172,044
Segment liabilities	587,450	660,802	342,826	318,556	52,593	41,773

	Aviation		Holding/Consolidation		ATON Group	
in EUR '000	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**
External revenue (net)	73,317	75,301	140	-	2,040,301	2,461,564
Internal revenue (net)	-	22	- 155	- 146	-	38
Revenue	**73,317**	**75,323**	**- 15**	**-146**	**2,040,301**	**2,461,602**
Changes in inventories and own work capitalised	-	-	-	-	1,436	5,387
Gross revenue	**73,317**	**75,323**	**-15**	**-146**	**2,041,737**	**2,466,989**
Non-operating result	104	-126	5,049	-3,911	357,566	166,890
Impairment losses / reversal of impairment losses on financial assets	-277	269	-35	1	8,024	3,444
EBITDA	**2,237**	**-247**	**-16,314**	**-59,655**	**559,732**	**330,747**
Depreciation and amortisation	1,995	262	429	62	150,998	105,971
Impairment losses	-	-	-	66	2,006	3,909
EBIT	**242**	**-509**	**-16,743**	**-59,783**	**406,728**	**220,867**
Financial result	855	119	-651	-1,877	-87,597	-17,805
thereof interest income	257	374	2,967	2,666	4,677	4,701
thereof interest expense	-643	-331	-4,707	-4,399	-23,127	-23,643
thereof result from at equity investments	12	246	-	-	14,208	14,155
EBT	**1,097**	**-390**	**-17,394**	**-61,660**	**319,131**	**203,062**
Income taxes	139	67	703	-1,414	22,994	35,084
EAT	**958**	**-457**	**-18,097**	**-60,246**	**296,137**	**167,978**
EAT attributable to non-controlling interest	-	-	-	-	372	1,204
EAT attributable to owners of the parent	**958**	**-457**	**-18,097**	**-60,246**	**295,765**	**166,774**

	Aviation		Holding/Consolidation		ATON Group	
in EUR '000	**31.12.2019**	**31.12.2018**	**31.12.2019**	**31.12.2018**	**31.12.2019**	**31.12.2018**
Segment assets	44,508	26,862	895,345	611,941	2,583,058	2,553,516
Segment liabilities	38,346	25,657	605,974	327,822	1,627,189	1,374,610

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	2019	2018
Audits	799	1,105
Other attestation services	-	59
Tax consultation services	-	34
Other services	2	76
Total	**801**	**1,274**

39. Related party transactions

In addition to the subsidiaries included in the consolidated financial statements, ATON 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 are a member of the key 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 services provided to related parties by the ATON Group breaks down as follows:

in EUR '000	31.12.2019 Revenue, other income and interest	31.12.2019 Receivables outstanding	31.12.2018 Revenue, other income and interest	31.12.2018 Receivables outstanding
Investments accounted for using the equity method	28,054	6,256	25,087	6,426
Non-consolidated subsidiaries	7,264	3,653	2,470	7,742
Other related parties	3,215	83,549	1,508	38,600
Shareholders	7	4,549	5	1
Total	**38,540**	**98,007**	**29,070**	**52,769**

Income with companies, which are accounted by using the equity method, mainly derives from deliveries of inventories and interests.

Income with non-consolidated subsidiaries results primarily from rendering of services and from interest income.

Income with other related parties essentially results from rendering of services.

The receivables from other related parties are essentially loan receivables from CETERUM-Holding GmbH.

The receivables from shareholders mainly consist of other receivables from ATON 2 GmbH.

The volume of services received from related parties by the ATON Group breaks down as follows:

in EUR '000	31.12.2019 Purchased merchan-dise/services, other operating expenses and interest	31.12.2019 Liabilities outstanding	31.12.2018 Purchased merchan-dise/services, other operating expenses and interest	31.12.2018 Liabilities outstanding
Investments accounted for using the equity method	84,996	8,287	294	6,165
Non-consolidated subsidiaries	0	31	8	88
Other related parties	362	20,631	646	24,888
Shareholders	3,263	607,661	-	146,147
Total	**88,621**	**636,610**	**948**	**177,288**

Expenses with companies, which are accounted by using the equity method, primarily result from the impairment of the shares of Murray & Roberts and the purchase of services.

Expenses with other related parties mainly result from the purchase of services.

Expenses with shareholders consist primarily of interest expenses with ATON 2 GmbH.

The liabilities to related parties essentially include loans and borrowings as well as balances from deliveries and services.

The liabilities to shareholders result from the liability arising from the profit and loss transfer agreement with ATON 2 GmbH and shareholder loans.

Transactions with related parties are contractually agreed and conducted at arm's lengths conditions.

Transactions with the management board

The remuneration paid to the management board amounts to EUR 2,549k in the financial year (previous year: EUR 4,334k). Besides, the key management personnel received a variable additional remuneration in the amount of EUR 750 (previous year: EUR 1,000k).

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

On 1 August 2019, the ATON Group announced that it intends to purchase shares in EDAG Engineering Group AG, Arbon / Switzerland, until 31 July 2020. During this period, up to 1,000,000 shares of the company (4.0 % of the share capital of the EDAG Group) are to be acquired.

With regard to the corona pandemic, which became relevant after the balance sheet date, we refer to our comments in chapter **VI. EXPECTED DEVELOPMENTS, OPPORTUNITIES AND RISKS** in the Group Management Report 2019.

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 2020

ATON GmbH
Management Board

[original German version signed by:]

Georg Denoke   Jörg Fahrenbach

List of shareholdings (direct and indirect) of ATON GmbH

As of 31 December 2019

No.	Company	City	Country	Share in % direct	Share in % indirect	Currency	Equity as per 31 Dec 2019	Net Result 2019
I. Affiliated Companies								
1. Consolidated Companies								
a) Domestic companies								
1.	AspiAir GmbH	Munich	Germany	100.0		kEUR	519	- 6
2.	ATM Holding GmbH	Munich	Germany	100.0		kEUR	81,492	- 308
3.	ATON Digital Services GmbH	Munich	Germany	100.0		kEUR	11,518	- 7
4.	ATON - Oldtimer GmbH	Munich	Germany	100.0		kEUR	6,638	- 3,611
5.	BFFT aeromotive GmbH (since 6 March 2020: EDAG aeromotive GmbH)	Gaimersheim	Germany		100.0	kEUR	585	36
6.	DC Aviation GmbH	Stuttgart	Germany	100.0		kEUR	6,162	958
7.	Deilmann-Haniel Mining Systems GmbH	Munich	Germany	100.0		kEUR	- 25,189	0
8.	EDAG Engineering GmbH	Wiesbaden	Germany		100.0	kEUR	248,759	0
9.	EDAG Engineering Holding GmbH	Munich	Germany		100.0	kEUR	77,162	14,737
10.	EDAG Production Solutions GmbH & Co. KG	Fulda	Germany		100.0	kEUR	13,708	- 16,292
11.	Redpath Deilmann GmbH (previously: Deilmann-Haniel GmbH)	Dortmund	Germany		100.0	kEUR	40,184	9,907
12.	REFORM Maschinenfabrik Adolf Rabenseifner GmbH & Co. KG	Fulda	Germany	100.0		kEUR	3,418	- 3,288
13.	Rücker Akademie GmbH (since 3 February 2020: EDAG Akademie GmbH)	Wiesbaden	Germany		100.0	kEUR	213	0
14.	Ziehm Imaging GmbH	Nuremberg	Germany	100.0		kEUR	126,917	12,487
b) Foreign Companies								
15.	ATON Austria Holding GmbH	Going am Wilden Kaiser	Austria	100.0		kEUR	544,279	19,683
16.	BFFT of America Inc.	Los Angeles	USA		100.0	kUSD	452	- 17
17.	CKGP/PW & Associates, Inc.	Troy	USA		100.0	kUSD	2,857	- 417
18.	Deilmann-Haniel Schachtostroj OOO	Berezniki	Russia		100.0	kCAD	34,748	- 584
19.	EDAG do Brasil Ltda.	Sao Bernardo do Campo	Brazil		100.0	kBRL	18,340	1,488
20.	EDAG Engineering AB (since 25th January 2020: EDAG Engineering Scandinavia AB)	Goeteborg	Sweden		100.0	kSEK	7,381	4,851
21.	EDAG Engineering and Design (Shanghai) Co. Ltd.	Shanghai	China		100.0	kCNY	39,033	10,471
22.	EDAG Engineering CZ spol. s.r.o.	Mladà Boleslav	Czech Republic		100.0	kCZK	19,200	- 15,435
23.	EDAG Engineering Group AG	Arbon	Switzerland		72.1	kEUR	389,622	- 2,183
24.	EDAG Engineering Ltd.	Markyate	Great Britain		100.0	kGBP	- 805	- 265
25.	EDAG Engineering Polska Sp.z.o.o.	Warszawa	Poland		100.0	kPLN	8,141	2,208
26.	EDAG Engineering Schweiz GmbH	Arbon	Switzerland		100.0	kCHF	1,096	462
27.	EDAG Engineering Schweiz Sub-Holding AG	Arbon	Switzerland		100.0	kEUR	476,197	11,798
28.	EDAG Holding Sdn. Bhd. Malaysia	Shah Alam	Malaysia		100.0	kMYR	1,637	373
29.	EDAG Hungary Kft.	Györ	Hungary		100.0	kEUR	2,251	- 205
30.	EDAG Inc.	Troy	USA		100.0	kUSD	9,896	1,522
31.	EDAG Italia S.R.L.	Torino	Italy		100.0	kEUR	1,294	370
32.	EDAG Japan Co. Ltd.	Yokohama	Japan		100.0	kJPY	78,580	11,374
33.	EDAG Mexico S.A. de C.V.	Puebla	Mexico		100.0	kMXN	69,016	22,097
34.	EDAG Netherlands B.V.	Helmond	Netherlands		100.0	kEUR	662	354
35.	EDAG Production Solutions CZ s.r.o.	Mladà Boleslav	Czech Republic		100.0	kCZK	35,747	12,199
36.	EDAG Production Solutions, Inc.	Troy	USA		100.0	kUSD	9,273	219
37.	EDAG Production Solutions India Priv. Ltd.	Gurgaon	India		100.0	kINR	226,178	18,856
38.	EDAG SERVICIOS Mexico S.A. de C.V.	Puebla	Mexico		100.0	kMXN	10	- 130
39.	EDAG Technologies India Priv. Ltd.	Gurgaon	India		100.0	kINR	52,577	10,972

No.	Company	City	Country	Share in % direct	Share in % indirect	Currency	Equity as per 31 Dec 2019	Net Result 2019
b) Foreign Companies								
40.	Eroc Holdings Pty Limited	Brisbane	Australia		100.0	kCAD	4	0
41.	Eroc Malaysia Sdn. Bhd.	Kuala Lumpur	Malaysia		100.0	kCAD	0	0
42.	HRM Engineering AB	Goeteborg	Sweden		100.0	kSEK	9,756	0
43.	J.S. Redpath Peru SAC	Lima	Peru		100.0	kCAD	- 24	1
44.	Les Entreprises Mineres Redpath Ltee.	North Bay	Canada		100.0	kCAD	79	0
45.	Müller HRM Engineering AB	Goeteborg	Sweden		100.0	kSEK	498	- 790
46.	OOO EDAG Production Solutions RU	Kaluga	Russia		100.0	kRUB	5,143	133
47.	OrthoScan Inc.	Scottsdale	USA		100.0	kUSD	- 65,792	3,455
48.	PT Redpath Indonesia	Jakarta	Indonesia		100.0	kCAD	35,670	16,741
49.	Redpath Africa Limited	Ebene	Mauritius		100.0	kCAD	7,092	- 94
50.	Redpath Argentina Construcciones S.A.	Buenos Aires	Argentina		100.0	kCAD	185	58
51.	Redpath (Australia) Holdings Pty Limited	Brisbane	Australia		100.0	kCAD	15,810	- 7,014
52.	Redpath Australia Coal Pty Ltd.	Brisbane	Australia		100.0	kCAD	- 113	- 10
53.	Redpath Australia Pty Limited	Brisbane	Australia		100.0	kCAD	20,822	804
54.	Redpath Canada Limited	North Bay	Canada		100.0	kCAD	97,411	- 362
55.	Redpath Chilena Construcciones Y Cia. Limitada	Santiago	Chile		100.0	kCAD	- 28,644	- 12,976
56.	Redpath Contract Services Pty Ltd.	Brisbane	Australia		100.0	kCAD	20,834	11,056
57.	Redpath Deilmann Belschachtostroj (previously: Deilmann-Haniel Belschachtostroj)	Soligorsk	Belarus		99.9	kCAD	526	350
58.	Redpath-Deilmann d.o.o Beograd	Belgrade	Republic of Serbia		100.0	kCAD	0	0
59.	Redpath Global Mobility Services Inc.	North Bay	Canada		100.0	kCAD	- 467	- 453
60.	Redpath Greece Pivate Company	Athens	Greece		100.0	kCAD	382	- 21
61.	Redpath Guatemala Construc-ciones S.A.	Guatemala	Guatemala		100.0	kCAD	- 77	0
62.	Redpath KR LLC	Bishkek	Kirgizstan		100.0	kCAD	0	0
63.	Redpath Mexicana Construcciones SA de CV	Mexico City	Mexico		100.0	kCAD	3	- 1
64.	Redpath Mining (S.A.) (Pty.) Ltd.	Johannesburg	South Africa		74.0	kCAD	- 33,938	- 9,501
65.	RGP Deilmann d.o.o.	Belgrade	Republic of Serbia		100.0	kCAD	0	0
66.	Redpath Mining Inc.	North Bay	Canada		100.0	kCAD	96,438	1,826
67.	Redpath Mongolia LLC	Ulaanbaatar	Mongolia		100.0	kCAD	10,982	8,714
68.	Redpath Philippines Inc.	Makati	Philippines		100.0	kCAD	0	0
69.	Redpath PNG Limited	Port Moresby	Papua New Guinea		100.0	kCAD	1,124	- 21
70.	Redpath Raiseboring Limited	North Bay	Canada		100.0	kCAD	69,411	4,676
71.	Redpath Rig Resources JV Limited	Kitwe	Zambia		70.0	kCAD	- 8,687	- 3,421
72.	Redpath USA Corporation	Sparks	USA		100.0	kCAD	16,923	- 4,515
73.	Redpath Venezolana C.A.	El Callao	Venezuela		100.0	kCAD	0	0
74.	Redpath Zambia Limited	Lusaka	Zambia		74.0	kCAD	10,575	472
75.	Rücker Lypsa, S.L.U.	Cornellá de Llobregat	Spain		100.0	kEUR	11,704	- 1,243
76.	Rücker Vehicle Design (Shanghai) Co., Ltd.	Shanghai	China		100.0	kCNY	2,501	0
77.	Triple S Insurance Company Limited	Bridgetown	Barbados		100.0	kCAD	34,527	6,173
78.	UnderAus Group Holdings Pty Limited	Brisbane	Australia		100.0	kCAD	6,431	0
79.	Ziehm Imaging Austria GmbH	Tulln	Austria		100.0	kEUR	170	87
80.	Ziehm Imaging Finnland (OY)	Hinthaara	Finland		100.0	kEUR	287	73
81.	Ziehm Imaging Japan KK	Tokyo	Japan		100.0	kJPY	8,369	2,300
82.	Ziehm Imaging Sarl	Villejust	France		100.0	kEUR	371	96
83.	Ziehm Imaging Singapore Pte. Ltd. (PTE)	Singapore	Singapore		100.0	kSGD	969	95
84.	Ziehm Imaging Spain S.L.U.	Valencia	Spain		100.0	kEUR	210	7
85.	Ziehm Medical Do Brasil	Sao Paulo	Brazil		100.0	kBRL	- 755	- 57
86.	Ziehm Medical (Shanghai) Co. Ltd.	Shanghai	China		100.0	kCNY	21,538	7,775
87.	Ziehm Imaging Srl a Socio Unico (SRL)	Reggio Nell' Emilia	Italy		100.0	kEUR	1,218	383

No.	Company	City	Country	Share in % direct	Share in % indirect	Currency	Equity as per 31 Dec 2019	Net Result 2019
2. Non-Consolidated affiliates, which are measured at fair value								
a) Domestic Companies								
88.	EDAG-Beteiligung GmbH	Fulda	Germany		100.0	kEUR	36	1
89.	EDAG Production Solutions Verwaltungs GmbH	Fulda	Germany		100.0	kEUR	17	1
90.	Parkmotive GmbH (formerly: EDAG EE Treuhand GmbH)	Fulda	Germany		100.0	kEUR	20	- 2
91.	REFORM Maschinenfabrik Adolf Rabenseifner Beteiligungs GmbH	Fulda	Germany		100.0	kEUR	64	2
b) Foreign companies								
92.	DC Aviation Holding Ltd.	Birkirkara	Malta		99.99	kEUR	- 322	- 10
93.	DC Aviation Ltd.	Luqa	Malta		99.8	kEUR	- 101	- 348
94.	Distinct Crew Management Ltd.	Luqa	Malta		99.8	kEUR	- 127	91
II. Joint Ventures - Equity-method investments								
1. Consolidated Companies								
a) Domestic Companies								
95.	Arbeitsgemeinschaft BS Schachtanlage ASSE	Mühlheim an der Ruhr	Germany		50.0	kEUR	2,293	5
96.	Arbeitsgemeinschaft Burg Altena	Schmallenberg	Germany		50.0	kEUR	- 438	0
97.	Arbeitsgemeinschaft Konrad Versatzaufbereitung Los 1	Dortmund	Germany		50.0	kEUR	2,178	653
98.	Arbeitsgemeinschaft Sanierung Schacht Zielitz 1	Mühlheim an der Ruhr	Germany		50.0	kEUR	118	46
99.	Arbeitsgemeinschaft Neuhof Ellers	Dortmund	Germany		50.0	kEUR	3	0
100.	Arbeitsgemeinschaft Schacht Konrad 1	Mühlheim an der Ruhr	Germany		50.0	kEUR	5,971	1,407
101.	Arbeitsgemeinschaft Schacht Konrad 2	Mühlheim an der Ruhr	Germany		50.0	kEUR	10,175	3,310
102.	Arbeitsgemeinschaft Schacht Konrad Notfahreinrichtung	Dortmund	Germany		50.0	kEUR	- 11	0
103.	Arbeitsgemeinschaft Schacht Borth 1	Saarbrücken	Germany		50.0	kEUR	0	0
104.	Arbeitsgemeinschaft Schächte Bergwerk Siegmundshall	Mühlheim an der Ruhr	Germany		50.0	kEUR	129	0
105.	Arbeitsgemeinschaft Vorbausäule Schacht Neurode	Dortmund	Germany		50.0	kEUR	0	0
106.	Arbeitsgemeinschaft Was-serhaltung Reden	Dortmund	Germany		50.0	kEUR	0	0
107.	OneFiber Interconnect Germany GmbH	St. Wendel	Germany		33.3	kEUR	4	- 15
b) Foreign Companies								
108.	Associated Mining Construction Inc.	Saskatchewan	Canada		50.0	kCAD	503	- 427
109.	Dayan Contract Mining LLC	Ulaanbaatar	Mongolia		49.0	kCAD	261	183
110.	DC Aviation Al Futtaim LLC	Dubai	U.A.E.		49.0	kEUR	- 7,823	24
111.	DC Aviation G-OPS S.A.S.	Paris	France		50.0	kEUR	30	0
112.	Deilmann-Haniel & Drillcon Iberia ACE	Braga	Portugal		50.0	kEUR	36	38
113.	Innu-Inuit Redpath Limited Partner-ship	North Bay	Canada		33.0	kCAD	2,024	579
114.	Redpath Thonket Mining Services Ghana Limited	Kumasi	Ghana		49.0	kCAD	0	0
115.	TRL Mining Construction LP	Regina	Canada		33.0	kCAD	12,533	8,881

No.	Company	City	Country	Share in % direct	Share in % indirect	Currency	Equity as per 31 Dec 2019	Net Result 2019
III. Investments in associates and investment measured at fair value								
1. Consolidated Companies								
a) Domestic Companies								
116.	EDAG Werkzeug + Karosserie GmbH	Fulda	Germany		49.0	kEUR	20,612	1,937
a) Domestic Companies								
117.	Murray & Roberts Holdings Ltd. *	Bedfordview	South Africa		43.8	kZAR	5,527,000	307,000
1. Non-Consolidated Companies								
a) Foreign Companies								
118.	Aveng Ltd. *	Beijing	South Africa		7.0	kZAR	2,386,000	- 930,000

* Figures from the interim consolidated financial statements, as Murray & Roberts and Aveng have a different financial year

The following Auditors’ Report (Bestätigungsvermerk) has been issued in accordance with Section 322 German Commercial Code (Handelsgesetzbuch) on the consolidated financial statements and group management report (Konzernlagebericht) of ATON GmbH as of and for the business year from January 1 to December 31, 2019.

The English version of the report is a translation of the German version of the report. The German version prevails.

INDEPENDENT AUDITOR’S REPORT

To ATON GmbH, Munich

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE GROUP MANAGEMENT REPORT

Audit Opinions

We have audited the consolidated financial statements of ATON GmbH, Munich, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2019**,** and 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 2019, 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 GmbH, Munich, for the financial year from 1 January to 31 December 2019.

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 under 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 2019, and of its financial performance for the financial year from 1 January to 31 December 2019, 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 German Commercial Code (HGB), we declare, except for the qualification of our audit opinion on the consolidated financial statements, 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 German Commercial Code (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 the 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 IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) German Commercial Code (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 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 German Commercial Code (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 judgment and maintain professional skepticism 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 for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- 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) German Commercial Code (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, 28 April 2020

Deloitte GmbH
Wirtschaftsprüfungsgesellschaft

[original German version signed by]

Signed: André Bedenbecker	Signed: Felix Mantke
Wirtschaftsprüfer	Wirtschaftsprüfer
[German Public Auditor]	[German Public Auditor]