BROCKHAUS TECHNOLOGIES

2021 Annual Report

2021 – The year of our transformation

Successful acquisition of Bikeleasing

With our majority interest in Bikeleasing, we have acquired a company almost two-and-a-half times the Group's previous size.

EBITDA almost quadrupled

By acquiring Bikeleasing, we have more than doubled the Group's pro forma sales before PPA and even almost quadrupled the adjusted pro forma EBITDA.

Headcount almost doubled

At year-end 2021, our workforce increased from 231 employees last year to 447.

Renaming as Brockhaus Technologies AG

The decision to change our name from Brockhaus Capital Management to Brockhaus Technologies was a logical step. Our new name underscores our identity and business model as a technology group.

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About us

Mission & vision

Brockhaus Technologies AG is a technology group that acquires high-margin, fast-growing technology and innovations champions with B2B business models in the German Mittelstand sector. With a unique platform approach and a long-term horizon, Brockhaus Technologies actively and strategically supports its subsidiaries in achieving profitable long-term growth, both across industries and internationally. At the same time, Brockhaus Technologies offers a gateway into these non-listed German technology champions, which are otherwise inaccessible to capital market investors.

We know Germany.
We know Mittelstand.
We know Technology.
We acquire Champions.

Elevating champions

Executive Committee

Executive Board

Marco Brockhaus
Founder, CEO

Dr. Marcel Wilhelm
COO, Legal Counsel

Harald Henning
Finance

Paul Göhring
Acquisitions

History

Over 20 years of expertise and a global network

2000
Founding of Brockhaus Private Equity

2001
Brockhaus Private Equity I

2007
Brockhaus Private Equity II

2014
Brockhaus Private Equity III

2017
Founding of Brockhaus Capital Management AG

2020
Stock market listing of Brockhaus Capital Management AG

2021
Renaming as Brockhaus Technologies AG

Key performance indicators

2021 in figures

REVENUE*

€126.5 million

2020 | €51.6 million +145.3%

GROSS PROFIT*

€91.0 million

2020 | €38.6 million +136,0%

ADJUSTED EBITDA*

€48.2 million

2020 | €12.3 million +292,7%

EMPLOYEES**

447

2020 | 231 +93.5%

GROSS PROFIT MARGIN*

71.9%

2020 | 74.7% -3.7%

ADJUSTED EBITDA MARGIN*

38.1%

2020 | 23.8% +60.1%

* Pro forma figures that present the results of operations as if Bikeleasing and kvm-tec had already belonged to Brockhaus Technologies and IHSE, respectively, as of January 1, 2021, revenue and gross profit adjusted for non-recurring effects from purchase price allocation (PPA)

** Employees on the reporting date

Highlights in 2021

Renaming as Brockhaus Technologies

Brockhaus Capital Management AG becomes Brockhaus Technologies AG. We have changed our name to highlight our business model and focus: Brockhaus Technologies acquires high-margin and fast-growing technology and innovation leaders in the German Mittelstand.

Brockhaus Technology Day

The hybrid event staged on July 14, 2021 gave shareholders, business partners and interested investors insights into the strategy and growth objectives of the current subsidiaries Palas and IHSE and into the latest acquisition target – the Bikeleasing Group.

Our new subsidiaries in 2021

Majority stake in Bikeleasing

Brockhaus Technologies has completed the acquisition of a majority interest in the B2B fintech company Bikeleasing. Founded in 2015, Bikeleasing offers companies a digital and highly automated platform for arranging, financing, and managing employee benefits.

REVENUE IN 2021*	EMPLOYEES
€72.6 million	162

REASONS FOR THE ACQUISITION

- Digital disruptor and innovation leader
- Highly profitable and strongly growing since it was founded
- Strong base of more than 32,000 corporate customers
- Expansion of the platform & internationalization as growth drivers

IHSE acquires kvm-tec

Our subsidiary IHSE acquired all the shares in kvm-tec. Founded in 2006, kvm-tec develops and distributes flexible, high-security KVM-over-IP solutions (KVMoIP) to extend and switch computer signals using the IP signal.

REVENUE IN 2021*	EMPLOYEES
€4.1 million	30

REASONS FOR THE ACQUISITION

- Complements IHSE’s product portfolio with new KVM-over-IP technology
- Expansion of the customer base and leveraging of global sales and production synergies
- Maximum infrastructure flexibility thanks to merging of proprietary and IP KVM technology

* Pro forma figures that present the results of operations as if Bikeleasing and kvm-tec had already belonged to Brockhaus Technologies and IHSE, respectively, as of January 1, 2021, revenue adjusted for non-recurring effects from purchase price allocation (PPA)

What our entrepre-neurs say about us

“We are very happy to welcome Brockhaus Technologies on board as a long-term partner. Our business is attractive and has expanded rapidly since the company was founded, which is why we are particularly pleased to have joined forces with a partner like Brockhaus who has more than 20 years of experience in supporting strongly growing technology and innovation leaders,” says Bastian Krause. Paul Sinizin adds: “As part of the technology group, we can now build on our clear growth potential. With its experience and network, Brockhaus Technologies will help us tap into all opportunities and possibilities, especially with a view to international expansion.“

Paul Sinizin & Bastian Krause
Co-CEOs of Bikeleasing

“With kvm-tec’s IP-based product portfolio we are strengthening our strategic market and competitive position in the market for further growth. Now we offer the right KVM solution for every customer need. Our joint technology platform also means we are reinforcing our innovation capabilities in a rapidly changing market. We are pleased that such an add-on acquisition has been made possible for us as part of Brockhaus Technologies.”

Dr. Enno Littmann
CEO of IHSE

To our shareholders

Letter from the Executive Board

Ladies and Gentlemen, dear Shareholders,

We are delighted to present you with our report on the 2021 fiscal year.

For our technology group, 2021 was a dynamic year in which we set important strategic courses for the future of Brockhaus Technologies. By renaming ourselves from Brockhaus Capital Management to Brockhaus Technologies, we are underscoring our focus on tech champions in the German Mittelstand and our ambitions to build and grow a highly profitable technology group.

In an increasingly challenging market environment characterized by high purchase price expectations and a continued large circle of interested parties last year, we were able to acquire a majority stake in Bikeleasing, a real champion. Moreover, our subsidiary IHSE was able to acquire kmv-tec, a strategically important addition. Following a detailed due diligence review of these two acquisitions, we are convinced that both companies' business models and growth prospects meet our requirements, thus contributing to increasing the group's value. Bikeleasing is a transformational acquisition for us and takes us a big step closer to our long-term objective of funding company acquisitions from the organic cash flow of our technology group.

With pro forma revenue of €126.5 million, an adjusted EBITDA margin of 38.1% and adjusted EBITDA of €48.2 million, we achieved our pro forma forecast revenue of €125 – 135 million and substantially exceeded the projected range of €42 – 46 million for adjusted EBITDA. Moreover, we have already achieved our medium-term growth targets 18 months after our IPO in July 2020 (see strategy interview) – twice as fast as planned despite the COVID-19 pandemic.

That said, it should be mentioned that the acquisition of Bikeleasing also posed major obstacles for us. Converting the accounting system from German GAAP (HGB) to IFRS tied up considerable time and resources. Accordingly, it makes us all the more proud that we have now completed this conversion and that the company is now fully integrated into our group.

Bikeleasing's figures speak for themselves: The B2B fintech achieved revenue of €72.6 million and a pro forma EBITDA margin of 54.8% in 2021. With its innovative business model, the digital and highly automated B2B finance platform for arranging, financing and managing employee benefits via the employer addresses the growing demand for sustainable mobility. More than 32,000 companies in Germany and Austria are already using the Bikeleasing platform to give their employees an opportunity of leasing a company bicycle. As well as this, the highly scalable platform offers additional options for further employee benefits in the medium term.

For information on performance indicators, please refer to Note 7 in our consolidated financial statements.

With revenue rising by 17.5% to €21.3 million and an adjusted EBITDA margin of 34.4%, Palas likewise looks back on a successful year in 2021. In the first half of the year in particular, Palas continued to generate significant revenue from the sale of equipment for testing the effectiveness of respiratory masks. With the measures for containing the COVID-19 pandemic gradually lifted, Palas was additionally able to return to its core certified fine dust measurement business. As well as this, the company's revenue increased almost five-fold in China. This strong performance is particularly due to the establishment of its own sales company in Shanghai in 2020.

By contrast, the impact of the COVID-19 pandemic continued to leave trace on IHSE's business in the year under review. Renewed lockdowns and continued travel and contact restrictions caused delays in order receipts and revenue recognition with large KVM projects in particular. With the acquisition of kvm-tec, IHSE is not only tapping an adjacent and complementary business area but also gaining access to a global KVM-over-IP customer base and diverse synergy potential. Together with kvm-tec, IHSE recignized pro forma revenue of €32.7 million, only slightly below the previous year's figure. The adjusted pro forma EBITDA margin came to 25.5%. With travel and contact restrictions being eased, IHSE expects business and sales activities to normalize this year.

Moreover, the current geopolitical situation resulting from the Russian war of aggression could have a positive impact on IHSE's business if increased military budgets are invested in the modernization and establishment of control centers and surveillance rooms. This is an area in which IHSE is active. Palas and Bikeleasing have no direct contact with Russia. IHSE has discontinued the previously only minor business activities with Russia.

To conclude: We can look back on a dynamic and very upbeat financial year, underpinned in particular by our successful acquisitions. It was a record year for Brockhaus Technologies. More than ever, we are combining high-margin and high-growth technology and innovation leaders in relevant markets under a single roof. We are confident of being able to continue on our growth trajectory with rising revenue and earnings. We project revenue before PPA of between €140 million and €150 million in 2022, accompanied by a continued high adjusted EBITDA margin of 35%. In the year ahead of us, we will be concentrating on strengthening our three subsidiaries and particularly also on identifying and acquiring further technology champions from Germany's Mittelstand. We are working on this with vigor, a clear head and firm principles by remaining true to our strategy and our high expectations of these companies.

We would like to thank our 447 employees across the group for their great commitment, our shareholders for their trust in Brockhaus Technologies and our Supervisory Board for their active support and encouragement. Together we are building Germany's leading technology group.

YOURS SINCERELY,
MARCO BROCKHAUS **DR. MARCEL WILHELM**

Report of the Supervisory Board

Dr. Othmar Belker
Chairman

Michael Schuster
Deputy Chairman

Andreas Peiker
Member

Martin Bestmann
Member

Dr. Cornelius Liedtke
Member

Prof. Dr. Christoph Hütten
Member

The Supervisory Board of Brockhaus Technologies AG, Frankfurt am Main, ("**Company**" or "**BKHT**" and together with its subsidiaries "**Brockhaus Technologies**" or the "**Group**") oversaw the activities of the Company's Executive Board in accordance with the requirements of the German Stock Corporation Act and the Articles of Association of BKHT and provided advice and support to the Executive Board during the fiscal year from January 1, 2021 to December 31, 2021.

The Executive Board reported regularly to the Supervisory Board on the business development of BKHT. Particular highlights were the process for seeking out additional suitable acquisitions, the successful acquisition of the Bikeleasing Group ("**Bikeleasing**"), the performance of the two business segments Evironmental Technologies (Palas Holding GmbH and its subsidiaries ("**Palas**") and Security Technologies (IHSE AcquiCo GmbH and its subsidiaries ("**IHSE**")), and the ongoing assessment of the influence of COVID-19 pandemic restrictions on the Company's business activities in Germany and on export markets. Changes in revenue, earnings, statement of financial position items and cash flows were presented and explained in detail, in each case with a comparison with the budget and the previous year. The Supervisory Board was directly involved in all key decisions, in particular issues of strategy and planning and in the review of strategic options. On this basis, in-depth discussions were held at the numerous meetings, the number of which far exceeded the minimum number required.

The Company's Articles of Association specify that the Supervisory Board should hold at least two meetings per calendar half-year. A large number of Supervisory Board meetings as well as other informal verbal and telephone discussions were held in fiscal year 2021. In the current fiscal year 2022, there were several additional Supervisory Board meetings. The Chairman of the Supervisory Board was in regular personal and telephone contact with the members of the Executive Board and was proactively and comprehensively informed about all important business transactions. If necessary, the Chairman of the Supervisory Board kept the other members of the Supervisory Board informed between meetings.

The Executive Board provided detailed information on the course of business at the regular Supervisory Board meetings. The regular meetings usually have an agenda that is identical in parts and structures the discussion on key economic issues and potential risks. Regular topics were the current economic situation of the operating segments and Group, the current impacts and future risks of the COVID-19 pandemic, a regularly assessed risk report, the opportunities and risks of the search processes for new acquisition targets, and developments in the field of investor relations. Fundamental issues at the meetings were the annual and consolidated financial statements of BKHT for fiscal year 2020, the quarterly financial statements for fiscal year 2021, the half-yearly report as of June 30, 2021, preparation for and evaluation of the Annual General Meeting on June 16, 2021, cost trends at the Company and the subsidiaries, personnel development at the Company, the implementation of the Group's employee stock option program, and discussion and approval of the internal rules of procedure and declarations of compliance.

Another fixed feature of the regular Supervisory Board meetings was an examination of the relevant risks and support for the development of a formal internal control system at the Company and the subsidiaries. In the course of the discussions relating to risk, the Supervisory Board was in all cases able to obtain a clear picture, in particular about whether and which risks could adversely affect the Company's financial position and results of operations. In addition, the Supervisory Board and the Executive Board regularly discussed the Company's long-term strategic alignment. Among other things, the latest economic figures of the Company, the subsidiaries and the Group, including changes in cash flows and, where expedient, in statement of financial position items, were presented and discussed.

By way of a resolution of the Annual General Meeting 2020, the number of Supervisory Board members had been increased from four to six. Dr. Cornelius Liedtke was appointed as a member of the Company's Supervisory Board by a decision of Frankfurt am Main Local Court on September 14, 2020 and elected as a full member of the Supervisory Board at the Annual General Meeting on June 16, 2021 up to the end of the Annual General Meeting that resolves to approve the actions of the Supervisory Board for the fiscal year of the Company ending December 31, 2021. Effective April 16, 2021, Prof. Dr. Christoph Hütten was delegated by the shareholder Falkenstein Heritage GmbH as a full member of the Supervisory Board up to the end of the Annual General Meeting that resolves to approve the actions of the Supervisory Board for the fiscal year of the Company ending December 31, 2022.

In fiscal year 2021, the Supervisory Board held 13 meetings, some of which were wholly conducted using videoconferencing and conference calls and some of which were conducted in hybrid form (with some of the members being present in person and others participating virtually) due to the conditions caused by the COVID-19 pandemic and to reduce the risk of infection. Unless specified otherwise below, the Supervisory Board meetings were attended by all Supervisory Board members in office. Mr. Andreas Peiker was excused from attending the meetings on September 22 and October 28, 2021. Dr. Cornelius Liedtke was also excused from attending the meeting on October 28, 2021. He had previously submitted his approval for the resolution up for vote by e-mail on October 27, 2021.

In fiscal year 2022 to date, four meetings of the Supervisory Board were held. Unless otherwise noted, all members of the Supervisory Board in office attended the Supervisory Board meetings. Dr. Cornelius Liedtke was excused from the meeting on April 27, 2022, but had previously submitted his written vote by e-mail dated April 27, 2022.

At its meeting on June 16, 2021, the Supervisory Board formed an Executive and Nomination Committee and an Audit Committee.

The training and development measures required for discharging their duties, for example on changes in the legal environment and on new technologies, are taken by the members of the Supervisory Board under their own responsibility, with the Company's support where requested.

The Supervisory Board addressed the following topics at its meetings in the 2021 fiscal year.

SUPERVISORY BOARD MEETING on January 26, 2021
Detailed discussion and approval of a transaction intended by the Executive Board relating to a previously presented acquisition project.

SUPERVISORY BOARD MEETING on February 3, 2021
The 2021 budget for BKHT, the subsidiaries and the Group was discussed in detail. In particular the uncertainties due to the coronavirus situation as well as reconciliations from German GAAP to IFRS were discussed. The Supervisory Board resolved the budget for 2021. Another focus was the current economic situation of the Company and the subsidiaries and their product roadmap, personnel developments and the current internationalization steps. The acquisition projects from the Q1 2021 pipeline and the share's performance were discussed.

SUPERVISORY BOARD MEETING on March 3, 2021
The Executive Board discussed the current acquisition processes with the Supervisory Board. The Executive Board and Supervisory Board will ensure that any potential or actual conflicts of interest are discussed regularly and that all economic activities with related parties are managed strictly on an arm's length basis.

SUPERVISORY BOARD MEETING on March 24, 2021
As part of the debate on diversity and corporate culture, the Supervisory Board passed resolutions on the independence of the Supervisory Board, the setting of targets for the proportion of women and adopted the corporate governance statement. Other focus points of the meeting were governance, risk and compliance, the review of the effectiveness of ICS and RMS and the current status of the preparation of the 2020 annual and consolidated financial statements and the combined management report and its audit by the independent auditor, KPMG.

SUPERVISORY BOARD MEETING on April 7, 2021
The independent auditor reported on the conduct of the audit, the focus points of the audit and the audit results relating to the 2020 HGB annual financial statements of Brockhaus Technologies AG, the IFRS consolidated financial statements and the combined management report for the fiscal year 2020 prepared in accordance with the requirements of the HGB. The independent auditor issued unqualified audit opinions for the annual financial statements, the consolidated financial statements and the combined management report. Following its own detailed examination of the accounting documents and the independent auditor's reports, the Supervisory Board approved the annual financial statements, the consolidated financial statements and the combined management report. The annual financial statements are thereby adopted. In view of the risk of infection, the Supervisory Board approved preparations for a virtual Annual General Meeting instead of an in-person Annual General Meeting on June 16, 2021.

SUPERVISORY BOARD MEETING on April 28, 2021
After being delegated by the shareholder Falkenstein Heritage GmbH as a member of the Supervisory Board

effective April 16, 2021, Prof. Dr. Christoph Hütten took part in a meeting for the first time. Backed by his many years of experience in the fields of accounting, auditing of financial statements, financial processes and compliance, Prof. Hütten will further bolster the expertise on the Supervisory Board. Moreover, the Supervisory Board mainly discussed the status of current acquisition projects with the Executive Board.

SUPERVISORY BOARD MEETING on May 10, 2021
The Supervisory Board discussed and unanimously adopted the agenda for the Annual General Meeting, which included the agenda items approval of the actions of the members of the Executive Board for the fiscal year 2020, approval of the actions of the members of the Supervisory Board for the fiscal year 2020, appointment of the independent auditor of the annual and consolidated financial statements for the fiscal year 2021 and for any review of interim financial reports, change in the Company's name to Brockhaus Technologies AG, nomination of the existing member Dr. Cornelius Liedtke for election as a member of the Supervisory Board up to the end of the Annual General Meeting that resolves to approve the actions of the members of the Supervisory Board for the fiscal year 2021, and adjustments to the Supervisory Board's remuneration. After an in-depth and very comprehensive discussion, the Supervisory Board resolved following the meeting by way of a unanimous written vote on May 12, 2021 to approve the new remuneration system for the Executive Board members that will be presented to the Annual General Meeting. Instead of the one-year performance bonus directly linked to earnings as was the case in the Company's establishment phase, a more up-to-date system was introduced with the short-term performance bonus less dependent on earnings and more dependent on the earnings performance of the portfolio companies and of newly acquired companies. A multi-year, long-term component essentially reflecting the share's performance was also introduced. The new system is to apply in the course of 2022, but no later than by August 2022, after being approved by the Annual General Meeting. Changes to the Declaration of Compliance with the German Corporate Governance Code were adopted following the meeting.

SUPERVISORY BOARD MEETING on June 11, 2021
The meeting of the Supervisory Board dealt in detail with the potential acquisition of the Bikeleasing Group. The Executive Board and Supervisory Board discussed the strategic alignment of the existing group, the strategic changes that would result from the potential acquisition, the status of the due diligence review, possible ownership and financing structures, the company's business plan, and the opportunities and risks associated with the acquisition. The Executive Board answered numerous detailed questions. The Supervisory Board unanimously approved the Executive Board's decision to acquire the company and finance the acquisition.

SUPERVISORY BOARD MEETING on June 16, 2021
The Supervisory Board meeting after the Annual General Meeting dealt with the voting results for the agenda items, the lessons learned from the first virtual Annual General Meeting, and a wide range of measures relating to successful signing of the deal to acquire Bikeleasing. They also included questions of financing, as well as a legal assessment of the scope of application of various mediation agreements in connection with the acquisition. The Supervisory Board established an Executive and Nomination Committee for the first time and elected Dr. Belker as its Chairman, Mr. Schuster as its Deputy Chairman and Mr. Peiker as a further member. The Supervisory Board likewise established an Audit Committee for the first time and elected Prof. Dr. Hütten as its Chairman, Mr. Bestmann as its Deputy Chairman and Dr. Belker as a further member. Both Prof. Dr. Hütten and Dr. Belker are independent of BKHT and have expertise in the field of accounting and auditing of financial statements, as well as particular know-how and experience in the application of accounting principles and internal control procedures.

The Audit Committee convened its constituent meeting following the meeting of the Supervisory Board.

SUPERVISORY BOARD MEETING on September 22, 2021
The Supervisory Board adopted rules of procedure for the Audit Committee and resultant amendments to the rules of procedure for the Supervisory Board. The first report from the meetings of the Audit Committee dealt mainly with defining its focal tasks, as well as the involvement of business management functions at the Company and external auditors in the committee's work. The Supervisory Board discussed measures to finance the acquisition of Bikeleasing, plans to integrate it, and the planning for closing the acquisition. The time of closing is subject, among other things, to successful completion of a qualifying holding procedure by German Federal Financial Supervisory Authority (BaFin). After the meeting, the Supervisory Board voted in writing on October 16, 2021 to approve formal steps for financing the acquisition.

SUPERVISORY BOARD MEETING on October 28, 2021
The Supervisory Board noted with approval the acquisition of the shares in the Austrian company kvm-tec by the subsidiary IHSE GmbH following an update of the general contractual terms and conditions that had been negotiated.

SUPERVISORY BOARD MEETING on November 29, 2021
Following the in-depth discussions by the Executive Board and Supervisory Board at previous meetings about possible financing models for the acquisition of the Bikeleasing shares and their prior approval of a partial purchase price payment in the form of BKHT shares on June 11, 2021, the Supervisory Board supported the resolution of the Executive Board on the performance of a capital increase partially utilizing Authorized Capital 2020 (designated as Authorized Capital 2020/II in the commercial register) in return for non-cash contributions while disapplying the Company's shareholders' pre-emption rights.

SUPERVISORY BOARD MEETING on December 1, 2021
The meeting focused on the operating performance of Bikeleasing and converting the HGB accounting of Bikeleasing, which featured complex leasing issues, into Brockhaus Technologies' IFRS accounting, made even more complex on account of these leasing issues. This changeover will be carried out with the support of proven IFRS and leasing specialists from one of the leading

global auditing firms and independently of BKHT's independent auditor. Following the meeting, the Supervisory Board gave its approval for the 2021 Annual Report not to be published until April 28, 2022 due to the fact that Bikeleasing was only acquired shortly before the end of the year and for the Company's 2021 Declaration of Compliance to be amended April 28, 2022.

In its meetings to date in fiscal year 2022, the Supervisory Board has focused on the following topics:

SUPERVISORY BOARD MEETING on January 19, 2022
The Supervisory Board discussed the submitted budget for 2022 and approved the provisional budget. Earlier preparation of the complete budget was not possible because of the late closing of the Bikeleasing transaction in December 2021. The budget figures will also change as a result of Bikeleasing's annual financial statements. The Supervisory Board discussed the general conditions for successful closing. After in-depth consideration and in view of the ongoing situation as regards coronavirus, it decided to organize and hold the 2022 Annual General Meeting once more as a virtual Annual General Meeting.

SUPERVISORY BOARD MEETING on March 30, 2022
This Supervisory Board meeting focused on the economic performance of the three operating segments. The Supervisory Board discussed strategic options to develop the respective business models further, taking into account the gradual lifting of coronavirus restrictions as well as the war between Russia and the Ukraine. During the meeting, the organization of the virtual 2022 Annual General Meeting and the process of the ongoing annual audit, especially with regard to the transition of Bikeleasing to IFRS, was also discussed. Furthermore, the proposal for a new member of the Supervisory Board for the upcoming Annual General Meeting was discussed. Against the background of the Executive Board appointments expiring in mid-2022, the Supervisory Board resolved to introduce staggered new appointment periods for the Executive Board members (CEO 5 years, COO 4 years).

SUPERVISORY BOARD MEETING on April 27, 2022
The focus of the meeting was discussion of the 2021 accounting documents and the status and remaining timeline of the 2021 annual audit. The Chairman of the Audit Committee and the auditors also reported on this. The agenda for the 2022 Annual General Meeting was also discussed. The Supervisory Board discussed and resolved the compensation of the Executive Board for the fiscal year 2021 and discussed the draft compensation report 2021. The meeting also dealt with the structure and implementation of new Executive Board contracts in 2022, taking into account the Executive Board compensation system adopted by the Annual General Meeting on June 16, 2021.

SUPERVISORY BOARD MEETING on May 2, 2022
The Supervisory Board discussed and approved the Company's accounting and consolidated financial statements and adopted this Supervisory Board Report.

The work of the Audit Committee
The Audit Committee, which was set up in June 2021, held a total of three meetings in fiscal year 2021, some of which were held virtually. All members of the committee took part in all the meetings.

In September 2021, the Supervisory Board adopted rules of procedure for the Audit Committee. These rules of procedure assigned the committee the tasks of dealing with the accounting and the accounting process, the audit and the auditor, with oversight of the internal control system, risk management system, internal audit system, and compliance management system, and with transactions with related parties.

In addition to the committee members, an Executive Board member, the manager responsible for the consolidated financial reporting, and a representative of the auditor took part in most of the committee meetings.

The following topics were dealt with at the Audit Committee's meetings:

- preparation of the rules of procedure for the Audit Committee as the basis for the committee's further work
- discussion of financial statement preparation processes in the Group, associated internal controls, and improvement potential
- discussion of the details of individual important accounting policies in the consolidated financial statements
- discussion of the 2021 semi-annual report and the interim statement for the third quarter before their publication and of the corresponding preparation processes
- engagement of the auditor for a voluntary content audit of BKHT's remuneration report
- discussion of the audit planning and audit focal points of the audit of the 2021 financial statements
- discussion of the impact on the Company of the newly adopted German Act to Strengthen Financial Market Integrity (FISG)

In addition, the chair of the Audit Committee advised on various aspects of the points listed above and important individual topics in the Audit Committee's area of activity in numerous discussions both with members of the Executive Board and the manager responsible for the consolidated financial reporting and with representatives of the audit. The chair of the Audit Committee in each case informed the other committee members about these discussions at the next meeting. The chair of the Audit Committee also regularly reported on the activities of the Audit Committee at the Supervisory Board meetings.

The work of the Executive and Nomination Committee
The Executive and Nomination Committee, which was also set up in June 2021, did not hold any meetings in fiscal year 2021.

Audit of the financial reporting and consolidated financial reporting in 2021
On June 16, 2021, in response to the proposal of the Supervisory Board, the Company's Annual General meeting elected KPMG AG Wirtschaftsprüfungsgesellschaft ("**KPMG**")

as the auditor of the financial reporting and consolidated financial reporting. KPMG has been the auditor of BKHT‘s financial statements since the company was founded in 2017 and has also been the auditor of the consolidated financial statements since the first acquisition of the company at the end of 2018. Before the Supervisory Board proposed it to the Annual General Meeting as the auditor, KPMG had confirmed to the Chairman of the Supervisory Board that no circumstances existed that could impair its independence as the auditor or give rise to doubts about its independence. The engagement letter for the audit of the annual and consolidated financial statements and of the combined management report was issued by the Supervisory Board following the Annual General Meeting.

KPMG audited BKHT’s financial reporting and consolidated financial reporting for the year ended December 31, 2021 and issued an unqualified audit opinion on these on May 2, 2022. The audited financial reporting and consolidated financial reporting consisted of BKHT’s annual financial statements prepared in accordance with the requirements of the German Commercial Code (HGB), its consolidated financial statements prepared in accordance with International Financial Reporting Standards (IFRS), as adopted by the European Union, and its combined management report in accordance with HGB for fiscal year 2021. In addition, in accordance with section 317 (3a) HGB, KPMG audited and confirmed that the reproduction of the annual financial statements, the consolidated financial statements, and the combined management report, which were contained in the files provided on an electronic data storage medium and retrievable in the client portal with access protection and were prepared for the purpose of publication, complies in all material respects with the requirements of section 328 (1) HGB for the electronic reporting format (“ESEF format”).

The Supervisory Board also arranged for KPMG to inform it and note in the audit report if, during the performance of the audit, any facts are identified that indicate an inaccuracy in the Declaration of Compliance regarding the recommendations of the German Corporate Governance Code issued by the Executive Board and Supervisory Board.

The Audit Committee, and in particular, the chair of the Audit Committee, was always closely involved in the preparation of the audit measures, and the support of the auditor and commercial functions in the Group.

Ahead of the first financial statements meeting on April 27, 2022, the Supervisory Board received the draft versions of the financial reporting, the consolidated financial reporting, and the corresponding auditor’s reports and ahead of the second financial statements meeting on May 2, 2022, final versions of both the financial statements and consolidated financial statements as well as the corresponding auditor‘s reports. In the Audit Committee meetings on April 21 and 27, 2022 as well as May,2, 2022 and in the Supervisory Board meeting on April 27 and May 2, 2022, the Audit Committee and the Supervisory Board discussed the financial reporting and consolidated financial reporting. At these meetings, the Executive Board and the manager responsible for the consolidated financial reporting reported on the preparation of the documents and the auditor reported on the current status of the audit overall, on the individual key audit matters, and on the key findings of the audit. At their respective meetings, the Audit Committee and the Supervisory Board then discussed the financial reporting, the consolidated financial reporting, the findings of the audit and the audit reports with the Executive Board and the auditor. All the Audit Committee’s and the Supervisory Board’s questions were answered. Furthermore, the auditor explained that there were no facts that gave rise to concerns about bias on its part and informed the Supervisory Board about services provided in addition to the audit services. At the Supervisory Board meeting, the Audit Committee also reported on its own review of the financial reporting and consolidated financial reporting, its discussion with the Executive Board and the auditor, and its oversight of the financial reporting process.

Both the Audit Committee and the Supervisory Board were able to satisfy themselves that the audit by KPMG was properly conducted. In particular, the Audit Committee and the Supervisory Board concluded that the audit reports and the audit itself complied with statutory requirements. They therefore approved the findings of the audit, and the Supervisory Board determined that, on the basis of the final result of the review by the Audit Committee and its own review, no objections were to be raised. The Supervisory Board therefore approved the financial reporting and consolidated financial reporting. The annual financial statements were thus adopted in accordance with section 172 sentence 1 of the German Stock Corporation Act (AktG).

Appropriation of the result

The net accumulated losses, consisting of the accumulated losses brought forward from the previous year and the net profit for the fiscal year 2021, are carried forward to new account.

The Supervisory Board thanks the members of the Executive Board and all employees of Brockhaus Technologies for their enormous personal commitment and our shareholders for the confidence they placed in the Company in this year again marked by enormous external challenges.

On behalf of the Supervisory Board

Dr. Othmar Belker, Chairman
Frankfurt am Main, May 2022

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Our strategy – Interview with Marco Brockhaus

Mr. Brockhaus, what was the technology group's most important step in 2021?

That's very clear: The key milestone was the acquisition of our third subsidiary Bikeleasing. The B2B fintech operates a digital platform for the arrangement, financing and management of employee benefits through employers. And it's pretty successful at that: It generated pro forma revenue of €72.6 million and an adjusted pro forma EBITDA of €39.8 million in 2021, so this was a transformational acquisition for us and one that has given a decent boost to our technology group's growth. The acquisition of kvm-tec by our subsidiary IHSE was also an important strategic step in developing our technology portfolio further in the areas of IT security and connectivity.

Talking about growth: Did you achieve your objectives last year?

We not only met our expectations, we far surpassed them. When we went public in July 2020 I was asked about the company's objectives in three to four years. My response: a handful of companies, €120 million in revenue, and an EBITDA of around €40 million. 18 months later the Group has majority stakes in three companies, pro forma revenue is at €126.5 million and the adjusted pro forma EBITDA is a princely €48.2 million. We want to establish Brockhaus Technologies as the brand for tech champions in the German Mittelstand. I believe we're making good progress toward that goal.

You've been known as Brockhaus Technologies only since 2021. Why?

The renaming underscores more clearly our orientation as a technology group. We acquire high-margin, high-growth technology and innovation champions in the German Mittelstand and support them actively and strategically to become even better and more successful. Unlike private equity funds, we don't have to sell our subsidiaries after three to five years, but instead we can hold on to them long term. We also don't restructure them, and they retain their independence. We specifically choose champions who we

For information on performance indicators, please refer to Note 7 in our consolidated financial statements.

can continue to build up together with their management. Like uncut diamonds that are still polished. We expand globally with some of them and tap further business segments. To enable that, we provide them with our network and expertise from more than two decades of technology investments.

To return to your most recent champion: There are lots of leasing providers. What's so special about Bikeleasing?

The platform is completely digital, transaction-based, highly automated and therefore very scalable. Moreover, this sustainable way of mobility is in tune with the times and meets the increased environmental awareness of society. More than 32,000 corporate customers from the extremely healthy Mittelstand, with a workforce of more than 1.7 million, currently use the Bikeleasing platform to recruit and motivate staff. Employees who finance their bicycle through Bikeleasing save up to 37 percent by using a deferred compensation model compared with a cash purchase. At the same time, we waive a margin for the more than 5,000 affiliated dealers. That means the dealers not only sell their bicycles at full price, but above all they sell high-priced bicycles because of the significant savings. That makes Bikeleasing so attractive for all stakeholders.

What are your growth objectives at Bikeleasing?

We're pursuing four concrete growth objectives. Firstly, we want to acquire new corporate customers together with Bikeleasing. Less than 30 percent of all employees currently have the chance to lease a bicycle through their employer. You can be sure there are plenty of bicycle fans among the other 70 percent. Secondly, there is mostly only a small proportion of the workforce at affiliated companies who use the offering. Thirdly, we're establishing further employee benefits: Conceivable examples are laptop or iPhone leasing to expand working from home. And lastly, we also want to grow internationally. Bikeleasing has already founded a sales office in Austria. The next move could be into other European countries.

What's currently on the agenda at the other two subsidiaries Palas and IHSE?

Palas is one of the technology and cost leaders in the measurement and characterization of particles in the air. On the basis of our certified measurement network in Europe, we went to Shanghai with Palas in 2020 and were able to increase revenue almost five-fold in 2021. The sales potential in the fine dust segment is many times higher in China than in Europe. In a test phase locally we were able to impress the Shanghai Environmental Monitoring Center (SEMC) with our fine dust measuring device and we're currently applying for official certification of our devices for the certified measurement stations. That's an important milestone for our group.

"We specifically choose champions who we can continue to build up. Like uncut diamonds that are still polished."

“Our long-term objective is to fund new acquisitions from our technology group’s cash flow.“

Carry on …

In addition new application areas for measuring fine dust particles in the private sector, such as in production processes, in subway stations or at building sites come along for Palas. A further highlight: Our cloud-based MyAtmosphere platform is the most modern environmental measurement system for aggregating, visualizing and archiving that data. The measurement results can be visualized on interactive maps intuitively and in real time. For example, during the volcano eruption on La Palma we were able to assist the Spanish authorities in initiating targeted measures to protect the population with our measurement devices and data platform.

What’s new with regards to IT security and IHSE?

IHSE continues to expand its product portfolio with the acquisition of kvm-tec. Apart from proprietary technology, we now offer “over-IP” technology that works with existing IP networks. It is used in industry, radio and television, post-production or the public sector. These KVM solutions using the standardized IP protocol are fast to implement, flexible and cost-efficient. With the acquisition of kvm-tec, IHSE is also gaining access to a global KVM-over-IP customer base, which will benefit in the future from IHSE’s international sales network with its locations in Germany, the USA, Singapore and China.

Is there demand for KVM technologies at present?

Definitely. Data is growing in importance in just about every sector, which means highly secure and high-performance transmission of data is becoming more and more important at many companies and organizations, also in view of the current political situation: Of course, IHSE immediately discontinued the already limited business activities with Russia. No one wants to profit from wars. However, IHSE is analyzing current decisions carefully. The way we view our military and how the armed forces are equipped have changed. Increases in military budgets can also be invested in modernizing and setting up control centers and surveillance rooms. IHSE operates in this field and leading in some areas.
However, KVM technologies are increasingly used in “new” markets such as healthcare or in gaming and e-sports. We’re also developing new applications and working, for example, on initial control rooms for autonomous driving, with the aim of reducing inner-city traffic and making urban transport more sustainable.

Have your acquisition criteria changed since the IPO?

Our acquisition criteria haven’t changed. If the market offers the chance, we will selectively acquire one to two tech champions in the German Mittelstand segment a year. The key selection criteria: They have to be innovative technology leaders that have high margins and price setting power. By definition, these companies achieve gross profit margins through their prices. In turn, excellent management should be able to generate a high EBITDA from their large gross profit. The EBITDA margin is one of the key performance indicators we apply in choosing our acquisitions. However, at the end of the day it’s cash flow that counts. That’s a simple, yet successful rule. It’s sometimes hard to be so rigorous and say no. But enthusiasm for a great product or company is not enough – our success is founded on strictly pursuing our strategy. This cannot always be planned in a timely manner.

Where do you go from here? What are your objectives for the next 3 to 5 years?

To carry on as we’re doing (laughs). We want to keep growing. Our long-term objective is to fund new acquisitions from our technology group’s cash flow. In that way we avoid capital increases and the dilution effect they entail for shareholders. After one-and-a-half years on the stock market, we’re very solidly positioned with three subsidiaries. If things continue as they have, our subsidiaries will become more and more a substitute for the capital market. We’re forging an independent, self-financing technology group that grows organically and inorganically and thus creates value added for our shareholders.

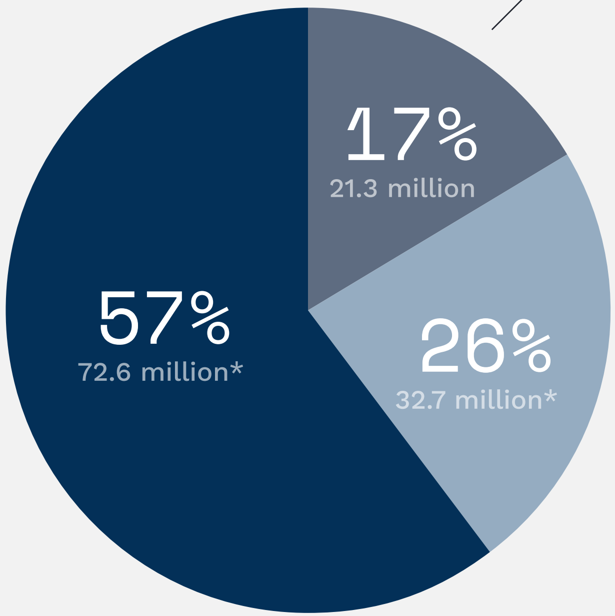
Our subsidiaries

Our operating segments' revenue in 2021

Financial Technologies

Operation of a digital B2B finance platform for arranging, financing, and managing employee benefits through the employer, consisting of Bikeleasing.

BIKELEASING



SHARE OF REVENUE

Environmental Technologies

Development, production, and distribution of high-precision devices for measuring, characterizing, and generating of particles in the air, consisting of Palas.

PALAS®

Security Technologies

Development, production, and distribution of KVM technology (keyboard, video, and mouse) for high-security, reduced-latency, and loss-free data transmission in mission-critical applications, consisting of IHSE and kvm-tec.

ihse. kvm-tec over IP an ihse. company

* Pro forma figures that present the results of operations as if Bikeleasing and kvm-tec had already belonged to Brockhaus Technologies and IHSE, respectively, as of January 1, 2021, revenue adjusted for non-recurring effects from purchase price allocation (PPA)

Our locations

LOCATIONS

11 ↗ 17

2020 2021

EMPLOYEES

231 ↗ 447

2020 2021

FINANCIAL TECHNOLOGIES

The digital B2B finance platform for employee benefits

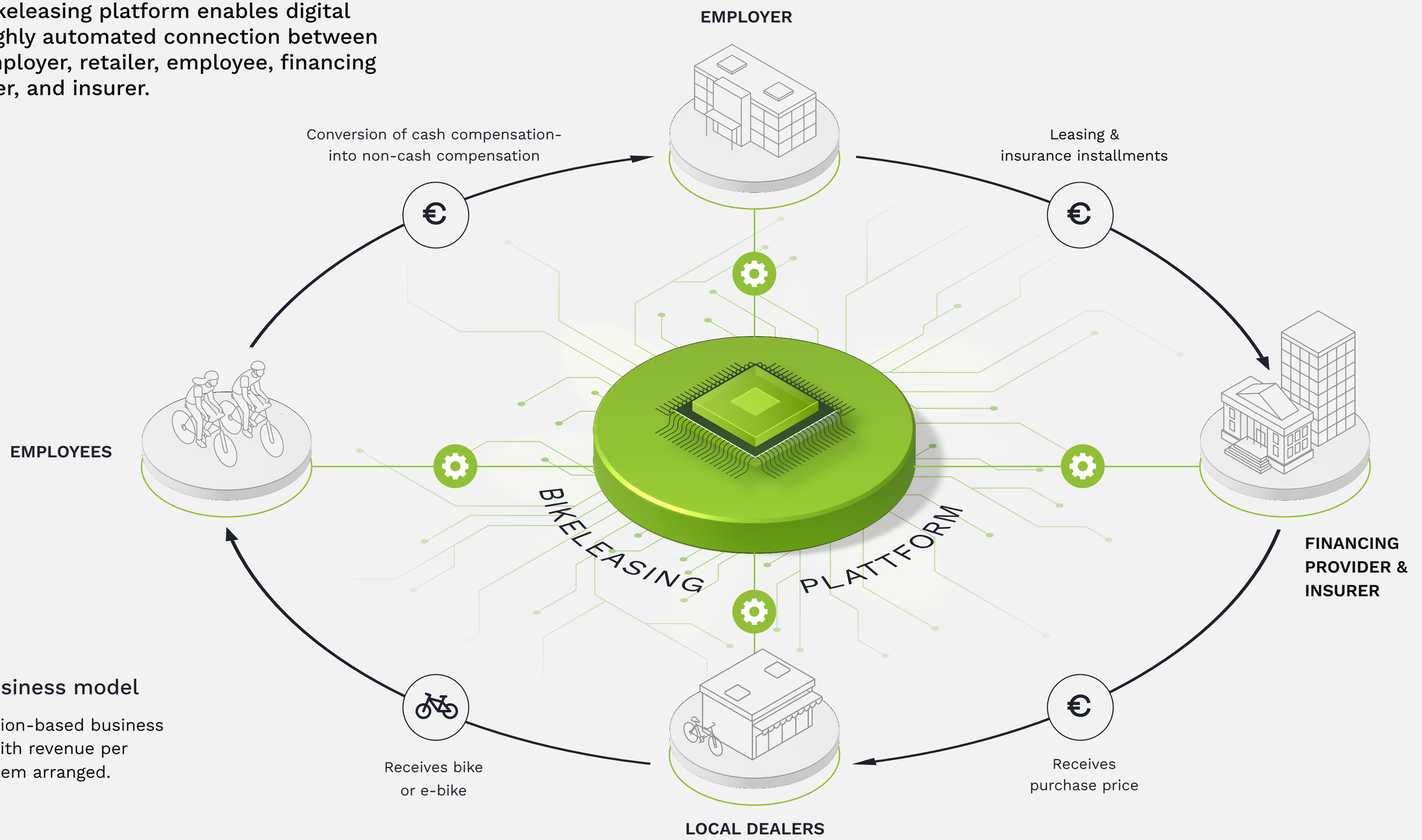
BIKELEASING

Bikeleasing operates a digital B2B finance platform for offering, financing, and managing employee benefits through the employer. The platform enables highly automated and digital connection between the retailer, employee, employer, financing provider, and insurer to finance a greener future.

EMPLOYEES	HEAD OFFICE	BRANCHES
162	**Vellmar, Germany**	**· Uslar · Freiburg · Innsbruck**

The digital B2B finance platform for employee benefits

The Bikeleasing platform enables digital and highly automated connection between the employer, retailer, employee, financing provider, and insurer.



The business model

Transaction-based business model with revenue per leased item arranged.

Bikeleasing highlights in 2021

Launch of the Austrian website

The Austrian version of its website going live opened up Bikeleasing's user-friendly bicycle leasing service in full for the still largely untapped Austrian market. The technology, usability, and performance of the website designed for Austria correspond 1:1 to the German website and provide the full experience of Bikeleasing's holistic service approach for Austrian companies and employees in use. Since Bikeleasing.at was launched, the number of newly registered employers and employees and participating partner dealers in brick-and-mortar retail has grown continuously.

Online portal and app relaunch

The new Bikeleasing app brings employers, employees, self-employed people, freelancers, and dealers together. Companies, their employees, and participating dealers can use the app to manage bicycles and leases while on the go at any time. The app's useful functions, such as reporting insurance claims and the option of contacting the Bikeleasing service team directly, make admin a simple and minor matter and add another service plus point that make business bike leasing a pleasure for Bikeleasing customers.

Extending the online portal: Schufa connection

The Bikeleasing portal has gained a new dimension of user-friendliness: Direct connection with the Schufa database enables automatic comparison with the data stored there on the credit rating of companies, self-employed people, and freelancers that want to register for the Bikeleasing service. Faster exchange of data in the background enables quicker service for potential new customers: Inquiries can be quickly processed and answered.

SECURITY TECHNOLOGIES

The KVM experts

IHSE is a global technology leader in flexible, highly secure, reduced-latency, and loss-free KVM solutions. With more than 35 years of experience, IHSE develops and manufactures its ISO-certified solutions in Oberteuringen on Lake Constance. The products impress with their outstanding manufacturing quality for continuous operation, high security standards, extremely easy operation and high modularity.

EMPLOYEES

154

HEAD OFFICE

Oberteuringen, Germany

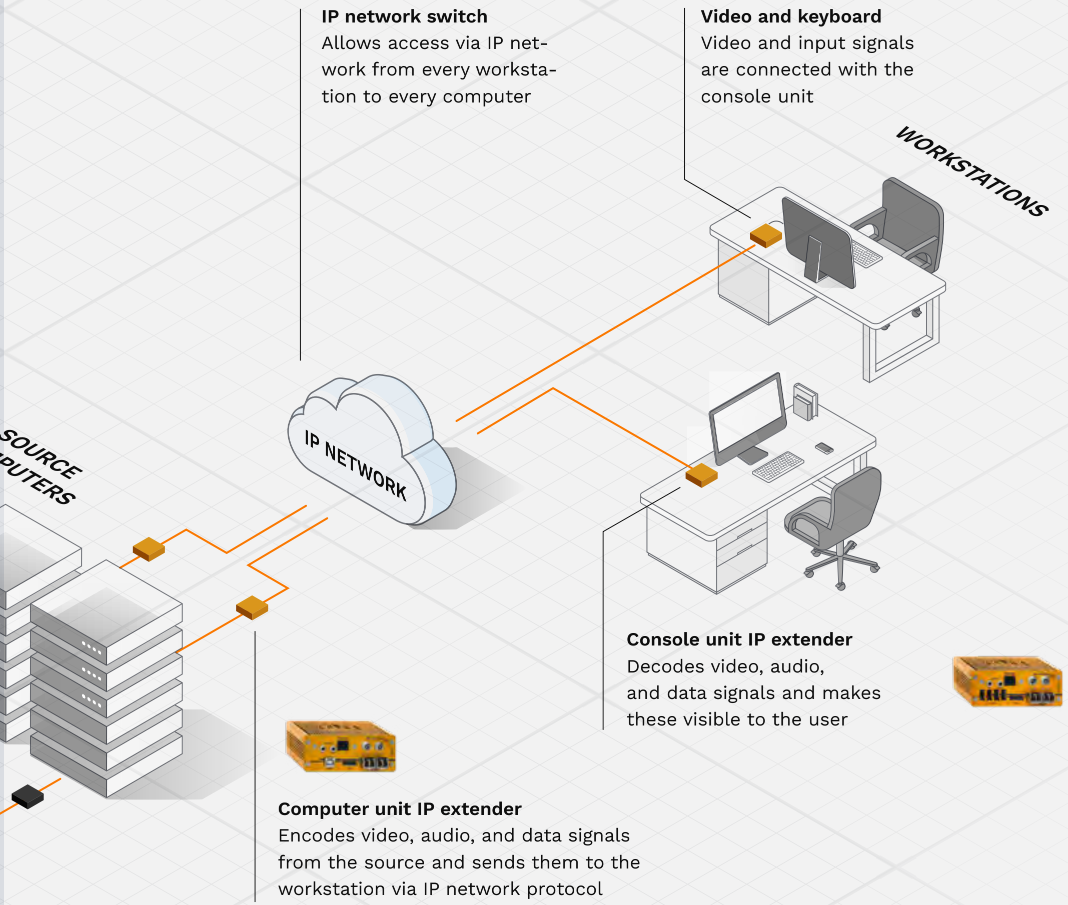
BRANCHES

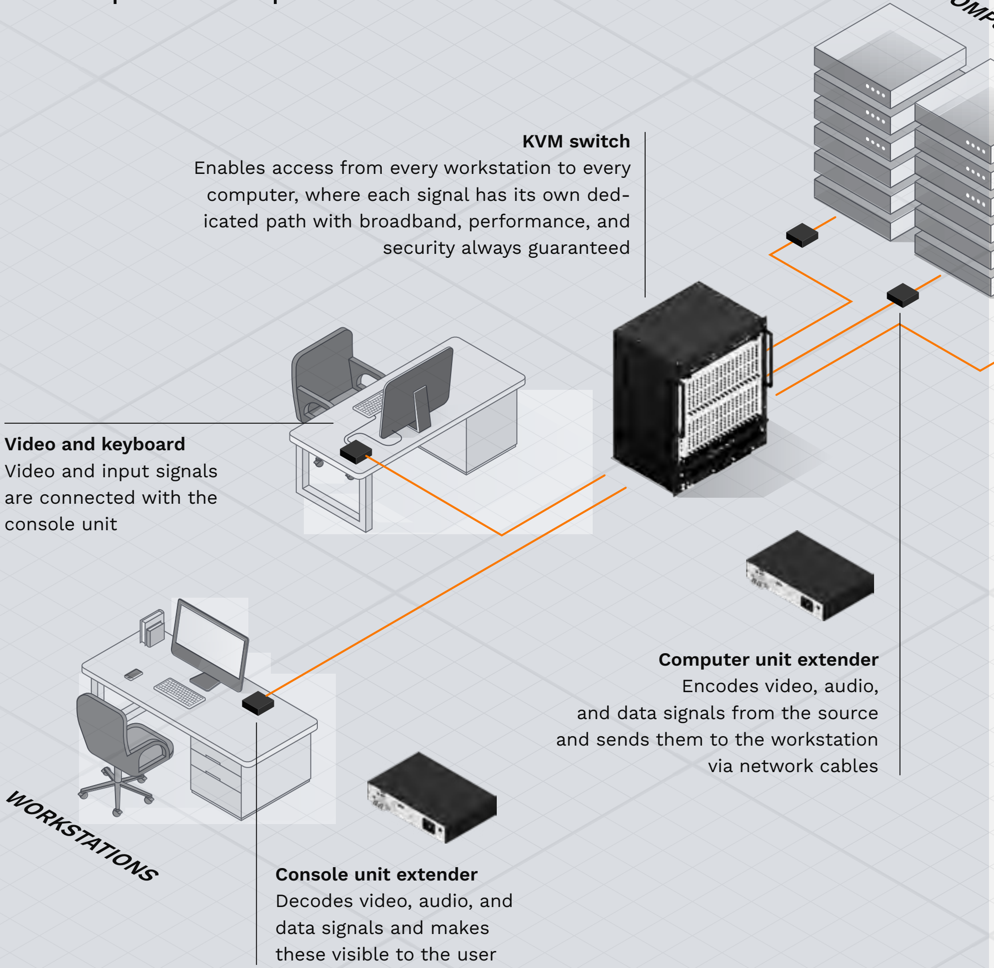
- **Austria**
- **Singapore**
- **U.S.A.**
- **France**
- **Israel**
- **India**
- **South Korea**
- **China**

The perfect addition

ihse.

Proprietary KVM technology enables high-performance and high-security separation of workstations and their respective computers.





IP-based KVM technology

kvm-tec over IP
an ihse. company

IP-based KVM technology enables real-time-based interconnection and transmission of KVM signals between the workstation and remote computers in a more flexible and cost efficient manner than proprietary solutions.

IHSE highlights in 2021

IHSE in the U.S. Congressional Recording Studios

Both the U.S. House of Representatives and the U.S. Senate continually upgrade and expand their technical infrastructure to take advantage of faster processing and communications speed with new audio and video equipment. In 2021, both chambers' recording studios were equipped with IHSE KVM systems supporting all aspects of video creation, including sound, post-production, graphics editing, interviews, live streaming, and TV studio operation.

IHSE acquires KVM-over-IP specialist kvm-tec

Founded in 2006, kvm-tec develops and distributes flexible, high-security KVM-over-IP solutions (KVMoIP) to extend and switch computer signals. The company enables high-performance, reduced-latency transmission via the standard IP protocol in existing networks. IHSE is a world-leading technology provider for KVM solutions (keyboard, video, mouse) via proprietary network protocols, and this acquisition expands its product portfolio and customer base.

IHSE opens branch in China

Opening IHSE China means KVM specialist IHSE is taking the next step in the strategically important growth market of China, where IHSE has already been represented by local sales partners for many years. The aim of establishing the subsidiary is to pool existing strengths, to enable business activity coordination and continued improvement of local customer support, and to strengthen the IHSE brand on the Chinese IT market.

ENVIRONMENTAL TECHNOLOGIES

The experts in aerosol technology

PALAS

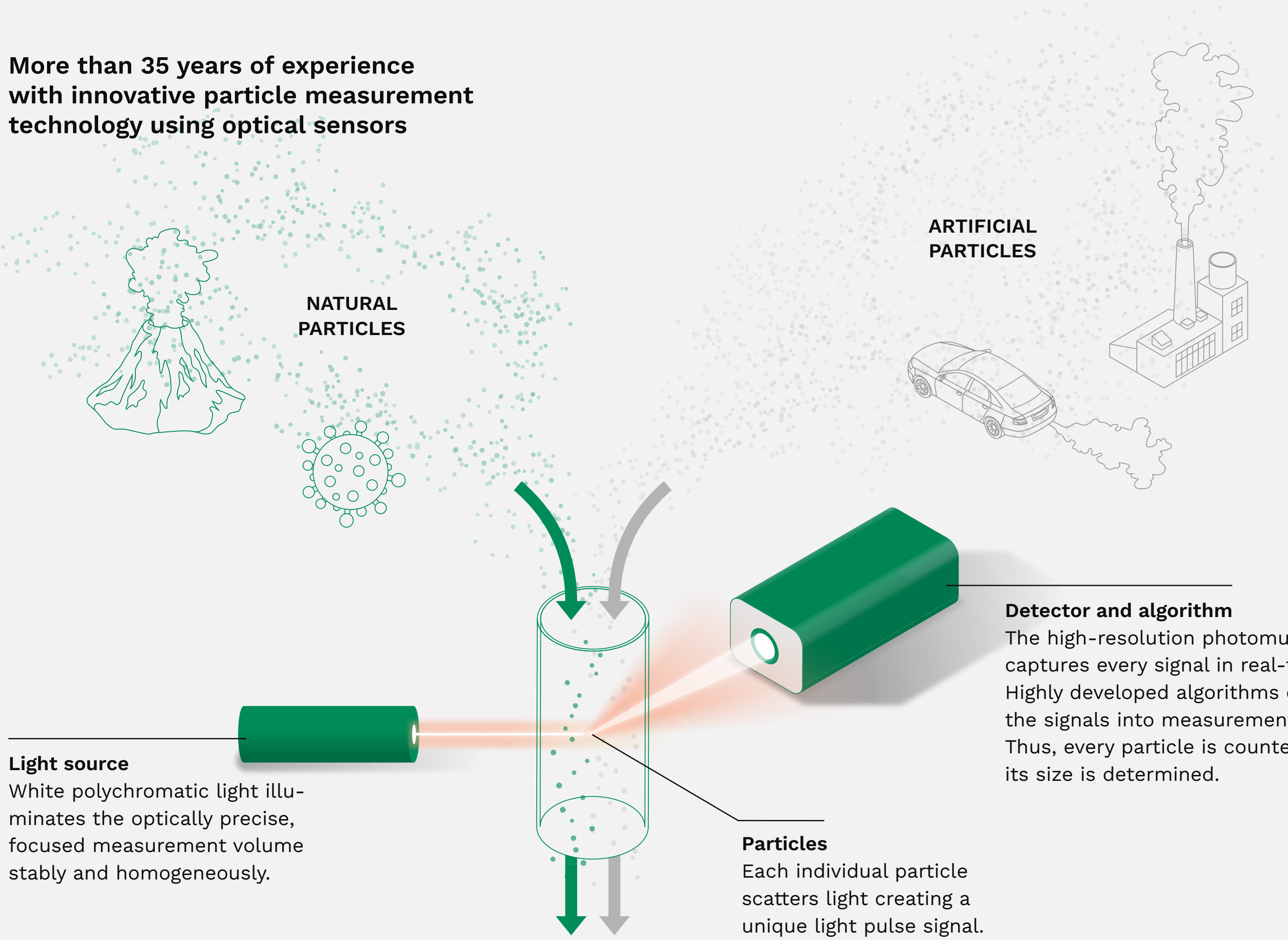
Founded in 1983, Palas is a leading developer and producer of high-precision devices for measuring, characterizing, and generating particles in the air.

With a large number of active patents, Palas develops technologically leading and certified fine-dust and nanoparticle measuring devices, aerosol spectrometers, generators, and sensors, as well as associated systems and software solutions.

EMPLOYEES	HEAD OFFICE	BRANCHES
120	**Karlsruhe, Germany**	**· Hong Kong** **· Shanghai**

Palas aerosol technology

More than 35 years of experience with innovative particle measurement technology using optical sensors



Light source
White polychromatic light illuminates the optically precise, focused measurement volume stably and homogeneously.

Particles
Each individual particle scatters light creating a unique light pulse signal.

Detector and algorithm
The high-resolution photomultiplier captures every signal in real-time. Highly developed algorithms convert the signals into measurement data. Thus, every particle is counted and its size is determined.

Selected areas of application


Mask tests


Exhalation


Air quality


Laboratories

Palas highlights in 2021

Air quality measurements at active volcano on La Palma

For several months, the Cumbre Vieja volcano on the Canary Island of La Palma spewed lava and ashes. But harmful and poisonous gases also escaped the crater. To protect the population, aerosol technology expert Palas quickly and easily provided and installed nine of its newest devices on La Palma to measure the air quality at various measurement points.

What makes this special is that the Spanish authorities get to see the current and precise measurement results – processed and visualized in real time – via the new cloud-based data platform MyAtmosphere. This means that if values increase, they can react quickly and pinpoint the measures needed, such as lockdowns.

Cloud-based environmental measurement system for smart cities and large areas

The MyAtmosphere data platform designed and newly developed by Palas is regarded as one of the world's most state-of-the-art environmental measurement systems. The measurement data collected is accessed in real time via the cloud-based solution, which enables effective and efficient management of quality information – from the collection of data to sharing it with third parties.

Dust monitoring is essential for meeting environmental-protection and occupational-safety requirements. Immissions as a result of, for example, urban traffic, roadworks, industry, landfills, opencast mining, or natural events are reliably recorded to determine dust and the number and size of particles. As a result, the necessary measures can be introduced quickly and effortlessly.

Combined management report

Combined management report

The registered office of Brockhaus Technologies AG (**BKHT**, or the **Company**, together with its subsidiaries **Brockhaus Technologies** or the **Group**) is Nextower, Thurn-und-Taxis-Platz 6, 60313 Frankfurt am Main, Germany, and the Company is registered in the commercial register at the Local Court in Frankfurt am Main under commercial register number HRB 109637.

On June 16, 2021, a resolution was passed at the Company's Annual General Meeting to rename the Company Brockhaus Technologies AG (formerly: Brockhaus Capital Management AG) and to amend the Articles of Association accordingly. The aim of the name change is to sharpen communication of the Company's mission statement and to create clearer market awareness of the Group's strategy. By doing this, the Group is already clearly emphasizing its business model in its name. The name change took effect on September 30, 2021, on its entry in the commercial register.

In addition to information on the Group, this combined management report (**management report**) includes information on the parent company. The reporting on the position of the Group generally corresponds to the reporting on the position of the Company. Additional disclosures regarding the BKHT annual financial statements pursuant to the German Commercial Code (HGB) can be found in the section Brockhaus Technologies AG's economic development. This combined management report has been prepared in accordance with German Accounting Standard No. 20 (GAS 20). The report describes the position of both the Group as a whole and the parent company as a single entity.

Unless otherwise stated, the period-related disclosures in this management report relate to the period from January 1, 2021, to December 31, 2021 (**reporting period**) and disclosures for a specific date relate to December 31, 2021 (**reporting date**). Quantitative information is rounded in accordance with standard commercial practice. This rounding method does not necessarily preserve totals, so that it is possible that the amounts in this report do not add up precisely to the total shown. Negative amounts are shown in parentheses.

Fundamentals of the Group

Business model

Brockhaus Technologies is a group of companies consisting of high-margin, fast-growing technology and innovation leaders with B2B business models in the German Mittelstand. The Company's strategy is to continuously acquire cash compounding businesses in line with this focus. With its distinctive platform approach and a long-term horizon, Brockhaus Technologies supports its subsidiaries actively and strategically to enable them to achieve profitable long-term growth beyond sector and national boundaries. At the same time, Brockhaus Technologies offers capital market investors a level of access to these unlisted German technology champions.

In addition to capital for future acquisitions, carrying out the business activities requires in particular highly qualified specialists from a wide variety of high-tech fields, e.g., information technology, electronics, optics, and various fields of physics. Material intangible assets include the extensive experience of the employees and their technological and process expertise, long-standing customer relationships, and internally developed software and trademarks.

Brockhaus Technologies' business activities consist firstly of its acquisition activities, i.e., identifying, investigating, and acquiring subsidiaries and supporting their long-term growth and, secondly, of its existing operating segments of Financial Technologies, Security Technologies, and Environmental Technologies. The Group comprised 26 consolidated entities in Germany and abroad as at the reporting date.

Since July 14, 2020, Brockhaus Technologies has been listed in the regulated market of the Frankfurt Stock Exchange with additional post-admission obligations (Prime Standard). Brockhaus Technologies' reporting therefore follows the high level of requirements stipulated for the Prime Standard.

Financial Technologies | The Financial Technologies operating segment consists of the business with digital B2B finance platforms. At present, the segment comprises the Bikeleasing companies (**Bikeleasing**), in which Brockhaus Technologies acquired an approximately 52% stake in November 2021. Of the remaining 48%, 40% is held by the founders and directors of Bikeleasing and 8% by coinvestors.

Bikeleasing operates a highly automated digital B2B finance platform for arranging, financing, and managing employee benefits through the employer.

Its business model allows employers to provide their employee benefits and fund them directly from the employees' pretax wages through a deferred-compensation model. This deferred compensation model reduces taxes and social security contributions for the employee, offering significant savings compared with a cash purchase. The employee can additionally choose from a comprehensive insurance offering, for example covering theft, material and production defects, accident damage, improper handling, and vandalism ("full-service lease"), and even the risk of early termination of the lease because of the employee leaving the company is covered by an insurance policy. Because of the savings from the deferred-compensation model, the main bicycles acquired by employees through Bikeleasing are high-value ones, particularly e-bikes. This is also an attractive model for bicycle retailers because they can generate higher revenues and – in contrast to other providers – they do not have to pay any commission.

In this context, Bikeleasing offers a digital ecosystem with its own proprietary platform or app for mobile devices through which the companies, their employees, retailers, insurers, and financing providers can be integrated. The entire process of arranging and managing bicycle leasing, from onboarding the employer, through ordering the bicycle by the employee at the bicycle retailer, down to the purchase or return of the bike by the employee, as well as insurance claims handling, uses the digital Bikeleasing platform.

The Company sees itself as a leading innovator and is recording strong, highly profitable growth. With more than 32,000 connected corporate customers and their more than 1.7 million employees at year-end 2021, the established digital platform additionally offers undeveloped potential as a comprehensive "social benefits platform" by enabling the leasing of further products such as leasing of smartphones, tablets, or computers.

The current product range on the Bikeleasing platform is characterized primarily by bicycles, which are growing in popularity. More and more people of all ages are choosing bicycles as a recreational sport, a hobby, or as a means of transportation. E-bikes in particular are ensuring that greater distances can be traveled. Cycling is also becoming increasingly attractive in German towns and cities, with considerable sums being invested in modern cycling infrastructure, such as protected cycle lanes, cycle highways, and bicycle parking. This trend can also be observed in other major European cities such as London, Paris, and Vienna. As well as recreational use, bicycles also offer solutions to current challenges facing society, such as reducing road congestion and emissions, thus actively contributing to improving the quality of urban life.

Bikeleasing's headquarters are in Vellmar, with branches in Uslar and Freiburg. Additionally, Bikeleasing established an additional branch office in Innsbruck in 2020 to develop the Austrian market.

Bikeleasing's business is usually subject to a certain seasonality depending on the warm temperatures of the "cycling season." Accordingly, a significant part of its revenue is generated in the second and third quarters of the year.

Security Technologies | The Security Technologies operating segment does business in KVM technologies. The segment currently consists of the IHSE companies (**IHSE**), which have been wholly owned by Brockhaus Technologies since December 2019, as well as KVM-TEC Electronic GmbH (**kvm-tec**), in which IHSE acquired a 100% interest in November 2021.

IHSE and kvm-tec develop, produce, and distribute KVM (keyboard, video, and mouse) technology for high-security, reduced-latency, and loss-free data transmission in mission-critical applications.

KVM technology can also be used to create direct, highly secure access from a workstation to several servers (switching) and/or conversely from several workstations to a single server (sharing). The outcome is a significant improvement in the efficiency, reliability, security, and user-friendliness of high-end IT applications.

The operating segment focuses on high-performance systems in the following product groups:

> Digital KVM extenders: Modular devices to control PC-based applications remotely in real time independently of the operating system (operating channel extension)
> KVM matrix switches: Routing systems for single and multiple workstation solutions to operate PC-based applications on one or more computer units
> VGA & USB extenders: transmission of USB and VGA signals
> Converters and accessories: devices for signal conversion
> Installation accessories: empty housings and power supply units
> Other: IP gateways, repeaters, programmable controllers and input devices, aftersales service, and other services

IHSE's products comprise proprietary network infrastructure solutions used in the mission-critical fields such as air traffic control, medicine, utilities, transportation, banking, maritime, and control centers in general – especially in situations where latency, system failures, or cyberattacks could have serious consequences and where people's lives often depend on the transmission of data. They bridge distances between control units and computer units, usually servers or other high-performance computers, of up to 160 km. Another business line that has recently been developed technologically through the acquisition of kvm-tec consists of flexible, high-security KVM-over-IP solutions (KVMoIP) that use the standardized Internet Protocol (IP) in existing networks for signal transmission. KVMoIP products are increasingly being used in industry, television, and radio (broadcasting) as well as in postproduction and in the public sector as a rapidly implemented, flexible, low-cost solution.

With its acquisition of kvm-tec, IHSE is also developing a worldwide KVMoIP customer base, which will in future benefit from IHSE's preexisting international sales network with its own sales companies in Germany, the US, Singapore, and China as well as further sales locations in France, Israel, and South Korea. The joint product portfolio offers comprehensive, flexible KVM solutions for a broad range of applications. In addition to joint sales, management expects synergy potential in development, purchasing, and production.

IHSE products are hub technologies that can be used in a wide range of end markets and benefit from a large number of megatrends (including autonomous driving, Industry 4.0/networked production, etc.) that are driven by growing connectivity and digital transformation and the accompanying growth in mission-critical data transmission.

When planning (e.g., control rooms), operators must take account of future developments to the farthest extent possible. The increasing pace of digital transformation, the closure of security gaps in hardware and software in light of growing cyberattacks, and the creation of best working conditions possible are the focus of efforts when optimizing control rooms. The systems of IHSE and kvm-tec are optimized for these factors and are thus focused directly on customer requirements. The solutions offer a high degree of investment security because of things such as their modular approach. Customers can flexibly assemble a tailored KVM system from a variety of modules. Existing installations can be retrofitted with new functions and interface standards with a minimum of effort and expense. These aspects systematically enhance customer loyalty and hence also follow-up business with longstanding customers.

IHSE is certified according to the ISO 9001 quality management standard and applies a certified environmental management system in accordance with ISO 14001.

IHSE is headquartered in Oberteuringen by Lake Constance. IHSE USA LLC, based in Cranbury, New Jersey, has been wholly owned by IHSE since 2017. In 2015, IHSE also established a subsidiary in Singapore, IHSE GmbH Asia Pacific Pte Ltd. Effective April 20, 2021, IHSE GmbH Asia Pacific Pte Ltd. established a wholly owned subsidiary IHSE China Co., Ltd., whose registered office is in Guangzhou. IHSE also has regional sales offices in France, Israel, India, and South Korea. The headquarters of kvm-tec, the new subsidiary, are in Tattendorf, Austria.

The customers are primarily sales partners and systems integrators. Major end-customers in fiscal year 2021 included the United States Congressional Recording Studios, the Hong Kong Civil Aviation Department and CH Media Schweiz.

The business activities in the Security Technologies segment are largely unaffected by seasonal influences. In some cases, increased revenue is observed in the second half of the calendar year. However, management does not consider this to be statistically relevant.

Environmental Technologies | The Environmental Technologies operating segment is active in the areas of environmental measurement technology and sustainability technologies. This segment currently comprises the Palas companies (**Palas**), in which Brockhaus Technologies acquired a 70% interest in December 2018.

Palas develops, produces, and distributes high-precision devices for measuring, characterizing, and generating particles in the air.

The company is certified to the ISO 9001 quality management system, holds a large number of active patents, and is a global leader in researching and developing aerosol, fine dust and nanoparticle measuring instruments. This is also reflected in numerous cooperation arrangements with universities and research institutes as well as its membership of several standards development committees at bodies such as ISO, DIN, and VDI.

On account of its highly precise optical measurement technologies and competitive pricing thanks to the comparatively low total cost of ownership for its devices, Brockhaus Technologies believes that Palas is attractively positioned in its niche. One of the company's unique selling propositions is that its optical sensor is able to measure several particle sizes and fractions (e.g., PM10 and PM2.5 mass fractions as well as size-resolved aerosol number concentration) simultaneously in real time.

Palas products are developed for the following particle measurement applications:

> Fine-dust measurement devices: devices for regulatory air pollution control and for monitoring air quality outdoors, indoors, and at the workplace as well as for applications in the laboratory
> Test rigs: filter test rigs and filter media test rigs for testing filter media and complete filter systems as well as protective mask test devices for testing respiratory masks for particle separation efficiency, for example, with virus-sized particles
> Aerosol generators, spectrometers, and sensors: devices for generating test particles and for measuring particle size and

particle concentration of aerosols, e.g., in industrial processes, the environment, or filter testing.
- Nanoparticle measuring devices: devices for measuring the number concentration and particle size distribution of ultrafine aerosols, starting at 2 nanometers, in the environment and in technical applications.
- Other: dilution systems, unloading devices, software (including my-atmosphere.net), and aerosol technology accessories

Increasing air pollution, growing awareness of the resulting health risks, and corresponding regulatory requirements are driving demand for Palas' products. Among other areas, they are used in the public sector (in particular environmental monitoring), in the automotive industry, in industry, in process monitoring, in the pharma and medical technology industries, and in laboratories and clean rooms.

Fine-dust pollution in particular is playing an increasingly important role in public perception. Fine dust relates to pollutants in the form of particles that are released above all by industrial processes in power plants, furnaces, and motor vehicles. There are various sizes of fine-dust particles – the smaller the particles are, the deeper they can penetrate the human body.

Among other applications, filter test rigs and filter media test rigs are used in the automotive industry, in laboratories, and in clean rooms or to monitor industrial exhaust gas emissions. Palas has also identified the measurement of ultrafine aerosols as a key future area and already offers a nanoparticle measuring device for this application right now. The devices measure particles in sizes of between two and 1,000 nanometers.

In the wake of the COVID-19 pandemic, public interest in the topic of "aerosols" and the effectiveness of respiratory masks has jumped dramatically. The SARS-CoV-2 virus is a nanoparticle with a size of around 150 nanometers. This size range can be tested reliably using technology from Palas. Specially developed protective mask test devices are used by manufacturers and authorities to test the effectiveness of masks and are also used in hospitals, nursing homes, and retirement homes for testing before daily use. Special aerosol spectrometers also enable particles to be identified in breathing air in the size range of viruses such as SARS-CoV-2.

Due to the growing demand for test rigs for face masks, another sales area emerged for testing special respiratory masks that are used in the field of occupational safety, for example by fire departments.

Palas is headquartered in Karlsruhe. In May 2020, Palas established its first foreign subsidiary, Palas (Asia) Ltd., whose registered office is in Hong Kong. Brockhaus Technologies holds a 90% interest in Palas (Asia) Ltd. The remaining 10% is held by the managing director responsible for Asia. In July 2020, Palas (Asia) Ltd. formed the Palas Instruments (Shanghai) Co. Ltd. subsidiary, whose registered office is in Shanghai, China. The Asian entities are sales locations responsible for serving Palas' local Asia-Pacific markets, especially China.

Palas serves an international customer base in approximately 60 countries as well as a wide range of end markets, such as certified public measurement networks, original equipment manufacturers, healthcare agencies, industrial companies, and research institutions. Palas' customers include Siemens, BASF, Bosch, Roche, BMW, the NHS National Institute for Health Research, and the Fraunhofer Society.

The main sales regions are the European Economic Area, followed by the Asia-Pacific region, where Palas established its own sales network in China in the 2020 fiscal year, and the Americas.

Palas' business is normally subject to a certain level of seasonal fluctuation, with a disproportionately high share of revenue in past years typically being generated in the fourth quarter of the calendar year. Palas' management believes that the reason for this is largely linked to its customers' internal budget policies.

Central Functions | Organizationally, the M&A activities are concentrated on the Group parent. They focus on the identification, due diligence, and acquisition of majority stakes in high-margin, high-growth companies in the German Mittelstand that lead in technology and have B2B business models. Central Functions also include activities such as financial controlling, investor relations, marketing, risk management, and compliance.

In addition to competitive bidding processes with several prospective buyers, Brockhaus Technologies also focuses on creating proprietary transaction situations. This approach aims to avoid the high purchase prices commonly found in auctions. It is also designed to ensure the greatest possible probability that the transaction will enter the due-diligence phase. Selling processes of M&A consultants are selectively pursued with an eye to cost-benefit aspects.

To obtain access to attractive investment opportunities, Brockhaus Technologies actively nurtures its existing network and grows it continuously. To ensure a constant deal flow of high-quality proprietary acquisition opportunities, Brockhaus Technologies has implemented a structured, software-based, and tried-and-tested process that is designed to identify and proactively develop close relationships with attractive companies, their founders, family shareholders, and directors.

Brockhhaus Technologies' support for its subsidiaries' sustainable post-acquisition performance pursues a nuanced approach with the goal of driving further organic growth. The aim is to develop a close relationship and partnership with the management teams at the subsidiaries, to provide them with comprehensive strategic support and access to the Brockhaus Technologies network, and to enable the continuous review of strategic options, such as professionalization or expansion through internationalization.

Control system

The Group's control system is geared toward its objective of sustainably increasing the long-term value of its subsidiaries. To achieve this, Brockhaus Technologies' management receives and evaluates monthly reports from its subsidiaries. In addition to financial reporting, these also contain explanations by the relevant management on material events, opportunities, and risks.

The Group's most important financial key performance indicators (KPIs) are revenue before purchase price allocation (PPA) and its adjusted EBITDA margin.

Revenue before PPA is the key indicator of market performance or the growth generated by the Group. For the purpose of managing the Company, revenue is calculated in accordance with IFRS 15 for revenue from contracts with customers and with IFRS 16 in conjunction with IFRS 9 for income from leases. The Group adjusted this KPI for one-time PPA effects during the reporting period. This was because the acquisition of Bikeleasing was initially followed by PPA for solely the statement of financial position and not the statement of cash flows, which affected the Group's revenue. There had previously been comparable effects, particularly for depreciation and amortization, and they had always been adjusted for when calculating the Group's alternative performance measures. Accordingly, the management believes that the analogous method applied for the Group's revenue is consistent with the perspective applied in the past. Please refer to Note 7 to the consolidated financial statements for more information about this and the KPIs in general.

Adjusted EBITDA or the ratio of adjusted EBITDA to revenue before PPA expressed as a percentage (**adjusted EBITDA margin**) indicates firstly a company's pricing power and secondly its cost efficiency. It is calculated as earnings before interest, taxes, depreciation, and amortization, adjusted for the cost of acquisition of subsidiaries, costs of equity transactions to be recognized in profit or loss, costs of stock-based compensation, and the reduced income resulting from the value step-up as a consequence of the Bikeleasing PPA.

Research and development

The Group's development activities are concentrated on the development of new – and enhancement of existing – technologies, products, processes, and software. These activities are undertaken for particle measurement technology in connection with aerosols, in the high-performance secure transmission and switching of computer signals, and as part of the digitization and automation of the B2B finance platform for employee benefits.

Research and development activities

€ thousand	2021	2020
Pro forma research and development expense	3,518	2,368
Research intensity (pro forma research and development expense/pro forma revenue before PPA)	2.8%	4.6%
Pro forma capitalized development investments	861	392
Capitalization rate	24.5%	16.6%

The Group's research and development activities are presented on a pro forma basis. The Group reports them as if Bikeleasing and kvm-tec were already part of Brockhaus Technologies as of January 1, 2021. The comparison period has not been adjusted. Research and development expense in the reporting period amounted to €3,518 thousand (previous year: €2,368 thousand), corresponding to a research intensity of 2.8% (previous year: 4.6%). Capitalized development investments amounted to € 861 thousand (previous year: €392 thousand). The capitalization ratio was therefore 24.5% (previous year: 16.6%). Including amortization of capitalized development costs amounting to €564 thousand (previous year: €78 thousand), the total research and development expense was €3,220 thousand (previous year: €2,054 thousand). At Group level, the main change is from the increased research and development activities at Palas as well as from the inclusion of Bikeleasing and kvm-tec. IHSE's research and development activities also increased year over year. The research and development expense on an as-is basis was €3,255 thousand, research intensity (as-is research and development expense/as-is revenue before PPA) 4.9%, capitalized development investments €861 thousand, and capitalization ratio 26.5% during the reporting period.

Financial Technologies | Development activities in the Financial Technologies segment consist of the further development and optimization of the Bikeleasing platform. These activities include both the further development of the user interfaces for all stakeholders involved on the website and in the mobile app (the front end), as well as the back end, which includes master data and identity management as well as the CRM/ERP system with the associated process logic.

In 2021, and therefore far before Bikeleasing joined the Group, a comprehensive relaunch of the online portal and the Bikeleasing app was implemented to improve functional handling and safeguard the security and stability of the processes. The source code was subjected to extensive restructuring as part of a redesign, while retaining the original range of functions. In the process, readability, clarity, extensibility, comprehensibility, and testability were optimized to enable more efficient, faster internal work processes and enhance the performance of the front-end applications. In addition, an English language version was added to the user interface.

On the system side, an automated "Schufa" (credit check) connection was implemented in order to enable even faster and less complicated registration of new corporate customers. Additionally, the information technology architecture software of the ERP system was updated to improve the efficiency and stability of the processes running in the background. Overall, these measures are designed to ensure maximum scalability of the platform for further future growth.

Bikeleasing is work together extensively with external service providers to enhance the platform. They are engaged and managed by the Head of IT and Head of Processes and a two-person development department. Development activities will be increasingly internalized as the organizational structure grows.

Security Technologies | Extensive further development of KVM and KVMoIP products took place in the Security Technologies operating segment in the past fiscal year. KVMoIP solutions work on the basis of the standardized Internet Protocol (IP) and are a cost-efficient alternative to a proprietary KVM network solution. A large number of projects to ensure and enhance the IP capability of existing devices have already been carried out or are currently in an advanced stage of development. IHSE also significantly expanded and completed its IP product portfolio by acquiring Austria-based KVMoIP specialist kvm-tec in 2021. In light of the shortage of relevant components, the dependence on specific chips was reduced through product redesigns.

To meet the growing demand for security-certified products, processes are currently underway for a product family to obtain certification under the US NIAP (National Information Assurance Partnership), the international Common Criteria for Information Technology Security Evaluation, and the German KRITIS (critical infrastructure in accordance with the Federal Offices for Civil Protection, Disaster Assistance, and Information Security).

There is also a cooperative arrangement in the field of research and development with the Fraunhofer Society and with a number of companies in the Lake Constance District to develop a test track for autonomous vehicles with an integrated smart-city control center under the leadership of IHSE. IHSE, including kvm-tec, employs 31 staff in the research and development area.

Environmental Technologies | The AQ Guard system and the MyAtmosphere data management platform (my-atmosphere.net) were significantly enhanced in the reporting period. With Fidas Smart 100 (formerly AQ Guard Ambient) and AQ Guard Smart, two devices for measuring outdoor air quality and optional gas sensors were brought to market maturity. They are optimized for further applications, for example for monitoring air quality at construction sites, industrial areas, landfills or in opencast mining.

The MyAtmosphere data platform developed in parallel enables the measurement results of the devices to be read out over the cloud and visualized and documented in real time on the website, with integrated map data.

Fidas Smart 100 and the data platform were used to launch a pilot project in the wake of the volcanic eruption on La Palma in the Canary Islands to support the Spanish authorities in monitoring air quality during the natural disaster. The MyAtmosphere platform provides the responsible parties with a comprehensive environmental measurement system for deriving targeted measures to protect the population from invisible airborne noxious substances.

At the beginning of 2022, the Chinese Ministry of Ecology and Environment issued a revised national ecological environmental standard with the title: “Technical Requirements and Detection Methods for Continuous Automatic Monitoring Systems for Airborne Particulate Matter (PM10 and PM2.5),” which now allows the use of optical sensor technologies, such as those produced by Palas, for regulatory air pollution control. The Palas fine-dust monitors in the Fidas product line are now already undergoing the necessary certification process according to the environmental standard. For Palas, this could lead to significant business opportunities in China in the future.

Palas has research and development cooperation agreements with research institutes and universities. Palas has 12 employees working in its R&D department.

Employees

Our employees are our most important asset. That is why we work continuously to offer our employees a dynamic environment that allows them to actively participate in the Company and contribute to the success of Brockhaus Technologies.

Employees (headcount)	31 Dec., 2021	31 Dec., 2020
Financial Technologies	162	-
Security Technologies	154	125
Environmental Technologies	120	96
Central Functions	11	10
Brockhaus Technologies	**447**	**231**

As of December 31, 2021, we employed a total of 447 employees (previous year: 231 employees). This corresponds to year-over-year growth of around 94% in our headcount. The increase in the number of employees is due predominantly to the acquisition of Bikeleasing and kvm-tec, as well as to the growth in the volume of business in the Environmental Technologies operating segment. The average number of full-time-equivalent employees (part-time positions weighted according to their share of full-time working hours, FTE) was 360 as at the reporting date (previous year: average of 192 FTE positions).

Economic report

During the reporting period, the income and expenses of Bikeleasing and kvm-tec were only included for December in the consolidated statement of comprehensive income because control was only obtained in late November 2021 in both cases. As the informative value of the consolidated statement of comprehensive income for the 2021 fiscal year is limited, particularly its suitability for deriving projections, the Executive Board analyses earnings figures on a pro forma basis. This presents the Group's statement of comprehensive income as if Bikeleasing and kvm-tec had already been acquired as of January 1, 2021. The comparison period has not been adjusted.

The results presented in this financial report are based on pro forma figures unless otherwise indicated for the 2021 fiscal year. The corresponding non-pro forma values are designated as "as is".

Comparison of actual and forecast business development

Forecasts made about performance in 2021

When it published its 2020 Annual Report on **April 15, 2021**, Brockhaus Technologies communicated expected revenue growth of 20%, bringing it to €62 million, and an expected adjusted EBITDA margin above the level of 23.8% for the previous reporting period. This estimate was reaffirmed in the half-year report published on **August 16, 2021**.

Following the signing of the purchase agreement for the acquisition of Bikeleasing, Brockhaus Technologies published a supplementary **pro forma forecast** for the then-current 2021 fiscal year on **June 16, 2021**. It included pro forma revenue ranging between €120 million and €130 million with adjusted pro forma EBITDA of roughly €34 million (an adjusted pro forma EBITDA margin of between 26% and 28%). That pro forma forecast was subject to, amongst other reservations, particularly increased uncertainties regarding Bikeleasing's IFRS conversion.

On **August 16, 2021**, the **pro forma forecast** was increased and now states expected pro forma revenue of between €125 million and €135 million with expected adjusted pro forma EBITDA of between €42 million and €46 million. This corresponds to an adjusted pro forma EBITDA margin between 31% and 37%. The increase of the pro forma forecast was conducted in light of an advanced stage regarding the conversion of financials to IFRS.

In its nine-month quarterly report on **November 15, 2021**, Brockhaus Technologies still forecast revenue at €62 million with an adjusted EBITDA margin exceeding the prior year figure of 23.8% for the then-current 2021 fiscal year. BKHT expected to meet the forecast when consolidating the income and expenses of Bikeleasing for the month of December 2021, the month of first-time consolidation, into the Group. Simultaneously, Brockhaus Technologies did not expect the Security Technologies segment to achieve the earnings metrics originally planned, due to continued COVID-19 disturbances and increasing supply shortages. It expected that the effects would balance each other out in the main, although this expectation remained subject to the preliminary nature of Bikeleasing's conversion to IFRS. In light of COVID-19 cases increasing considerably again as well as shortfalls in the supply chains for semiconductor products (IHSE), metal components (Palas), and bicycles (Bikeleasing), the forecast was additionally subject to a high level of uncertainty.

Achievement of as-is forecast

When analyzed as is, BKHT was able to exceed its forecast of €62 million for 2021 with revenue before PPA of €66.5 million. In revenue before PPA, a one-time effect related to the disposal of lease receivables in December 2021 of €7.1 million is included. The adjusted EBITDA margin of 32.8% also surpassed the forecast of more than 23.8%.

Even without including kvm-tec, the forecast was exceeded with as-is revenue before PPA of €66.2 million and an adjusted EBITDA margin of 32.9%. When also subtracting the adjustment for the purchase price allocation (PPA) effects of €6.2 million, the forecast would have been almost achieved with revenue of €60.0 million. Under these assumptions, the adjusted EBITDA margin would have been at 26.0%, so that the forecast figure would still have been exceeded.

Achievement of pro forma forecast

The pro forma revenue before PPA of €126.5 million was within the forecast range of €125 million to €135 million. The adjusted pro forma EBITDA margin of 38.1% exceeded the forecast span of 31% to 37%. The adjusted pro forma EBITDA of €48.2 million surpassed the forecast range of €42 million to €46 million too. The pro forma revenue before PPA when excluding kvm-tec was €122.5 million and therefore slightly less than the forecast range. However, even when excluding kvm-tec, the pro forma EBITDA margin of 39.1% and adjusted pro forma EBITDA of €47.9 million exceeded the forecast.

COVID-19 pandemic

Business performance during the reporting period remained impacted by the effects of the COVID-19 pandemic. Brockhaus Technologies had already taken action in the previous year to adapt the Group to the prevailing conditions to protect the health of all employees, ensure delivery capabilities for customers, and safeguard its liquidity. The far-reaching health, safety, and hygiene measures implemented at all sites remained in place during the reporting period. Large numbers of employees also stopped working from home either partly or fully. The Security Technologies and Environmental Technologies segments continued to be influenced by repeated or ongoing COVID-19 lockdowns and restrictions on travel and physical contact. On the other hand, the COVID-19 pandemic saw the Environmental Technologies segment face high demand for test rigs for testing the effectiveness of respiratory masks, especially in the first half of the year, which dropped substantially a short while later in the second half of 2021. There were also shortfalls in the supply chains that began in the second quarter. They primarily concerned semiconductor products at IHSE, metal components at Palas, and bicycles at Bikeleasing. Nonetheless, production and delivery capabilities were largely maintained.

Macroeconomic environment

The German economy's recovery was disrupted by another wave of COVID-19 right at the start of 2021, which resulted in a significant year-over-year decline of 3.0% in the country's GDP in the first quarter. Germany's economic output rose significantly in the second quarter and experienced growth of 10.8% compared to the same quarter in the previous year, which had been impacted by a recession. The economic recovery was delayed again in the second half of the year due to the increasing precautions for infection prevention and due to persistent goods shortages. When viewing the year as a whole, GDP was up 2.8% on the previous, weak year according to the Federal Statistical Office of Germany.

The economic output of both the eurozone and EU increased by 5.0% according to estimates by the Kiel Institute for the World Economy (IfW). Brockhaus Technologies' most important sales markets outside Europe are the US, where GDP grew by 5.6% during the reporting period, and China, where the forecast economic growth of 7.8% was considerably less than the growth rate recorded prior to the crisis.

Industry-specific environment

Because of the niche strategy of Brockhaus Technologies' segments, no reliable statistics or studies are available on developments in the corresponding relevant markets. For this reason, the following information on market developments in the relevant segments refers to estimates by the management at subsidiaries.

Financial Technologies I The persistently high demand for bicycles, especially e-bikes, continued unabated during the reporting period. However, supply chain disruptions and the lack of parts from Asia meant that the demand was not able to be met in full despite the higher production output in the German bicycle and e-bike industries. These factors led to purchases being postponed as well as additional price increases since a larger number of high-priced e-bikes were sold.

The increased number of outdoor activities during the pandemic, especially in summer months, as well as growing environmental awareness and changes in transportation patterns in urban areas provided additional impetus for the bicycle industry.

Thanks to the growing familiarity with the idea of leasing a company bicycle and the greater acceptance of this offer, an increasing number of employees have the possibility of leasing their new bicycle or e-bike through their employer at a low price. As a result, the share that company bicycle leasing has in the overall German bicycle market rose further.

Bikeleasing faces other competitors for company bicycle leasing. With its comprehensive platform-based approach and almost fully automated processing and management of leased property, Bikeleasing sees itself as a digital disrupter and leading innovator in its industry.

Security Technologies I The situation in the sales markets served by the Security Technologies segment continued to be shaped by the impacts of the COVID-19 pandemic during the last fiscal year. While planning continued for projects around the world and the sales pipeline continued to grow accordingly, there were still more significant delays in issuing contracts for projects, especially major ones, and subsequently realizing these projects due to the ongoing travel and physical-distancing restrictions. The general shortage of supplies of electronic components and semiconductors also had its first impacts, which resulted in the first delays in delivery as well as in being saddled with higher material costs in order to safeguard delivery capabilities.

Whereas the KVM market for non-mission-critical applications is characterized by significant fragmentation and competition from a large number of generalist providers, there are only a few specialized suppliers in the high-tech, heavily mission-critical segment relevant to IHSE and kvm-tec that compete with each other directly in specific sectors and applications.

Environmental Technologies | Palas' sales markets exhibited reverse momentum during the reporting period. The market for mask test rigs that had arisen in the year prior continued to have positive effects for business development, especially in the first half of the year, however by as soon as the second half of the year it began weakening significantly again.

Simultaneously, the market for certified fine-dust measurement devices (especially for the regulated EU measurement network) saw a strong drop in demand after a year in which industry events and projects had been delayed because of COVID-19. However, the drop in demand for COVID-19-related products was more than made up for.

Palas was also affected to a small extent by the increasing supply shortages that started in the second quarter and by the shortage of components.

As a niche supplier for high-precision airborne particle and aerosol measurement, Palas competes with small companies as well as large measurement technology corporations. Palas sees itself as a technology leader in the precise real-time measurement of the smallest particles down to the nanolevel.

Central Functions I After a subdued start to 2021 in the M&A transaction market, activities increased significantly as the year progressed and made for a record year in terms of transaction volume in spite of the ongoing COVID-19 pandemic. During the reporting period, the German market also recorded M&A transactions in numbers that in recent times had only been matched by the extraordinary privatization of communist-era businesses in the 1990s. In total, there were roughly 3,000 transactions in 2021 that involved a buyer and/or an acquisition target domiciled in Germany. This was reflected in consistently high purchase price expectations and unchanged intense competition on the part of both strategic and financial investors.

The most active sector for this remained the technology and software industries. In addition to the attractive overall parameters driving up the demand for businesses, the COVID-19 pandemic and the associated progress on digital transformation additionally helped the sector achieve lasting growth and continue attracting the interest of investors.

With the comprehensive process that its three-pronged sourcing approach involves, consisting of contact with M&A consultants, proactive sourcing, and a long-standing industry network, Brockhaus Technologies continued to have an appealing pipeline of potential acquisition targets over the last fiscal year and successfully closed two acquisition transactions. It was Brockhaus Technologies' network that led to the Bikeleasing acquisition, which was closed for only a finder's fee and success fee. kvm-tec resulted from IHSE proactively approaching the counterparty and was also acquired outside a classic M&A auction. Brockhaus Technologies always maintains a principle of being very selective and price-focused when making acquisitions.

Results of operations

Because Bikeleasing and kvm-tec could only be included in the consolidated financial statements upon their change of control to Brockhaus Technologies (i.e., the closing of the transactions) and therefore only for December 2021, the consolidated statement of comprehensive income only included the revenue, expenses, and other income of Palas, IHSE, and BKHT in the first eleven months of the 2021 fiscal year. For this reason, there is limited comparability for the results of operations in the reporting period compared with the prior-year period. The Group's revenue therefore rose by 133.2% to €120,308 thousand on a pro forma basis in 2021. Adjusted for the effects of PPA, the pro forma revenue before PPA was up 145.3% at €126,523 thousand. Viewed on an as-is basis, sales increased by 16.9% when including one-time effects in connection with the disposal of lease receivables in December 2021, bringing them to €60,321 thousand (previous year: €51,581 thousand) and revenue before PPA increased by 29.0% to €66,536 thousand. Please refer to the segment reporting for a detailed explanation of the revenue developments. The adjusted EBITDA margin rose by 60.1% to 38.1% on a pro forma basis. Viewed on an as-is basis, the adjusted EBITDA margin increased by 37.8% to 32.8% (previous year: 23.8%).

The change in significant costs is presented on an as-is basis. Alongside the first-time consolidation of Bikeleasing, the changes can also be attributed to the supply constraints and associated increases in component costs. The cost of materials rose by 3.3% to €14,239 thousand (previous year: €13,782 thousand), personnel expenses by 11.4% to €21,754 thousand (previous year: €19,529 thousand), and depreciation of property, plant, and equipment and amortization of intangible assets (excluding PPA assets) by 25.7% to €2,093 thousand (previous year: €1,665 thousand). The other operating expenses were influenced to a considerable extent by the costs of the company acquisitions, rising by 123.3% to €26,884 thousand (previous year: €12,042 thousand). If the M&A costs of €14,528 thousand are excluded, the increase would have been 2.6%, bringing the total to €12,356 thousand. The amortization of intangible assets identified during initial consolidation decreased by 1.5% to €7,590 thousand (previous year: €7,708 thousand). Finance costs rose by 58.3% to € 6,156 thousand (previous year: € 3,890 thousand) due to the loans taken out for the partial debt financing of the acquisition and because of remeasurement losses on the NCI put provision. After income taxes, the net loss for the year was € -18,761 thousand (previous year: €6,759 thousand).

Net assets

With total assets of €614,501 thousand, the Group's assets are split between 81.0% noncurrent assets and 19.0% current assets as at the reporting date. The largest items by value are intangible assets including goodwill (€398,872 thousand), lease receivables (€119,759 thousand), cash and cash equivalents (€30,327 thousand), trade receivables (€20,022 thousand), property, plant, and equipment (€16,156 thousand); and inventories (€12,568 thousand). Intangible assets relate primarily to the customer bases, basic technologies, and trademarks identified in the course of purchase price allocation for the Bikeleasing, IHSE, kvm-tec, and Palas acquisitions (PPA assets) as well as goodwill. Property, plant, and equipment consists largely of land and buildings at IHSE's headquarters in Oberteuringen by Lake Constance.

The change in assets since the beginning of the fiscal year resulted principally from the acquisition of Bikeleasing and the subsequent cash outflow. The total assets rose from €306,419 thousand to €614,501 thousand – a €308,082 thousand or 100.5% increase – and therefore more than doubled.

Financial position

The Group's cash and cash equivalents as at the reporting date amounted to €30,327 thousand. They stood against financial liabilities of €269,112 thousand, which include loans (€135,617 thousand), other financial liabilities (€5,316 thousand), and lease refinancing for Bikeleasing (€128,179 thousand). After factoring in net lease refinancing and lease receivables, the Group's net debt was €119,027 thousand and therefore 2.5 times the adjusted pro forma EBITDA.

Calculation of net debt

€ thousand	2021	2020
Senior loans	79,979	45,376
Subordinated loans	49,696	-
Real-estate loans	5,942	6,180
Cash and cash equivalents*	(30,327)	(123,544)
Net debt from loans	**105,290**	**(71,988)**
Other financial liabilities	**5,316**	**2,704**
Lease refinancing	128,179	-
Lease receivables	(119,759)	-
Net debt from leasing	**8,420**	**-**
Net debt	**119,027**	**(69,284)**

* Cash and cash equivalents have been subtracted from the loans in this table for analysis purposes. There is no corresponding earmarking.

The Group had unused credit lines of € 21,966 thousand as of the reporting date.

The senior loans have different times to maturity lasting up until and including 2027 and the real-estate loans up until and including 2037. All loans are denominated in euros. Part of the collateralized loans bear fixed rates of interest, whereas the rest bear interest of EURIBOR plus a margin. If EURIBOR is negative, it is considered to be zero in line with the loan agreements for calculating the interest rate. In relation to the liabilities that already existed as at the end of the previous reporting period, there were no changes to the loan terms in this reporting period that required explanation.

As part of the purchase of Bikeleasing, loans totaling €78,066 thousand (as at November 30, 2021) were taken out to fund the acquisition. They involved the following components as at the reporting date, including the interest accrued for the period up to then:

- € 15,125 thousand vendor loan at the level of Brockhaus Technologies AG, and therefore fully attributable to the Group parent, BKHT
- €34,571 thousand acquisition loan at the level of the intermediate holding company BCM Erste Beteiligungs GmbH, 95.19% of which is attributable to BKHT
- €28,957 thousand acquisition loan at the level of the holding company BLS Beteiligungs GmbH, 52.27% of which is attributable to BKHT

The Group uses hedging transactions relating to a secondary part of the volume of interest rate risk attributable to future EURIBOR-linked interest payments.

Some of the Group's loan agreements contain arrangements on whose basis extensive early repayment obligations may be triggered. For example, the loans in question may be repayable immediately if the Group breaches contractual conditions. For example, the loans in question are subject to covenants that must be complied with by the subsidiaries funded by the loans.

Additionally, another shareholder at Palas has held a put option on its shares since the acquisition. The option entitles the other shareholder to sell its shares to the parent company in the course of 2024. The sale price must be calculated on the basis of a contractually defined valuation formula whose inputs include in particular the EBITDA and net financial debt of the subsidiary in 2022 and 2023. The corresponding obligation is presented under financial liabilities and provisions in the consolidated financial statements.

The deferred tax liabilities of €52,189 thousand relate almost entirely to the customer bases, basic technologies, and trademarks identified in the course of purchase price allocation for the acquisitions of subsidiaries (PPA assets) and will be reversed through profit or loss (but with no effect on cash flow) in the future as these PPA assets are amortized. There will be no cash outflows from this.

The parent company made a noncash capital increase of €13 million as part of the acquisition of Bikeleasing. This had not yet been completed as at the reporting date, for which reason the amount had to be recognized as an extraordinary equity item. The reclassification as subscribed capital and capital reserves took effect when the noncash capital increase was recorded in the commercial register as of February 10, 2022.

There are restrictions on the availability of the Group's capital in the form of restrictions on distributions by the subsidiaries resulting from the loan agreements. Cash and cash equivalents are held in separate accounts by the relevant Group companies. There are no cash-pooling arrangements.

The Group had cash and cash equivalents of € 5,437 thousand in a range of foreign currencies at the reporting date. These cash holdings are not hedged.

Because of its good liquidity position, the Group was able to discharge its payment obligations at all times in the reporting period. No liquidity shortfalls arose and none are foreseeable on the basis of the expected development of the Group's business.

Group equity as at the reporting date was €254,920 thousand, equal to 41.5% of total assets. This represents a decline of 31.4 percentage points compared with December 31, 2020, when equity amounted to €223,437 thousand or 72.9% of total assets. The most significant drivers of the drop in the equity ratio were the loans taken out as part of the acquisition of Bikeleasing.

The Executive Board defines the principles and goals of the Group's financial management. The primary goals are to safeguard liquidity and limit financial risks. Despite the current low interest rate level, our goal is therefore not to enter into any risks from the investment of the Group's cash funds. To ensure this, these funds are held in bank accounts at domestic financial institutions until they are needed to finance acquisitions.

There are no plans to pay dividends until further notice under Brockhaus Technologies' dividend policy. The aim is to make investments for the acquisition of high-margin, fast-growing technology companies.

Cash flow from operating activities was –€6,205 thousand, or –€2,037 thousand before paying income taxes, and resulted primarily from the operating earnings contributions made by subsidiaries. The cash flow from operating activities in the prior-year period was €5,686 thousand or €6,954 thousand before paying income taxes.

The **cash flow from investing activities** of –€143,958 thousand chiefly comprised outlays for the acquisition of Bikeleasing. Capital expenditure was made at an amount of €1,040 thousand for Environmental Technologies (primarily for internally produced demonstration devices and for operating and office equipment), €121 thousand for Security Technologies (primarily for IT infrastructure), €10 thousand for Financial Technologies, and €2 thousand for Central Functions.

The **cash flow from financing activities** came to €55,666 thousand and was driven mainly by borrowing for the acquisition of Bikeleasing. The extremely positive financing cash flow in the comparison period resulted from the capital increases made as part of the Brockhaus Technologies IPO in July 2020. It was reduced by loan repayments that were mostly related to loans for the acquisition of Palas and IHSE. Interest payments came to €1,797 thousand.

The **free cash flow** (cash flow from operating and investing activities adjusted for acquisitions, income taxes, costs of equity transactions and purchasing subsidiaries) was €10,552 thousand (previous year: €9,413 thousand).

Condensed statement of cash flows

€ thousand	2021	2020
Adjusted EBITDA (non-pro forma)	**21,841**	**12,270**
EBITDA adjustments	(21,422)	(3,938)
(Income taxes paid)/income tax refunds	(4,168)	(1,268)
Expenses for equity-settled share-based payment transactions	196	242
(Gain)/loss on sale of property, plant, and equipment	(42)	39
Other non-cash expenses/(income)	(8,673)	(378)
(Increase)/decrease in lease receivables	(1,469)	-
Increase/(decrease) in lease refinancing liabilities before interest rate effect	3,792	-
(Increase)/decrease in lease assets from operating leases	(1,467)	-
(Increase)/decrease in inventories, trade receivables, and other assets not attributable to investing or financing activities	(2,329)	(1,129)
Increase/(decrease) in trade payables and other liabilities not attributable to investing or financing activities	7,589	(157)
Increase/ (decrease) in other provisions	(55)	6
Cash flow from operating activities	**(6,205)**	**5,686**
Payments to acquire property, plant, and equipment	(1,173)	(954)
Proceeds from sale of property, plant, and equipment	91	25
Payments to acquire intangible assets	(435)	(95)
Capitalized development costs	(861)	(392)
Acquisition of subsidiaries, net of cash acquired	(141,619)	-
Interest received	40	10
Cash flow from investing activities	**(143,958)**	**(1,406)**
Proceeds from loans raised	63,400	-
Repayment of loans and other financial liabilities	(5,379)	(7,553)
Repayment of lease liabilities	(558)	(539)
Interest paid	(1,797)	(2,301)
Proceeds from issuance of shares	-	119,822
Cost of capital increases	-	(7,116)
Cash flow from financing activities	**55,666**	**102,312**
Change in cash and cash equivalents	**(94,497)**	**106,592**
Effect of exchange rate changes on cash and cash equivalents	285	(219)
Cash and cash equivalents at period start	123,544	17,171
Cash and cash equivalents at period end	29,331	123,544

Segment reporting

For organizational purposes, Brockhaus Technologies is composed of the following operating segments.

- **Financial Technologies:** Operation of a digital B2B finance platform for arranging, financing, and managing employee benefits through the employer, consisting of Bikeleasing
- **Security Technologies:** Development, production, and distribution of KVM (keyboard, video, and mouse) technology for high-security, reduced-latency, and loss-free data transmission in mission-critical applications, consisting of IHSE and kvm-tec
- **Environmental Technologies:** Development, production, and distribution of high-precision devices for measuring, characterizing, and generating of particles in the air, consisting of Palas

To enhance the information value of the segment reporting, the information is presented on a pro forma basis. It presents the Group as if Bikeleasing and kvm-tec had been part of Brockhaus Technologies since January 1, 2021. The comparison period has not been adjusted.

Bikeleasing and kvm-tec entered the Group's scope of consolidation in December 2021 upon their change of control to Brockhaus Technologies, for which reason they were only part of Brockhaus Technologies for a period of one month. Consequently, the relevant figures presented in the table below for 2021 would have been significantly lower in the Financial Technologies and Security Technologies segments. Non-pro forma values are designated as "as is."

Brockhaus Technologies' pro forma revenue before PPA has risen by 145.3% year over year. The reasons for this include the acquisitions of Bikeleasing and kvm-tec as well as a significant increase in revenue in the Environmental Technologies segment. These factors were counteracted by the delayed realization of sales in the Security Technologies segment due to COVID-19.

Operating segments

	Reportable segments									
	Financial Technologies		Security Technologies		Environmental Technologies		Central Functions and consolidation		Brockhaus Technologies	
€ thousand	2021 (pro forma)	2020*	2021 (pro forma)	2020 (as is)	2021	2020	2021	2020	2021 (pro forma)	2020 (as is)
Revenue before PPA	72,555	-	32,688	33,543	21,279	18,114	2	(76)	126,523	51,581
Revenue growth			(2.6%)		17.5%				145.3%	
Gross profit before PPA	51,243	-	22,502	24,680	17,095	13,874	166	-	91,005	38,555
Gross profit margin	70.6%	-	68.9%	73.6%	80.3%	76.6%			71.9%	74.7%
Adjusted EBITDA	39,765	-	8,315	11,778	7,328	6,283	(7,227)	(5,793)	48,180	12,270
Adjusted EBITDA margin	54.8%	-	25.5%	35.1%	34.4%	34.7%			38.1%	23.8%

* The Group did not yet have a Financial Technologies segment during the comparison period. The zero figures were not audited as part of the audit of the consolidated financial statements (unaudited).

Viewed by region, Brockhaus Technologies' pro forma revenue development (before PPA) was very successful with 222.2% growth (including Bikeleasing) in the European Economic Area and 26.3% growth in the Asia-Pacific region, although revenue did drop by 9.0% in the Americas. The increase in Europe is mainly attributable to the consolidation of Bikeleasing. The positive revenue development in the Asia-Pacific region can be attributed to Palas' activities in China, where it opened a sales office in 2020 and almost quintupled its sales in the last year. In the Americas, Palas' increased revenue was not able to make up for the declines experienced by IHSE in the region.

Financial Technologies

The only subject of the audit in the Financial Technologies operating segment was the performance measures for the 2021 fiscal year. The previous year's figures and therefore the comparison data for Bikeleasing were left unaudited. However, the management believes that the addressees of this report would benefit from seeing the Company's income measures in a comparison with previous years.

€ thousand	2021	2020*
Revenue before PPA	72,555	35,928
Revenue growth*	101.9%	
Gross profit before PPA	51,243	25,107
Gross profit margin	70.6%	69.9%
Adjusted EBITDA	39,765	18,655
Adjusted EBITDA margin	54.8%	51.9%

* The previous year's figures and therefore the comparison data for Bikeleasing were not covered by the audit of the consolidated financial statements.

Revenue before PPA increased by 101.9% in the Financial Technologies operating segment. The reasons for the increased revenue were, in particular, the rising level of familiarity with the company bicycle concept and the growing employee demand resulting from that as well as the strongly increased number of corporate customers on the Bikeleasing platform. Moreover, the 2021 revenue includes a one-time influence from the derecognition of a large portfolio of lease receivables in December 2021.

Bikeleasing successfully gained roughly 12,000 new corporate customers for its platform during the reporting period, increasing its customers by 57.0% to approximately 32,000 businesses now. Over the same period, the number of new contracts signed rose by 29.0% to over 80,000 new contracts.

Its gross profit margin of 70.6% was mainly on the same level as the previous year.

At 54.8%, the adjusted EBITDA margin was up on the previous year (51.9%). The main reason for this was the large, high-margin disposal of part of the lease receivables in 2021.

In response to the COVID-19 pandemic, Bikeleasing took measures to safeguard particularly strong hygiene levels and ensure compliance with physical distancing rules. In order to maintain business administration processes, all employees were required to work from home. Some employees stopped working from home either partly or fully during the reporting period.

Bicycle retailers were only slightly affected by lockdowns at the beginning of the year and were able to stay open if they took safety precautions. The overall bicycle market, and therefore implicitly Bikeleasing, profited from the COVID-19 pandemic. However, the supply constraints starting in the second quarter simultaneously resulted in a lower availability of bicycles and, in doing so, put a limit on even stronger sales growth.

Viewed on an as-is basis, Bikeleasing achieved revenue before PPA of €16,332 thousand when including the extraordinary effect from the disposal of lease receivables, a gross profit margin before PPA of 95.6%, and an adjusted EBITDA margin of 83.9% in the month of December.

Security Technologies

The Security Technologies segment remained impacted by the effects of the COVID-19 pandemic during the reporting period. It saw revenue decline as a result of customers delaying their projects and this decline could not be fully compensated by the pro forma consolidation of kvm-tec. However, the pro forma revenue of €32,688 thousand was only 2.6% down on the previous year's sales levels. The Security Technologies segment attained revenue of €28,924 thousand on an as-is basis, equivalent to a decline of 13.8%.

Project business in all regions over the last year remained strongly characterized by delayed customer orders and subsequent delays in issuing contracts and realizing sales, as it was partially impossible for IHSE to interact with its system integrators on site on customer premises due to the new lockdown and persistent travel and physical-distancing restrictions. However, planning continued for existing and new KVM projects, which was reflected in the steadily growing sales pipeline. Beyond that, IHSE did not see any extraordinary project interruptions or losses of major contracts. The competitive environment remained unchanged from previous years, too. As the year progressed and COVID-19-related travel and physical-distancing restrictions began to be withdrawn, project business was progressively reinvigorated. However, this vigor was dampened by component shortage that started growing stronger in the second quarter and by the associated supply constraints. This led to an increase in orders received and in the order backlog. Having grown by 24.7% (including kvm-tec), the order backlog was significantly larger at the end of the reporting period than it was on December 31, 2020. Further placements of orders, particularly for major infrastructure projects, were largely postponed to 2022.

The underlying growth drivers and associated potential for the Security Technologies segment still exist since trends such as digital transformation, connectivity, and cybersecurity are continuing to drive customer demand for technologies for high-security, loss-free, and reduced-latency data transmission. The more important data and the visualization of data become in the widest range of end markets, the more important high-performance data transmission will also become. This is also reflected in the larger sales pipeline, as announced projects are not disappearing but are merely being postponed.

Revenue by product group

€ thousand	2021	%	2020*	%
Digital KVM extenders	24,529	75.0%	22,219	66.2%
KVM matrix switches	6,470	19.8%	9,757	29.1%
VGA & USB extenders	248	0.8%	413	1.2%
Converters & peripherals	273	0.8%	259	0.8%
Installation accessories & power supply units	162	0.5%	171	0.5%
Other	1,007	3.1%	724	2.2%
Revenue	**32,688**	**100%**	**33,543**	**100%**

* The prior-year figures have not been adjusted.

With intensive sales activities in the form of webinars, digital campaigns, and virtual training, basic business involving smaller order volumes expanded further during the reporting period.

The network of partners for control room construction was cemented further by gaining multiple highly respected system integrators.

At 68.9%, the gross profit margin was lower than the prior-year period (73.6%). This is attributable firstly to the inclusion of kvm-tec in the pro forma analysis and secondly to the increased costs, disadvantageous shifts in the sales mix, and currency-related effects. The Security Technologies segment attained a gross profit margin of 71.3% on an as-is basis.

A smaller proportion of revenue was attributable to more profitable switches in the sales mix in the reporting period. Furthermore, there are individually negotiated discounts on list prices with all customers, with an increase in the share of revenue from customers with above-average discount recorded in the reporting period. The general shortage of electronic components and semiconductors also meant that higher material costs had to be paid than during the comparison period, especially in the second half of the year, and these costs could not be passed onto customers in full despite initial price increases. Nonetheless, product availability was largely safeguarded by implementing measures such as redesigns.

At 25.5%, the adjusted EBITDA margin was down on the previous year (35.1%). This is mainly attributable to the first-time consolidation of kvm-tec as well as the reduced gross profit margin and existing fixed costs. The Security Technologies segment attained an adjusted EBITDA margin of 27.8% on an as-is basis.

Personnel expenses at IHSE were able to be reduced slightly, though were still up year over year due to the consolidation of kvm-tec. Extensive cost-cutting measures had already been taken during the previous year. They continued being implemented consistently during the reporting period and made it possible for the Company to maintain high profitability despite the drop in sales compared to the pre-COVID-19 era.

The other operating expenses were burdened to a small extent by COVID-19-related expenditure on tests and hygiene initiatives and by nonrefundable cancellation costs for trade fairs and marketing.

In the wake of the COVID-19 pandemic, the measures already taken during the previous year were continued in order to maintain the segment's ability to take action and to conduct its business operations as smoothly as possible. The measures were reviewed in accordance with the applicable government regulations and adjusted as needed in line with the circumstances of the pandemic. For example, office employees were given the possibility of working from home during the reporting period and this option was utilized appropriately in line with infection rates. Production at the Oberteuringen headquarters had an organizational structure that safeguarded operational and production capabilities if infections did occur. Comparable measures were implemented at the foreign subsidiaries in Austria, Singapore, China, and the US, with separated teams working in the office and from home on a rotating basis.

Trade fairs and in-person events were largely canceled, which had negative impacts in particular on the acquisition of new customers. Contact with existing customers was maintained by using virtual communication formats.

In addition to active liquidity management, receivables management was also intensified in parts. It was, however, not fundamentally changed.

A small portion of the workforce was put on short-time working hours for a period of time during the reporting period. Lost income from mandatory self-isolation was also reimbursed to a small extent. The assistance programs cost only €43 thousand and did not have any significant impact on the results of operations, assets, or financial position.

IHSE made use of the possibility to defer income tax payments during the coronavirus crisis. As at the reporting date, these deferrals resulted in a tax liability (postponed due dates) of €1,713 thousand.

In the US, IHSE took advantage of a €213 thousand loan under that country's Paycheck Protection Program. This loan was forgiven in the fourth quarter of the year.

IHSE believes that the relevance of remote and physically separate working will increase substantially in the mid-term because of the COVID-19 pandemic and that this could result in a large number of future business opportunities.

Moreover, IHSE's acquisition of kvm-tec and its KVM-over-IP (KVMoIP) solutions mean that it is not only developing an adjoining field of business, but tapping into a global KVMoIP customer base with cross-selling potential for both customer bases.

IHSE is currently closely following the direct and indirect consequences of Russia's invasion on business and sales activities, especially in European markets. All business activities with Russia have been discontinued with immediate effect. Simultaneously, increases in military budgets may also allow investments in the modernization and development of control centers, surveillance rooms, and ground stations, among other things. This would produce additional business opportunities for IHSE.

Environmental Technologies

The Environmental Technologies segment's revenue has increased by 17.5% to €21,279 thousand. In the first half of the year, and in the first quarter in particular, it was able to increase its revenue with test rigs for testing the effectiveness of respiratory masks thanks to the persistently high volume of business. With the gradual reversal of COVID-19 restrictions as the year progressed, Palas recorded a progressive decline in revenue from conventional products, which were mainly certified fine-dust measurement devices for the regulated EU measurement network. A large number of the projects and invitations to tender in this area had been delayed during the previous year due to lockdowns and physical-distancing rules. In the third quarter, revenue from certified fine-dust devices was more than able to compensate for the significant drop in sales of test rigs. Revenue in the fourth quarter was almost at the same level as the year before.

Revenue by product group

€ thousand	2021	%	2020	%
Fine-dust measurement devices	9,837	46.2%	6,832	37.7%
Test rigs	4,070	19.1%	5,270	29.1%
Aerosol generators, spectrometers, sensors	4,086	19.2%	3,228	17.8%
Nanoparticle measuring devices	857	4.0%	974	5.4%
Other	2,429	11.4%	1,810	10.0%
Revenue	**21,279**	**100%**	**18,114**	**100%**

On a regional basis, revenue increased most strongly in the Asia-Pacific region, where it grew by 124.6% for a figure of €4,345 thousand. This strong development is due in particular to Palas' establishment of a Shanghai-based subsidiary in 2020 in order to serve the market there with a local sales team. Revenue in the Americas region rose by 25.8% to €2,456 thousand during the reporting period, while revenue in Europe increased slightly by 1.8% to €14,478 thousand.

At 80.3% the gross profit margin was higher than the prior-year period (76.6%). The large positive change in finished products and work in progress that resulted from the stockpiling of critical components in combination with the increase in own work capitalized was more than able to compensate for the rise in the cost of materials.

At 34.4%, the adjusted EBITDA margin was slightly down on the previous year (34.7%). The effects causing the increased revenue and gross profit margin were largely able to compensate for the costs of expanding the organization as a result of the strong growth. They covered the expansion of production and sales capacities.

In response to the COVID-19 pandemic, Palas took measures to safeguard particularly strong hygiene levels and ensure compliance with physical distancing rules. Some employees in office-based roles returned from working from home during the reporting period. To ensure continued production even with the potential disruption to supply chains, Palas now endeavors to keep a stockpile of 12 to 24 months' worth of mission-critical parts. A corresponding procurement process has been arranged. Production and delivery capabilities were largely maintained. There were no fundamental changes to receivables, liquidity, or risk management.

In relation to marketing, there were cancellations – especially of trade fair exhibitions and in-person events – in the first half of the year, except in China. Important industry events were postponed to a later time of the year or even to the following year. This had a negative impact on the acquisition of new customers. With COVID-19 restrictions progressively being rescinded, an increasing number of on-site visits to prospective and existing customers were made and more physical events took place, such as the Air Filtration Seminar in September, to complement the webinar offering.

Palas assumes that the COVID-19 pandemic has noticeably increased public interest in air quality and aerosols and that this could produce significant business opportunities in the future. However, it also expects continued difficulty in procuring numerous components in the next fiscal year. The unclear circumstances make it impossible to guarantee exact delivery dates to customers for 2022. Nevertheless, there are no expectations of lost orders. Production can adapt to the circumstances flexibly and there is communication with suppliers almost every day.

Palas expects that future regulatory action to reduce fine-dust pollution in indoor and outdoor spaces and the acquisition of further certification in various regions, especially China, will have positive effects for business development. Furthermore, Palas expects over the medium term that regulations will become stricter for the measurement of even smaller nanoparticles, which have so far not been subject to any measurement requirements in the EU. Palas already has a foothold in this segment with a fully developed product on the market.

China's Ministry of Ecology and Environment published a revised national environmental standard in early 2022 which now allows optical sensor technologies, such as Palas' products, to be used for regulatory air pollution control. The Palas fine-dust monitors in the Fidas product line are now already undergoing the necessary certification process according to the environmental standard. For Palas, this could lead to significant business opportunities in China in the future.

With the development of Fidas Smart 100 and AQ Guard Smart to market maturity, Palas has brought two devices for measuring outdoor air quality which feature optional gas sensors to market maturity. Thanks to their low price, they are also especially optimized for unregulated applications, such as monitoring air quality at subway stations, building sites, industrial areas, landfill sites, or opencast mining. The proprietary MyAtmosphere data platform developed in parallel enables the measurement results of the devices to be viewed through the cloud and visualized and archived in real time on the website with integrated map data. This makes it possible to manage the results.

Central Functions (no reporting segment under IFRS)

The Central Functions recorded an adjusted-EBITDA decrease of €5,793 thousand, bringing it to –€7,227 thousand. This was mainly due to higher personnel expenses and costs for auditing and preparing the financial statements, as well as higher due diligence activity compared with the prior-year period.

These activities were characterized by the search for further acquisition targets and to a significant degree by the extensive due diligence for Bikeleasing, particularly as of March. Starting in late summer, they were additionally marked by due-diligence work for kvm-tec. The associated expenses are not included in adjusted EBITDA because they relate to the costs for the acquisition of subsidiaries. However, due-diligence costs in association with acquisition targets that are ultimately not purchased continue to be included in the costs. Further information on these expenses is contained in the consolidated financial statements. The adjusted EBITDA of the Central Functions also includes further expenses for the publicity obligations that are connected to the stock market listing.

Brockhaus Technologies focuses on acquiring high-margin, fast-growing technology and innovation leaders with B2B business models in the German Mittelstand. As part of this focus, companies that performed very well financially in the coronavirus crisis and exhibit a high degree of resilience to macroeconomic shocks in addition to their growth prospects were added to the shortlist over the last year. However, competition for these companies that are available for sale has become even more intense. This is also reflected in purchase price expectations because the valuations of some companies that were able to document their resistance to crisis in the preceding months have even gained a purchase price premium compared with the precrisis levels.

The ability to generate proprietary transaction situations by means of active searches is generally proving to be challenging. In order to actively leverage this deal-sourcing channel, BKHT Group uses a software solution that enables automated searches for companies. The software can search public databases and corporate websites, news sites, and social-media channels and provide information filtered in accordance with user specifications. The software was originally designed for B2B sales. Brockhaus Technologies was able to repurpose the application for its own needs, which is an entirely innovative application for the developer. Using this solution also increases the degree of automation of Brockhaus Technologies' deal-sourcing activities.

Overall assessment of the Group's economic position

Brockhaus Technologies sees itself as a fast-growing group of technology companies which acquires high-margin leaders in technology and innovation, helping them to grow organically across product boundaries and national borders. Given this background, the Company believes that its two new acquisitions are very satisfying and indicative of the Company's growth trajectory.

The result in 2021, which involved pro forma revenue before PPA rising by 145.3% to €126.5 million and an adjusted EBITDA margin of 38.1%, is characteristic of Brockhaus Technologies even in a difficult economy, particularly for IHSE, thanks to its consistent selection of new acquisitions and the continually high-margin performance of its subsidiaries.

The Executive Board of Brockhaus Technologies deems the Group's business development and economic situation in the 2021 reporting period to be positive, especially in light of the successful closing of the Bikeleasing acquisition.

Economic development at Brockhaus Technologies AG

The Group parent Brockhaus Technologies AG (BKHT) is managed by an Executive Board with two members. Marco Brockhaus is the Chief Executive Officer and Chairman of the Executive Board, and Dr. Marcel Wilhelm is Chief Operating Officer and Legal Counsel. The Group parent's head count, including the members of the Executive Board, came to 11 (2020: 10). The employees report directly to the Executive Board. They are employed by BKHT and work at its head office.

BKHT's annual financial statements are prepared under Germany's GAAP (HGB) in accordance with German principles of proper accounting. The table on the following page shows a condensed version of these annual financial statements.

The reporting period's revenue of €361 thousand (2020: €0 thousand) is attributable to income from service level agreements concluded during the reporting period. Personnel expenses rose from €3,622 thousand in the previous year to €3,796 thousand during the reporting period. Other operating income increased from €23 thousand to €9,516 thousand and mainly included income from the recovery of costs from affiliated companies. Other operating expenses rose from €12,781 thousand to €18,184 thousand. The rise is principally attributable to one-time expenses in connection with the acquisition of Bikeleasing.

Overall, the net loss for the fiscal year was €12,030 thousand, compared with €16,151 thousand in the prior-year comparison period. The significant reduction of the net loss that was forecast in the 2020 Annual Report has been achieved.

The Company's financial assets amounted to €225,398 thousand after €117,205 thousand in the previous year and mainly comprise the investments in subsidiary companies. The year-over-year increase is primarily the result of the acquisition of Bikeleasing. There also existed intercompany loans as at the reporting date at an amount of €7,223 thousand (previous year: €3,184 thousand).

BKHT's cash and cash equivalents as at December 31, 2021, amounted to €7,225 thousand (previous year: €108,561 thousand). The outflow results from the acquisition of Bikeleasing. There are no liabilities to banks.

When accounting for the net loss, equity reduced to €211,379 thousand compared to €223,409 thousand in the year before.

Provisions increased from €1,906 thousand to €4,123 thousand. The change is due to personnel- and remuneration-related provisions and provisions for accounting expenses as well as to a provision for commission on value added that was agreed under the contract for the Bikeleasing transaction.

The liabilities were €18,083 thousand after €568 thousand in the comparison period and mainly included the €15,125 thousand vendor loan granted under the Bikeleasing transaction along with trade payables.

The German GAAP net loss for the fiscal year of €12,030 thousand of BKHT is carried forward to new account together with the accumulated losses of €22,998 thousand brought forward from the previous year.

Income statement (German GAAP)

€ thousand	2021	2020
Revenue	361	0
Other operating income	9,516	23
Personnel expenses	(3,796)	(3,622)
Amortization of intangible assets and depreciation of property, plant, and equipment	(29)	(16)
Other operating expenses	(18,184)	(12,781)
Interest and similar income	228	77
Interest and similar expenses	(126)	(0)
Earnings after tax	(12,030)	(16,319)
Other taxes	0	169
Net loss for the fiscal year	**(12,030)**	**(16,151)**

Balance sheet (German GAAP)

€ thousand	31 Dec. 2021	31 Dec. 2020
Intangible assets	90	1
Property, plant, and equipment	9	16
Financial assets	225,398	117,205
Noncurrent assets	**225,496**	**117,222**
Receivables and other assets	727	-
Cash and bank balances	7,225	108,561
Current assets	**7,952**	**108,561**
Prepaid expenses	**137**	**99**
Assets	**233,585**	**225,883**
Subscribed capital	10,387	10,387
Capital reserves	236,021	236,021
Net accumulated losses	(35,028)	(22,998)
Equity	**211,379**	**223,409**
Provisions	**4,123**	**1,906**
Liabilities	**18,083**	**568**
Equity and liabilities	**233,585**	**225,883**

Events after the reporting period

Please refer to Note 42 to the consolidated financial statements for disclosures about significant events after December 31, 2021.

Report on expected developments

In January, the International Monetary Fund (IMF) forecast growth of 4.4% for the whole economy in 2022 compared to growth of 5.9% in the year before. The reasons for the smaller estimate include the reappearance of restrictions due to the spread of the Omicron COVID-19 variant at the beginning of the year as well as the stronger inflation expected because of rising energy prices and supply disruptions. In April, the IMF lowered its forecast for the global economy to 3.6% growth due to the impacts of the Russian invasion on the economy. The causes of this further reduction are the rising prices of raw materials, the increased rate of inflation, the deterioration of the business climate, and the challenging terms and conditions for financing as a result of the war. The following overview shows the expected growth rates of the most important markets for Brockhaus Technologies according to the “World Economic Outlook Update – April 2022” issued by the International Monetary Fund.

Gross domestic product	Year-over-year change in 2022
Worldwide	3.6%
Eurozone	2.8%
Germany	2.1%
US	3.7%
China	4.4%

Like the IMF, the management of Brockhaus Technologies AG rates its expectations as being extraordinarily uncertain due to the current economic and political environment.

Brockhaus Technologies expects that the 2022 fiscal year will continue to be marked by the impacts of the COVID-19 pandemic and by the impacts of Russia’s invasion of Ukraine, especially by any further escalation of it, a looming energy shortage, supply chain constraints, associated delays, and price increases based on availability and inflation. These impacts add an extra degree of uncertainty to business planning.

Management expects to complete one or several acquisitions during the 2022 fiscal year. The Group’s earnings figures have nonetheless been planned based on the assumption that there will be no change in the scope of consolidation. The reason for this approach is the difficulty in predicting the nature and scope of future acquisitions. We do not believe that any estimates in this respect are sufficiently reliable.

Brockhaus Technologies expects revenue before PPA between €140 million and €150 million in the 2022 fiscal year, which would represent growth between 11% and 19% compared to the pro forma revenue in 2021.

This expectation is underpinned by an assumption that the continuous acquisition of further corporate customers and the still-rising demand among employees for company bicycles will continue in the Financial Technologies segment during the reporting period. This is combined with a trend toward more outdoor activities as well as greater environmental awareness, political and trade union support for green transportation. Rising fuel prices might also have a positive effect on demand, although this will be conditional on bicycle availability not falling below the previous year’s level. Potential changes in consumer behavior due to higher inflation or interest rates have not been incorporated into the forecast either.

We expect that business and sales activities in the regions relevant to the Security Technologies segment will normalize given the relaxations being introduced to travel and physical-distancing restrictions. However, this will be conditional on critical components, particularly chips, being available.

In the Environmental Technologies segment, the global demand for fine-dust measurement devices for environmental monitoring and for industry and science should continue to pick up and, when viewing the year as a whole, should more than compensate for the significantly reduction of revenue from test rigs for testing respiratory-mask effectiveness already seen in the second half of 2021. This will be dependent on completing the necessary international certification processes as planned. Key growth regions include the European and American economies as well as the Asia-Pacific region in particular, where Palas established a subsidiary based in Shanghai, China in 2020. This forecast is also conditional on travel and physical-distancing restrictions being largely rescinded and on critical components being available.

The Group is planning for an adjusted EBITDA margin of 35%, down on the adjusted pro forma EBITDA margin of 38.1% during the reporting period. The reasons for this are the lack of the one-time extraordinary effect that had a positive influence on the Bikeleasing EBITDA margin in the 2021 fiscal year as well as the expected increases in purchase prices.

With regard to the financial figures of Brockhaus Technologies AG at the standalone entity level (German GAAP), we are expecting a significant lower net loss for the year. This estimate is based on lower due-diligence costs and lower costs for acquiring subsidiaries.

Disclaimer

This Annual Report, and in particular the report on expected developments, contain forward-looking statements that are based on the management’s current estimation of the future development of the market environment and the future performance of the Group. This estimation was made on the basis of all information available at the time when this Annual Report was prepared. Forward-looking statements are subject to uncertainties – as described in the Risk and opportunity report within our Management Report – that are beyond the Group’s control. This relates in particular to the ongoing COVID-19 pandemic, its progression, and the macroeconomic impacts from Russia’s invasion of Ukraine, especially by any further escalation of it, a looming energy shortage, supply chain constraints, associated delays, and price increases based on availability and inflation. If the assumptions on which these expected developments are based are not accurate, or if the risks or opportunities described were to materialize, the actual results may differ significantly from the statements made in the Forecast Report. If the underlying information changes in such a way that a significant deviation from the forecast is more likely than not, Brockhaus Technologies will provide notification about this in accordance with the statutory disclosure requirements.

Risk and opportunity report

Risk management system

Risks and opportunities relate to potential future developments and events that could result in a significant negative or positive deviation from Brockhaus Technologies' goals. Brockhaus Technologies is exposed to numerous risks in its business activities. The Group's goal is not to avoid risks in general, but to carefully weigh the opportunities and risks associated with its decisions and business activities on the basis of appropriate information. The aim is to establish an optimum balance between growth and profitability on the one hand and the associated risks on the other. Accordingly, opportunities that arise to increase enterprise value should be leveraged and risks should only be entered into to the extent that they are acceptable to the Group. A reasonable level of business risks must be accepted, but they must be managed by effective risk management that deploys suitable measures. Measures can be implemented to limit risks to an acceptable level, transfer them to third parties in part or in full, or avoid them. All employees are expected to deal responsibly with risks within the scope of their areas of responsibility. The risk policy principles and risk strategy are coordinated with and closely linked to the corporate strategy and the corporate goals. Risks to Brockhaus Technologies or individual subsidiaries as a going concern must be avoided in any case. The risks and opportunities presented in the following also apply largely to BKHT.

The concept, organization, and functions of BKHT's risk management system are defined by the Executive Board and the Supervisory Board. Documentation is provided in the form of a risk management system manual (RMS Manual). The risk management requirements are regularly amended to reflect changes in the legal framework and are subject to a continuous improvement process.

The Finance department coordinates the implementation and enhancement of the risk management system and the Supervisory Board oversees its effectiveness, in particular to establish whether the early risk warning system is generally suitable for identifying risks and developments that could jeopardize the Group at an early stage so that suitable countermeasures can be taken without undue delay.

The risk management system consists of measures that enable Brockhaus Technologies to identify, assess, and monitor material risks to the attainment of the Company's objectives at an early stage. The scope of consolidation for the Group's risks is the same as the scope of consolidation for the consolidated financial statements.

The Group significantly expanded its risk management system during the reporting period. The background to this is the increased requirements applied to early risk warning systems by the new version of Auditing Standard 340 issued by the Institut der Wirtschaftsprüfer in Deutschland e.V. (IDW AuS 340, as amended). The new requirements must be applied for fiscal years beginning after December 31, 2020. New mandatory components include in particular the definition and quantification of risk-bearing capacity and the systematic aggregation of risks. Risk-bearing capacity is defined as the maximum risk exposure that a company can bear without jeopardizing its continued existence. Aggregation serves to provide reliable information about whether or not any identified risk poses a threat to the company as a going concern, not only individually but also in combination with other risks.

A measure of the Group's risk-bearing capacity was defined in order to meet the new requirements. A Monte Carlo simulation (stochastic method) was performed to aggregate risks. It is based on the risks identified and quantified in the course of the Group risk inventory. To ensure greater meaningfulness when simulating risks as random events, the quantification of risks was expanded in the reporting period. In the past fiscal year, this was done by estimating a probability of occurrence and an extent of any loss if the risk occurs. The assessment of the extent of loss was extended in the reporting period by an estimate of the most likely loss as well as the lowest and highest loss that can reasonably be expected. As well as a random simulation of the occurrence of a risk, this allows an equally random loss amount with the expected value of the most likely loss, but additionally with the possibility of a lower or higher loss incurred. Any identified interdependencies between individual risks were also taken into account.

The outcome of the aggregation model is a distribution of a large number of total extents of potential loss, each with a different frequency in a relevant loss interval. Based on these data points, the interactions between the risks can be identified on a Group-wide basis. For example, confidence levels can be used to establish the probability that the sum of all risks occurring will not fall below a certain loss value.

The data used in the aggregation model is based predominantly on the probabilities of occurrence and extents of loss reported by the relevant Group companies. These are based in part on estimates that can only be supported to a limited extent by historical or other data. Individual judgment therefore significantly affects the overall outcome of risk aggregation.

The aggregation model reflects all quantifiable risks reported across the Group. Risks not covered by the aggregation model include in particular compliance risks, whose impact cannot be quantified reliably.

Despite the limitations described above, we consider the results of the aggregation model to be suitable overall for allowing us to make an appropriate assessment of the risks.

Whereas overall responsibility for risk management lies with the Executive Board, the subsidiaries are responsible for the operational management of the individual risks relevant to them. This includes the early identification, assessment, and definition of suitable measures, the management and monitoring of such measures, and appropriate documentation and reporting. The RMS Manual is intended to ensure a uniform approach and binding applicability in the Group.

All material risks are assessed using defined classes (1 to 5) for probability of occurrence and the impact on the Group's objectives. The probability of occurrence refers to the estimated probability of a risk occurring during the time horizon under observation and is expressed as a percentage. The probability of occurrence (P) is determined by selecting one of the defined probability intervals, as shown in the following overview.

Value	Class and probability interval
75% < P	5 Highly probable
50% < P <= 75%	4 Probable
25% < P <= 50%	3 Possible
10% < P <= 25%	2 Unlikely
P <= 10%	1 Very unlikely

The assessment of the loss when a risk occurs can be either quantitative, which is the preferred method, or qualitative if risks cannot be quantified, or qualitative aspects predominate (e.g., for compliance risk). Classification is also based on classes with values of 1 to 5. The quantitative classes are based on an estimated loss in euros relating to the potential impact on the Group's results of operations, net assets, and financial position. The qualitative classes are based on criteria that consider damage to the Group's reputation or the impact of any prosecution, with a particular focus on compliance-related risk.

Impact	Assessment
5 Very high	Going concern risks with a negative impact on business activities, results of operations, net assets, and financial position as well as reputation >=€10 million per individual risk
4 High	Significant negative impact on business activities, results of operations, net assets, and financial position as well as reputation €1 – €10 million per individual risk
3 Moderate	Some negative impact on business activities, results of operations, net assets, and financial position as well as reputation €100 – €1,000 thousand per individual risk
2 Low	Limited negative impact on business activities, results of operations, net assets, and financial position as well as reputation €10 – €100 thousand per individual risk
1 Insignificant	Immaterial negative impact on business activities, results of operations, net assets, and financial position as well as reputation <€10 thousand per individual risk

All identified risks are assigned a risk score, based on the assessment of probability of occurrence and impact. This corresponds to the sum of the class for probability of occurrence and the class for impact if the loss occurs. The probability class is weighted at 30% and the impact class at 70%.

The following overview provides a color coding for the risk scores. It corresponds to the visualization in the risk matrix.

Color code	Risk score
	5 Going-concern risk
	4 Very high risk
	3 High risk
	2 Moderate risk
	1 Low risk

The risk matrix graphically presents the classification of the identified risks and is used to prioritize the most significant risks and enhance transparency across the Group's entire risk portfolio. The classification presented here corresponds to the net risk, i.e., the expected effect of control measures has been taken into account in the quantification. This systematic and standardized risk analysis and assessment is conducted twice a year. It is the risk officers' responsibility to continuously monitor all changing risk situations within their departments or their company. In addition to regular risk reporting, a process has been implemented to ensure prompt reporting of newly emerging risks (ad hoc risk reports).

Risk matrix

Amount of loss if event occurs					
>= €10 million	Economy Technology Liquidity	Due diligence			
<€10 million	Growth obstacles Compliance Interest rates Taxes	Customer concentration IT	Suppliers Key management		COVID-19
<€1 million	Acquisition finance Financial planning Covenants Credit risk		Deal sourcing		
<€100 thousand	Foreign currency				
<€10 thousand					
	<=10%	<=25%	<=50%	<=75%	>75%
	Probability of occurrence				

Risks

Brockhaus Technologies classifies its risks according to the designations markets/technology, new acquisitions, business operations, compliance, and finance.

Market/technology risks

Economy | The general economic environment and other economic and political conditions significantly impact Brockhaus Technologies' markets. For example, the Financial Technologies segment is driven by the increasing attractiveness of bicycles and e-bikes as a means of transport as well as by support for company bicycle leasing through tax-privileged deferred compensation. Against the backdrop of long-term efforts towards sustainability, it is highly unlikely that these benefits will be discontinued, but if it were to happen, it would have a substantial adverse effect on the Group. The Security Technologies segment depends on investments by industry and the public sector in the construction and renewal of highly sophisticated IT infrastructure. The Environmental Technologies segment is driven primarily by global legislation relating to air quality and the measurement and regulation of fine dust pollution, among other factors. As a result, any departure from expected developments in the macroeconomic environment can result in both opportunities and risks in terms of demand for the Group's products.

As a general rule, diversification due to the diverse range of products and the international presence of the operating segments serves to mitigate economic risks to a certain extent. However, the cyclical natures of the business models are not diametrically counterbalanced, which means that there is still a significant dependence on economic cycles.

In particular, there is a high level of uncertainty internationally in terms of growing trade barriers, for example due to stricter, additional, or entirely new protectionist policies such as tariffs or due to circumstances such as the Russian invasion of Ukraine and the potential fallout from it. These trends may negatively impact the global economic environment and hence lead to lower demand for Brockhaus Technologies' products. They therefore constitute a significant risk. By contrast, they may also result in opportunities for the Group because – as European manufacturers of high-tech products – Palas and IHSE can supply sensitive sectors in both the US and China. In part, this may represent a competitive advantage compared with local providers. Potential risks from the Russian invasion that cannot yet be foreseen include, for example, the breakdown of supply chains, high energy prices, and the interruption of gas supply.

COVID-19 | The COVID-19 pandemic further curbed global economic activity in the reporting period. This led to substantial project postponements by the Company's customers in the Security Technologies segment. There is a risk that the improvement in macroeconomic conditions will be slower and/or less pronounced than expected. In addition, further outbreaks and/or variants of the virus could lead to new restrictions on travel and contact. This would adversely affect the Group's results of operations, net assets, and financial position.

Customer concentration | Because of the niche strategy in the Security Technologies and Environmental Technologies segments, they have significant customer concentrations. The loss or failure of one or more key accounts would therefore adversely affect the revenue and hence Brockhaus Technologies' results of operations, net assets, and financial position. To mitigate this risk, the Group has close, long-standing customer relationships and tries to avoid excessive customer concentrations wherever possible.

Technology | The success of the Group companies is rooted in their focus on technologies and innovative products that follow sustainable global trends such as digital transformation, automation, cybersecurity, or sustainability. Changes in customer preferences, new or substitutive technologies, or the emergence of industry standards and trends with negative consequences could make the Group's existing products obsolete or less attractive. To rule out this risk, the Group makes targeted investments in research and development.

Suppliers | Various disruptive factors such as financial, capacity, or procurement-related bottlenecks at the Group's suppliers could lead to delays or even the collapse of supply chains. This would result in the impairment of Brockhaus Technologies' production and hence its revenue generation and would negatively impact the Group's results of operations, net assets, and financial position. In order to mitigate this risk, the Group companies plan their future requirements in advance wherever possible and adjust their ordering behavior accordingly when circumstances dictate. Because of the current tense supply situation worldwide, particularly relating to semiconductor products, as well as other components and bicycles, we rate this risk as very high.

Risks from new acquisitions

Deal sourcing | Brockhaus Technologies' business model is based on its ability to identify companies as suitable acquisition targets and acquire them on attractive terms. If the Group is not able to conclude such acquisitions, this may adversely affect its future growth and the efficiency of the allocation of its cash resources. To minimize this risk, Brockhaus Technologies actively manages its network of sector experts, entrepreneurs, managers, and consultants to give it access to potential acquisition targets. It also conducts its own prospecting activities, for example by attending trade fairs and systematically monitoring company awards.

Acquisition finance | In many cases, acquiring companies is associated with a substantial need for finance. Transaction processes could fail if Brockhaus Technologies is not able to obtain this through equity or debt within a reasonable time and on acceptable terms. To prevent such a situation, the Group has numerous potential financing partners, which include debt funds and coinvestors in addition to banks. The initial listing in the Prime Standard quality segment also represents a source of finance through capital increases.

Due diligence | It is possible that the Group might inaccurately estimate the value and future potential of target companies and that they will generate lower revenue, earnings, and cash flows than assumed before the acquisition. This may happen if risks relating to the target company and/or its markets are not communicated or not identified. To reduce the possibility of this risk occurring, the Group conducts comprehensive due diligence before each acquisition, involving experienced specialist advisers. Nevertheless, it cannot be ruled out that material risks are not identified or not accurately assessed in the course of due diligence.

Operational risks

Obstacles to growth | Because the subsidiaries are relatively small organizations with ambitious growth targets, there is a risk that their management is not able to successfully address promising markets and customers, implement necessary product developments, and develop scalable internal structures in good time. The Group manages this risk using proven tools such as the 100-day plan in which the initial initiatives resulting from the due diligence are documented, scheduled, and implemented following the acquisition. There are also processes for strategic planning and stringent financial reporting. Furthermore, the members of the BKHT team have extensive experience in developing scalable structures in growing companies.

Key management | The Group's commercial success is critically sustained and driven by its ability to recruit, grow, and retain experienced, talented managers, and staff. There is a risk of inappropriate appointments when management structures are expanded to enable further expansion. If Brockhaus Technologies is unable to suitably fill future and existing positions and retain existing managers and staff, this could materially adversely affect commercial success and hence the Group's results of operations, net assets, and financial position. To counter this risk, remuneration structures in line with market conditions are in place in the Group, together with a pronounced focus on equity components and long-term incentives. These consist of both direct investments at the level of subsidiaries and investments in BKHT in the form of shares and stock options.

IT | The Group's business processes are critically dependent on information technology (IT). As well as the opportunity to leverage operational efficiencies, this also entails risks. The Group's technical infrastructure could be impaired or fail due to accidents, disasters, technical failures, obsolete technology, or cyberattacks. There is also a risk of unauthorized access by external parties to confidential business or personal data. Brockhaus Technologies has security systems that meet market standards in place to safeguard the availability, integrity, and confidentiality of its data.

Compliance risks

There are numerous legal risks from the scope of statutory and regulatory requirements, as well as the large number of contractual relationships and agreements that the Group enters into regularly. These relate in particular to the areas of patent, capital market, and company law. These risks are reduced to a moderate level through extensive cooperation with experienced prominent law firms. The Group works with several law firms to avoid dependencies resulting from outsourcing and ensure an appropriate level of technical specialization.

Other compliance risks that may result from breaching laws and regulations, such as capital market or data protection rules, are identified and monitored by the Legal Counsel. Brockhaus Technologies has developed a code of conduct that contains essential guidance for correct behavior. There are also training events on specialized topics, such as the proper handling of inside information. Compliance risks are continuously monitored and appropriate measures are taken if risks materialize.

Financial risks

Financial planning | Brockhaus Technologies' financial planning is based on assumptions made by the management of the parent company and the subsidiaries. These assumptions relate to business performance and other external factors that are, in part, very difficult to predict or cannot be influenced by the Group and to measures, some of which still have to be implemented. There is therefore a risk that the assumptions underlying the planning could be incomplete or incorrect and that this may result in divergence between projected and actual earnings. There could also be opportunities if actual developments diverge positively from projections.

Covenants | Some of the Group companies' loan agreements contain arrangements on whose basis extensive early repayment obligations may be triggered. For example, the loans in question are repayable immediately if subsidiaries breach financial covenants. If one or more such cases were to arise, this would adversely affect the Group's liquidity. To manage this risk, the Group has established a comprehensive financial reporting system.

Interest rates | Any increase in interest rates could impact the future development of the Group for a variety of reasons and adversely affect its results of operations, net assets, and financial position. On the one hand, rising interest rates would increase the Group's financing costs, but would also lead to higher acquisition financing costs for acquisitions as well as rising refinancing costs of new leasing business. To the extent possible and commercially reasonable, Brockhaus Technologies enters into hedges to mitigate interest rate risk. However, such hedges can only cover existing financing volumes, not those that may be necessary in the future. In addition, rising interest rates would increase the cost of capital in the context of impairment tests. This may lead to impairment losses, which would have a negative impact on the results of operations, net assets, and financial position.

Foreign currencies | Brockhaus Technologies executes certain transactions in foreign currencies, giving rise to foreign currency risk. The Group hedges foreign currency risk from its order backlog and from receivables and liabilities where this appears to be economically expedient. The inclusion of subsidiaries from countries outside the eurozone in the consolidated financial statements results in risks from currency translation. As a general principle, the Group does not hedge these risks using derivatives.

Credit risk | It is possible that customers of Brockhaus Technologies will be unable to settle their liabilities. This risk is mitigated by a stringent receivables management process and by agreeing advance payments in some cases. To the extent economically expedient, trade credit insurance is taken out to reduce the amount of potential credit losses.

Liquidity | Liquidity risk describes the risk that Brockhaus Technologies might not be able to meet its financial obligations to a sufficient extent. To safeguard liquidity, changes in liquidity are continuously monitored as part of detailed financial planning and financial reporting. For external financing purposes, the opportunities available on the financial markets are continuously monitored in order to ensure sufficient flexibility.

Taxes | Brockhaus Technologies is subject to income taxes and other taxes in various jurisdictions. Considerable discretion and significant estimates are needed to calculate obligations arising from income tax, value added tax, and other taxes, including withholding taxes. In the case of various transactions and calculations in the course of the Group's ordinary business activities, for example in the case of intercompany transactions and transfer prices across jurisdictions and transactions with special documentation requirements, the ultimate tax calculations or the timing of tax effects are uncertain. Brockhaus Technologies is subject to regular audits by tax authorities which may arrive at different results concerning tax estimates or the Group's discretionary judgment. Although Brockhaus Technologies believes that its tax estimates are appropriate, the final assessment of such tax audits may differ from the provisions and accruals. As a result, additional tax liabilities, interest, penalties, or regulatory, administrative, or other sanctions may be incurred.

Opportunities

In the management's opinion, Brockhaus Technologies has a large range of opportunities. We believe a pivotal task of management is to identify opportunities at an early stage as they arise and to be in a position to exploit them so as to increase enterprise value. The operating segments have strong cash flows that – in conjunction with the asset-light business models – enable them to finance growth investments from their own resources.

In addition to the risks already described, the pandemic and its consequences may also result in opportunities for the Group. At Palas, these materialized partly in the form of revenue from new products for mask testing that was not foreseeable before the SARS-CoV-2 outbreak. Both the Executive Board of BKHT and Palas' management assume that the pandemic will result in a sustainable rise in public interest in air quality in very many spheres of life. Because aerosols are highly relevant as a transmission route and they are also Palas' core competency, significant new business opportunities may arise in the future. In the medium term, IHSE could also benefit substantially from the changed conditions resulting from the pandemic. For example, there could be increased structural requirements relating to remote work. In particular in areas with very high requirements for fail-safe operation, bandwidth, and transmission speed, this could drive up demand for IHSE solutions.

Regardless of this, the business in the existing Environmental Technologies and Security Technologies segments has opportunities to perform better than planned in markets with strong growth drivers. Environmental Technologies can benefit from a general increase in public awareness of the issue of air quality and aerosols. Customer demand in the Security Technologies segment is driven by a high level of requirements for secure, fast data transmission. Continuously increasing data volumes and the need to visualize them, as well as the requirement to protect this data from unintended access, can offer substantial business opportunities in the future.

The Financial Technologies segment could benefit from an accelerated trend toward sustainable mobility through bicycles and e-bikes. Higher inflation – related to fossil fuels, among other things – may contribute to an increased avoidance of travel using cars and thus support Bikeleasing's business volume. The expansion of the product portfolio, e.g., with smartphones, tablets, etc., into a fintech platform for leasing employee benefits may also open up substantial business opportunities.

To sum up, there are significant opportunities for Brockhaus Technologies from the activities of its subsidiaries, as well as from further acquisitions in the future.

Overall assessment of risks and opportunities

In the opinion of the Executive Board, market/technology risks have the most significant impact on Brockhaus Technologies. This assessment is based in particular on the continued curbs on global economic activity in the reporting period as a result of the measures imposed to combat the COVID-19 pandemic. In addition, uncertainty is increasing further because of new factors such as supply bottlenecks for various components and the Ukraine conflict. To the extent that the macroeconomic effects of the pandemic countermeasures continue, or if the supply situation and/or the Ukraine conflict get worse, this could have a material adverse effect on the Group's results of operations, net assets, and financial position. In this case, decreased revenue in particular would reduce adjusted EBITDA and, subsequently, the Group's equity and its cash and cash equivalents.

Overall, Brockhaus Technologies is exposed to a high level of uncertainty that it can only partly influence itself. However, the Group has not identified any risks that, individually or in combination with other risks, could affect the continued existence of the Group as a going concern.

Internal control system relevant for the consolidated financial-reporting process

The internal control system (**ICS**) is an integral component of Brockhaus Technologies' risk management system. It aims to ensure regularity, completeness, and reliability of the accounting system and the related financial reporting and compliance with the relevant legislation and standards. The internal control system comprises all organizational arrangements and measures for identifying, assessing, and managing all risks that could materially impact the consolidated financial statements. Nevertheless, even an effective, appropriate, and properly functioning internal control system cannot guarantee that all irregularities or inaccurate disclosures will be avoided or identified.

The Group considers the following elements of the internal control system to be significant with respect to the consolidated financial reporting process:

- Internal monthly reports consisting of an income statement, statement of financial position, and statement of cash flows, including the presentation of year-over-year differences and differences versus the budget, as well as reporting on significant events
- Group-wide accounting manual
- Documentation of risks and controls in an ICS matrix, including risk description, control description, definition of documentation requirements, frequency of controls, and definition of control owners
- Preventive and detective controls such as dual control principle, access authorizations, and separation of duties
- Continuous analysis of new or amended accounting standards, legislation, and other requirements and assessment of their impact on the financial statements
- Centralized overviews of quarterly, half-yearly, and annual reporting, submission, and publication requirements and their deadlines
- Enhancement of accounting processes and systems, for example by providing advice on consolidation and providing templates and checklists
- Centralized preparation of consolidated financial statements, including the combined management report

Support services provided by external service providers are used in the preparation of the consolidated financial statements. The same applies to the assessment of specific special issues, such as complex IFRS requirements.

If control weaknesses or opportunities for improvement are identified, they are assessed and countermeasures are developed with the responsible managers in order to continuously enhance the effectiveness of the internal control system. An ICS manual was adopted to ensure the Group-wide standardization and further development of the ICS. It describes the significance, relevance, and components of Brockhaus Technologies' ICS. It addresses responsibilities, the ICS control cycle, and the assessment of the effectiveness of implemented controls. In addition, the ICS manual contains a range of tools for supporting and efficiently designing the implementation and documentation of controls.

Remuneration report

The Remuneration Report is no longer a component of the Consolidated Management Report. The Remuneration Report pursuant to AktG section 162 will be made publicly accessible in conjunction with the auditor's opinion on his/her audit of the form and, voluntarily, substance of the report on the website (www.brockhaus-technologies.com) in the section entitled Investor Relations, subsection Corporate Governance, where it will be available to view permanently.

Takeover-related disclosures

As required by AktG section 176(1) sentence 1, the Executive Board of Brockhaus Technologies AG ("BKHT" or the "Company") provides the following explanatory report on the disclosures relating to takeover law in accordance with HGB sections 289a(1) and 315a(1).

BKHT's subscribed capital was €10,386,808 as at December 31, 2021. It is composed of 10,386,808 no-par-value bearer shares, each with a notional value of €1.00. The capital stock is fully paid up. Each share conveys one vote at the Annual General Meeting. There are no other classes of shares. During the reporting period, Group company Palas Holding GmbH acquired 1,244 shares in Brockhaus Technologies AG ("BKHT"). The background to this was the termination of the employment contract with a sales manager. He had acquired the shares in course of his employment at Palas. As a result of the termination of the employment contract, the leaving employee was obliged to transfer the shares to Palas Holding GmbH without compensation. Therefore, on the reporting date, BKHT – indirectly through Palas Holding GmbH – held 1,244 treasury shares (previous year: -). The treasury shares held by the Group confer neither voting rights at annual general meetings nor dividend rights, etc. The rights and obligations associated with the shares are defined in the German Stock Corporation Act (AktG).

To the knowledge of the Executive Board, there are no restrictions on the voting rights conveyed by shares.

There are restrictions on the transfer of shares in the form of lockup agreements entered into in connection with the Company's initial public offering in July 2020. The Company's founding team and the managing directors of IHSE AcquiCo GmbH and Palas Holding GmbH have made a commitment to the Company not to sell any of the shares they held at the date of the initial listing until July 4, 2022. These arrangements concern a total of 2,905,293 shares in the Company, corresponding to 28.0% of the subscribed capital as at the reporting date.

As at the reporting date, Marco Brockhaus (resident in Germany) directly and indirectly held 22.4% of the Company's shares. To the knowledge of the Executive Board, there are no further interests in the capital that exceed 10% of the voting rights.

Under Article 9(2) of the Company's Articles of Association, Falkenstein Heritage GmbH, whose registered office is in Wetzlar (Germany), is entitled to appoint one-third of the shareholder representatives on the Company's Supervisory Board. This right exists for as long as Falkenstein Heritage GmbH holds at least 10% of the Company's shares. Marco Brockhaus holds the majority of the shares in Falkenstein Heritage GmbH.

The statutory provisions relating to the appointment and dismissal of members of the Executive Board are governed by AktG sections 84 et seq. The Articles of Association include the following arrangements relating to the appointment and dismissal of members of the Executive Board.

"The Executive Board comprises one or more persons. The Supervisory Board determines the number of Executive Board members. The Supervisory Board can appoint a Chair of the Executive Board and a Deputy Chair."

The adoption of the Articles of Association is governed by AktG section 23. Under AktG section 179(1), any amendment to the Articles of Association requires a resolution at the Annual General Meeting. Under Article 12(2) of the Articles of Association, the Supervisory Board is entitled to make amendments to the Articles of Association that relate solely to the wording.

The Executive Board's powers to issue shares are described in Note 25 to the consolidated financial statements. As at the reporting date, the Executive Board is not authorized to buy back shares of the Company through the Company. Exceptions are described in AktG section 71. There was no Annual General Meeting resolution authorizing the Executive Board to buy back shares as at the reporting date.

The members of the Executive Board have a special right of termination in the event of a change of control. A change of control is deemed to exist:

- if a third party or several third parties acting in concert who, at the time the contract of service of the Executive Board member was entered into, did not hold or held less than 20% of the voting rights in the Company, acquire voting rights in the Company such that they account for more than 30% in the aggregate (existing and acquired) of the voting rights in the Company, irrespective of whether this produces an obligation to make a takeover bid (the relevant provisions of the German Securities Acquisition and Takeover Act (WpÜG), in particular sections 29 and 30, apply to the calculation of the share of the voting power), or
- in the event of a merger (section 2 of the German Company Conversion Act [UmwG]) involving the transfer of the assets of the Company under UmwG section 174(1) or (2) sentence 1 or a legal transfer of the material assets to third parties who do not belong to the Company's group of companies, or
- in the event that a control agreement and/or a profit and loss transfer agreement is or are entered into by the Company in a role as a dependent controlled company

The Executive Board member is entitled to a severance payment if this special termination right is exercised. The severance payment is limited to the following:

- For Mr. Brockhaus: a total of two annual salaries
- For Dr. Wilhelm: a total of one annual salary

It comprises 50% of the total amount of the salaries no longer accruing and payable as a result of the early termination of the contract of service (fixed salary and variable remuneration, based on the last annual salary) and the additional payment amounting to one year's salary (fixed salary and variable remuneration, based on the last annual salary). The entitlement to the severance payment is due on termination of the contract of service. There is no entitlement to a severance payment if the contract of service would also have ended automatically within the following 12 months regardless of the change of control, or if the Company gives or was entitled to give the Executive Board member effective extraordinary notice of termination for good cause within the meaning of BGB section 626.

Corporate governance statement

For the 2021 fiscal year, the Company is exercising the option to make its corporate-governance statement pursuant to HGB sections 289f and 315d publicly accessible on its website. The corporate-governance statement is permanently accessible on the Company's website (www.brockhaus-technologies.com) in the section entitled Investor Relations, subsection Corporate Governance.

The declaration of compliance with the German Corporate Governance Code by the Executive Board and the Supervisory Board of Brockhaus Technologies AG pursuant to AktG section 161 is permanently accessible on the Company's website (www.brockhaus-technologies.com) in the section entitled Investor Relations, subsection Corporate Governance.

Related-party transactions

Please refer to Note 41 to the consolidated financial statements for information on related-party transactions.

Consolidated financial statements

Consolidated financial statements

Consolidated statement of comprehensive income

€ thousand	Note	2021	2020
Revenue	9	**60,321**	**51,581**
Increase/ (decrease) in finished goods and work in progress		(209)	(113)
Other own work capitalized	10	1,396	869
Total output		**61,508**	**52,336**
Cost of materials	11	(14,239)	(13,782)
Gross profit		**47,269**	**38,555**
Personnel expenses excluding share-based payments	12	(21,475)	(19,287)
Personnel expenses from share-based payments	38	(279)	(242)
Other operating expenses	13	(26,884)	(12,042)
Impairment loss on trade receivables	22	(161)	(147)
Other operating income	14	1,950	1,494
Amortization of intangible assets identified in initial consolidation	15	(7,590)	(7,708)
Other depreciation of property, plant and equipment and amortization of intangible assets	15	(2,093)	(1,665)
Finance costs from NCI put		(2,740)	(1,614)
Other finance costs		(3,416)	(2,276)
Finance income		40	95
Financial result	16	(6,116)	(3,795)
Earnings before tax		**(15,380)**	**(4,838)**
Income tax expense	17	(3,381)	(1,921)
Profit or loss for the period		**(18,761)**	**(6,759)**
of which attributable to BKHT shareholders		(15,881)	(6,729)
of which attributable to non-controlling interests		(2,880)	(30)
Foreign currency translation adjustments*		1,287	(1,615)
Total comprehensive income		**(17,474)**	**(8,374)**
of which attributable to BKHT shareholders		(14,594)	(8,345)
of which attributable to non-controlling interests		(2,880)	(29)
Weighted average number of shares outstanding		10,433,339	8,341,577
Earnings per share** (€)	18	(1.52)	(0.81)

* Other comprehensive income that may be reclassified to profit or loss in subsequent periods

** Basic earnings per share is equal to diluted earnings per share.

Consolidated statement of financial position

€ thousand	Note	Dec. 31, 2021	Dec. 31, 2020
Assets			
Property, plant and equipment	19	16,156	11,715
Intangible assets and goodwill	20	398.872	152,733
Non-current leasing receivables	22	82,142	-
Prepayments		9	-
Deferred tax assets	17	544	563
Non-current assets		**497,723**	**165,011**
Inventories	21	12,568	9,710
Trade receivables	22	20,022	7,235
Contract assets	22	155	-
Current leasing receivables	22	37,617	-
Other assets	23	15,280	394
Prepayments		811	525
Cash and cash equivalents	24	30,327	123,544
Current assets		**116,778**	**141,408**
Total assets		**614,501**	**306,419**

€ thousand	Note	Dec. 31, 2021	Dec. 31, 2020
Equity and liabilities			
Subscribed capital	25	10,387	10,387
Capital increase not yet implemented	26	13,003	-
Capital reserves	27	227,688	227,688
Other reserves	28	452	256
Currency translation differences		(418)	(1,705)
Net accumulated losses		(29,069)	(13,188)
Equity attributable to BKHT shareholders		222,043	223,438
Non-controlling interests		32,878	(1)
Equity		**254,920**	**223,437**
Non-current financial liabilities excluding leasing	29	123,945	48,118
Non-current financial liabilities from lease refinancing	29	115,654	-
Other provisions	32	4,765	2,048
Other liabilities	31	4,570	-
Contract liabilities	9	36	-
Deferred tax liabilities	17	52,189	16,296
Non-current liabilities		**301,159**	**66,461**
Current tax liabilities		5,556	2,831
Current financial liabilities excluding leasing	29	16,987	6,143
Current financial liabilities from lease refinancing	29	12,525	-
Trade payables	30	11,305	1,488
Other liabilities	31	10,531	4,852
Contract liabilities	9	1,394	1,055
Other provisions	32	123	151
Current liabilities		**58,422**	**16,521**
Liabilities		**359,581**	**82,982**
Total equity and liabilities		**614,501**	**306,419**

Consolidated statement of changes in equity

€ thousand	Note	Subscribed capital	Capital increase not yet implemented	Capital reserves	Other reserves	Currency translation differences	Net accumulated losses	Equity attributable to BKHT shareholders	Non-controlling interests	Equity
Jan. 1, 2021		**10,387**	**-**	**227,688**	**256**	**(1,705)**	**(13,188)**	**223,438**	**(1)**	**223,437**
Transactions with shareholders										
Capital increases	25	-	13,003	-	-	-	-	13,003	-	13,003
Cost of capital increases		-	-	-	-	-	-	-	-	-
Profit or loss for the period		-	-	-	-	-	(15,881)	(15,881)	(2,880)	(18,761)
Other comprehensive income		-	-	-	-	1,287	-	1,287	-	1,287
Equity-settled share-based payment transactions	38.1	-	-	-	196	-	-	196	-	196
Acquisition of subsidiaries with non-controlling interests		-	-	-	-	-	-	-	35,758	35,758
Dec. 31, 2021		**10,387**	**13,003**	**227,688**	**452**	**(418)**	**(29,069)**	**222,043**	**32,878**	**254,920**
Jan. 1, 2020		**6,642**	**-**	**118,727**	**97**	**(90)**	**(6,459)**	**118,917**	**-**	**118,917**
Transactions with shareholders										
Capital increases	25	3,745	-	116,077	-	-	-	119,822	-	119,822
Cost of capital increases		-	-	(7,116)	-	-	-	(7,116)	-	(7,116)
Profit or loss for the period		-	-	-	-	-	(6,729)	(6,729)	(30)	(6,759)
Other comprehensive income		-	-	-	-	(1,615)	-	(1,615)	1	(1,614)
Equity-settled share-based payment transactions	38.1	-	-	-	159	-	-	159	-	159
Formation of subsidiaries with non-controlling interests		-	-	-	-	-	-	-	28	28
Dec. 31, 2020		**10,387**	**-**	**227,688**	**256**	**(1,705)**	**(13,188)**	**223,438**	**(1)**	**223,437**

Consolidated statement of cash flows

€ thousand	Note	2021	2020
Profit or loss for the period		(18,761)	(6,759)
(Income taxes paid)/ income tax refunds		(4,168)	(1,268)
Income tax expense/ (income tax income)	17	3,381	1,921
Expenses for equity-settled share-based payment transactions	38.1	196	242
Amortization, depreciation and impairment losses	15	9,683	9,373
Financial result excluding lease refinancing	16	5,550	3,795
(Gain)/ loss on sale of property, plant and equipment		(42)	39
Other non-cash expenses/ (income)		(8,673)	(378)
Additions of lease receivables		(8,842)	-
Payments from lessees		8,637	-
Disposals/ reclassifications of lease receivables at residual value		75	-
Interest and similar (income)/ expenses from leasing		(1,339)	-
(Increase)/ decrease in lease receivables		(1,469)	-
Addition of liabilities from lease refinancing		5,000	-
Payment of annuities from lease refinancing		(1,208)	-
Disposal of liabilities from lease refinancing		-	-
Interest expense for liabilities from lease refinancing		566	-
Increase/ (decrease) in liabilities from lease refinancing		4,358	-
(Increase)/ decrease in leased assets under operating leases		(1,467)	-
(Increase)/ decrease in inventories, trade receivables and other assets not attributable to investing or financing activities		(2,329)	(1,129)
Increase/ (decrease) in trade payables and other liabilities not attributable to investing or financing activities		7,589	(157)
Increase/ (decrease) in other provisions	32	(55)	6
Cash flow from operating activities		**(6,205)**	**5,686**

Consolidated statement of cash flows (continued)

€ thousand	Note	2021	2020
Payments to acquire property, plant and equipment	19	(1,173)	(954)
Proceeds from sale of property, plant and equipment		91	25
Payments to acquire intangible assets	20	(435)	(95)
Capitalized development costs	10	(861)	(392)
Acquisition of subsidiaries, net of cash acquired	35	(141,619)	-
Interest received		40	10
Cash flow from investing activities		**(143,958)**	**(1,406)**
Proceeds from loans raised	29	63,400	-
Repayment of loans and other financial liabilities	29	(5,379)	(7,553)
Repayment of lease liabilities	29	(558)	(539)
Interest paid	29	(1,797)	(2,301)
Proceeds from issuance of shares		-	119,822
Cost of capital increases		-	(7,116)
Cash flow from financing activities		**55,666**	**102,312**
Change in cash and cash equivalents		**(94,497)**	**106,592**
Effect of exchange rate changes on cash and cash equivalents		285	(219)
Funds of financial resources at the beginning of the period	24	123,544	17,171
Funds of financial resources at the end of the period	24	29,331	123,544
Funds of financial resources			
Cash and cash equivalents	24	30,327	123,544
Overdraft facilities used for cash management		(995)	-
Total	24	**29,331**	**123,544**

Notes to the consolidated financial statements

I. General information, methods and policies

1. Information on the Group

The registered office of Brockhaus Technologies AG (**BKHT**, the **Company** or the **parent company**, together with its subsidiaries **Brockhaus Technologies** or the **Group**) is Nextower, Thurn-und-Taxis-Platz 6, 60313 Frankfurt am Main, Germany, and the Company is registered in the commercial register at the Local Court in Frankfurt am Main under commercial register number HRB 109637. The Company was created by changing the legal form of Eagle Fonds Verwaltungs- und Treuhand GmbH, with its registered office in Frankfurt am Main (Frankfurt am Main District Court, commercial register file number HRB 78705) and its entry in the commercial register on September 19, 2017. Until September 30, 2021, the Company operated as Brockhaus Capital Management AG.

The Company's purpose is to found companies and acquire, hold, manage and support investments in companies over the long term and, as the case may be, to sell such investments and to provide services relating to the aforementioned, such as support for sales, marketing, finance and general organizational and management matters and to acquire funding. The Company's purpose also includes performing business activities by a managing holding entity of investees and providing services for these entities (group services), granting loans to investees, to the extent that this does not require official approval and developing and implementing new business concepts for investees and third parties, as well as providing services and advisory services to companies, especially with regard to business strategy, business concepts, capital resources, funding options and capital investments (management consulting), to the extent this does not require official approval. The Company's purpose within the scope of the business strategy also includes investing free cash available to the Company that has not yet been committed to investments. Among things, this includes investing in listed securities, such as shares, participation certificates, other mezzanine instruments, debt securities, funds, certificates or derivatives. The Company's objective for its investees is long-term support and value growth.

2. Impact of the COVID-19 pandemic

Business performance in the reporting period was impacted significantly by the effects of the COVID-19 pandemic. Brockhaus Technologies took this situation into account in the judgments and assumptions made when preparing the accompanying consolidated financial statements.

Revenue

In the Security Technologies segment, the COVID-19 pandemic led to the postponement of some major projects and this resulted in lower revenue. This was partly offset by continuous growth in the basic business with smaller customers. It is not possible to quantify the amount of revenue lost as a result of the pandemic sufficiently precisely.

Government assistance

The Group used government assistance programs granted in countries affected by the pandemic (e.g., short-time working allowances) to an insignificant extent only. In the U.S.A., the Group used the Paycheck Protection Program (PPP) established under the Coronavirus Aid, Relief and Economic Security (CARES) Act to obtain a loan of €213 thousand. As the company had complied with the requirements imposed by the program, this federal loan was forgiven in the reporting period. The corresponding liability was consequently reversed in profit or loss. The Group received a total of €21 thousand under various local support programs in Singapore.

Government assistance recognized in profit or loss

€ thousand	2021	2020
Loan forgiveness (PPP loan)	213	218
Singapore support programs	21	66
Income from government assistance	**234**	**284**
Short-time working allowance	43	40
Reduction in personnel expense	**43**	**40**

Goodwill

As an indefinite-lived intangible asset, goodwill is tested annually for impairment. It is also tested for impairment if there are indications that its carrying amount may be impaired (triggering events). During the reporting period, the Group performed a qualitative analysis of each of its cash-generating units (**CGUs**) to determine whether there was any indication of goodwill impairment. There were no indications for the Palas CGU. Triggering events were determined for the IHSE CGU at the quarterly reporting dates during the reporting period, and impairment tests were subsequently performed during the year. This did not result in any need to recognize impairment losses. The CGUs were tested for impairment as of the reporting date in line with the annual cycle. Neither of the CGUs was impaired. Please refer to Note 20 for further information.

Credit risk

The Group did not record any defaults at key accounts due to COVID-19, nor does it expect any significant increase in credit risk in future. The Group therefore did not make any material changes to its estimate of expected losses for trade receivables.

Deferred tax assets

Deferred tax assets were tested for impairment. No additional write-downs were recognized as a result.

3. Accounting policies

The consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS), as adopted by the EU and supplementary requirements of section 315e(1) of the German Commercial Code (HGB). IFRS comprise the effective International Accounting Standards (IAS), International Financial Reporting Standards (IFRS) and the Interpretations issued by the Standing Interpretations Committee (SIC) and the International Financial Reporting Interpretations Committee (IFRIC).

4. Basis of preparation

The consolidated financial statements have been prepared on a historical cost basis. This does not apply to certain items that were recognized at the revalued amount or fair value at the reporting date. Corresponding explanations are provided in the relevant accounting policies.

Historical cost is generally based on the fair value of the consideration paid in exchange for the asset. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. This applies irrespective of whether the price was directly observable or was estimated using a measurement method.

The consolidated financial statements comprise the consolidated statement of comprehensive income, the consolidated statement of financial position, the consolidated statement of changes in equity, the consolidated statement of cash flows and the notes to the consolidated financial statements. The consolidated financial statements correspond to the classification requirements in IAS 1. The items of the consolidated statement of comprehensive income and the statement of financial position are aggregated to enhance clarity and disaggregated and explained in the notes.

The accounting policies, explanations and further disclosures are applied consistently. An exemption to this principle is the new accounting policies presented in Note 5.19.

Presentation in the statement of financial position distinguishes between current and non-current assets and liabilities. Assets and liabilities are classified as current if they are due or will be settled within twelve months of the reporting date. The statement of comprehensive income is prepared to determine profit or loss and total comprehensive income.

In accordance with IAS 1.106 et seq. the statement of changes in equity presents changes in each component of equity within the reporting period and in the previous reporting period.

Under IAS 7, the statement of cash flows records cash flows to present information on changes in the Company's cash and cash equivalents. Cash flows are classified into operating activities, investing activities and financing activities. The total cash change in these three activities corresponds to the change in cash and cash equivalents. The statement of cash flows is prepared using the indirect method for the presentation of cash flows from operating activities and the direct method for the presentation of cash flows from investing and financing activities.

The Company's fiscal year is the calendar year. These consolidated financial statements relate to the fiscal year from January 1, 2021 to December 31, 2021 (**reporting period**). The **reporting date** is December 31, 2021. Additionally, comparative information is presented for the previous fiscal year from January 1, 2020 to December 31, 2020 (**previous year** or **prior-period**). The **prior-year reporting date** is December 31, 2020.

The consolidated financial statements are presented in euros, which is the Company's functional currency. The amounts disclosed are therefore rounded to the nearest euro (**€**), thousands of euros (**€ thousand**) or millions of euros (**€ million**) in line with standard commercial practice. Due to this rounding method, the individual amounts reported do not always add up precisely to the totals presented. Negative amounts are presented in parentheses and zero amounts are denoted as dashes (**-**).

The Executive Board prepared these consolidated financial statements as of April 29, 2021 and approved them for distribution to the Supervisory Board.

5. Accounting policies

Recognition and measurement are based on the going concern assumption. When preparing the financial statements, assets and liabilities and income and expenses, are not offset unless explicitly required or permitted by a pronouncement.

5.1 Consolidation methods

Business combinations

Subsidiaries are consolidated using the acquisition method under IFRS 3. The cost of the business combination is allocated to the identifiable assets acquired and liabilities and contingent liabilities assumed at their fair values at the acquisition date. Any positive remaining difference is recognized as goodwill. Any negative remaining difference is recognized in profit and loss after reassessment. Transaction costs are expensed as incurred unless they relate to the issue of debt securities or equity instruments.

Any contingent consideration obligation is measured at the acquisition date fair value. If contingent consideration is classified as equity, it is not remeasured and settlement is accounted for within equity. Otherwise, other contingent consideration is remeasured at fair value at each reporting date and subsequent changes in the fair value of the contingent consideration are recognized in profit or loss.

Subsidiaries

Brockhaus Technologies AG and all its controlled subsidiaries (majority interests) are included in the consolidated financial statements. Under IFRS 10, control exists when an investor has power over the investee and is exposed, or has rights, to variable returns and it is able to affect the amount of those variable returns through its power over the investee. There is a general presumption that ownership of a majority of voting rights results in control. To support this assumption, where the Group does not own a majority of voting rights or similar rights, it considers all relevant matters and circumstances in assessing whether it has control of this entity. This is the case, for instance, where the investor has a current ability to exercise control via potential voting rights or other contractual arrangements. The financial statements of subsidiaries are prepared as of the same reporting date as the financial statements of the parent company using uniform accounting policies.

All Group entities were included in the consolidated financial statements as of December 31, 2021 by virtue of control. Please refer to Note 36 for a list of the consolidated entities.

Subsidiaries are included in the consolidated financial statements from the date of acquisition, i.e., from the date the Group obtains control. They stop being consolidated when the parent loses control of the subsidiary. When the Group loses control of a subsidiary, it derecognizes the assets and liabilities and any related non-controlling interests and other components of equity. Any gain or loss is recognized at fair value.

All intragroup balances, transactions, income, expenses, as well as gains and losses resulting from intragroup transactions are eliminated in full.

The Group entered into a purchase commitment with existing owners in connection with the acquisition of Palas GmbH. To account for this commitment, the Group uses the anticipated acquisition method, which presents the acquisition as if the purchase option had already been exercised. This means that the shares underlying the purchase option are already deemed to be acquired as of the acquisition date. Consequently, no non-controlling interests (NCI) are presented.

Structured entities

Structured entities are entities structured so that voting or similar rights are not the dominant factor in deciding who controls the entity. This is the case, for example, when voting rights relate to administrative tasks only and the relevant activities are directed by means of contractual arrangements.

5.2 Foreign currency

The consolidated financial statements are presented in euros, which is the Company’s functional and presentation currency. Each entity within the Group determines its own functional currency. The items in the financial statements of individual entities are measured in that entity’s functional currency. Transactions in foreign currencies are initially translated into the functional currency at the spot rate applicable on the transaction date. Monetary assets and liabilities in foreign currencies are translated into the functional currency at the closing rate at each reporting date. Exchange differences are recognized in profit or loss. This does not apply to exchange differences related to foreign currency loans used to hedge a net investment in a foreign operation. Such exchange differences are recognized directly in equity and only reclassified to profit or loss for the period on the disposal of the net investment. Deferred taxes arising from such exchange differences are also recognized directly in equity. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction. Non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was measured.

- Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of that foreign operation are treated as assets and liabilities of the foreign operation and translated at the closing rate.
- Assets and liabilities of foreign operations are translated into euros at the closing rate. Income and expenses are translated at the exchange rate at the date of the transaction. For practical reasons, an average weighted exchange rate is used to translate exchange rates that do not fluctuate significantly. All resulting exchange differences are recorded in a separate component of equity. The accumulated amount of exchange differences relating to that foreign operation recognized in equity is reclassified to profit or loss on disposal of a foreign operation.

The following exchange rates were used for currency translation in the consolidated financial statements.

	Exchange rates 2021		Exchange rates 2020	
1 Euro	Closing rate	Average	Closing rate	Average
CNY	7.195	7.634	8.022	7.871
HKD	8.833	9.199	9.514	8.852
USD	1.133	1.184	1.227	1.141

5.3 Revenue from contracts with customers

Under IFRS 15, revenue is recognized using a principle-based five-step model that is applied to all contracts.

> Step 1: First, the contract with the customer is to be determined.
> Step 2: The separate performance obligations in the contract are identified.
> Step 3: The transaction price is determined and IFRS 15 contains requirements dealing explicitly with the treatment of variable consideration, financing components, payments to customers and non-monetary exchanges.
> Step 4: The transaction price is allocated to each performance obligation. This is based on the standalone selling prices of each performance obligation.
> Step 5: Finally, revenue is recognized when the performance obligation is satisfied by the Group. A condition for this is the transfer of control of the goods or service to the customer.

When entering into a contract, it is necessary to determine whether the revenue resulting from the contract is to be recognized at a point in time or over time. In the first instance, certain criteria are applied to clarify whether control of the performance obligation is transferred over time. If this is not the case, revenue is recognized at the point in time when control is transferred to the customer. By contrast, if control is transferred over time, revenue may only be recognized over time if the stage of completion can be reliably determined using input or output methods.

Revenue recognition

Revenue is measured on the basis of the consideration specified in a contract with a customer. The Group recognizes revenue when it transfers control of a good or service to a customer. The table below provides information on the type and the point in time at which performance obligations from contracts with customers are satisfied and the associated revenue recognition policies.

Type of product/ service	Type and time of performance obligation and material payment terms	Revenue recognition under IFRS 15
Sale of measuring devices and KVM devices or KVM systems	Based on the standardized contractual and supply terms and conditions, customers obtain control when the products leave the company’s premises (ex works) or were accepted by them there (transfer of risks and rewards). In some cases, control also passes on the basis of other Incoterms (e.g., DDP Delivery Duty Paid). The invoices are generated as of the date of transfer of risk, based on the underlying Incoterms. Invoices are generally payable within 14 to 30 days. For significant key accounts, longer payment terms (30-60 days, in exceptional cases up to 90 days) are granted in some cases. Price reductions and cash discounts are generally granted for these devices/ systems. The contracts do not permit the customer to return the purchased products. Advance payments or partial advance payments for part of the total purchase price are agreed for large volume orders, new customers, or customers who are not covered by credit insurance.	Revenue is recognized when control is transferred. Revenue is recognized net of price reductions and cash discounts. Advance payments received are recognized under contract liabilities.
Manufacture and sale of test rigs	The Group manufactures test rigs for customers. The test rigs generally comprise standard measuring devices. Advance payments are typically agreed. Production time depends on the complexity. For standard test rigs, the production time is generally not more than six months. In rare cases, the production time can involve a longer time period.	Standard test rigs: Revenue is recognized after delivery of the test rigs (transfer of control). Customized test rigs: Revenue for customized test rigs is recognized over time using the cost-to-cost method. The associated costs are recognized in profit or loss as incurred. Advance payments received are recognized under contract liabilities.
Sale of software configurations for test rigs (for additional analyses)	The Group sells software for test rigs that enables extended analyses. This software can either be acquired at the same time as the test rig or subsequently. This relates to standard software and there is no customized development.	Sales revenue is recognized on transfer of the software to the customer.
Repair of devices	The Group provides repair services for devices as required.	Sales revenue is recognized at a point of time after the service has been rendered.
Revenue from extended warranties	In some instances subsidiaries provide separate extended warranty services to their customers (distinct service to the customers).	Revenue is recognized over the period in which the warranty services are provided. Advance payments received for warranty services still to be rendered are recognized as contract liabilities.
Revenue from commissions	The Group's Financial Technologies segment generates the following commissions in connection with the signing of leases (accounted for according to IFRS 16): 1. Commissions in connection with arranging bicycle leases from a third-party lessor that conducts the leasing business in conjunction with the Group. 2. On behalf of a third-party insurance company, the Group brokers insurance policies to lessees to insure the bicycles. For this service the Group receives a commission from the insurance company when an insurance policy is arranged. The Group also receives a margin from the premiums paid by customers in addition to the commission paid by the insurance company. Since two performance obligations (brokerage and claims service) are fulfilled by way of the premium payment margin and the insurance company commission, the allocation to the two services is based on the individual selling prices. Brokerage services are provided for the following types of insurance: a) Worker's compensation insurance in the event of an employee's unemployment, termination, long-term illness, death or parental leave b) Indemnity insurance for bicycles and e-bikes c) Wear-and-tear insurance for bicycles and e-bikes d) Liability and legal expense insurance for employees’ private use of bicycles and e-bikes Since this activity constitutes transferring the insurance coverage from the insurance company, the Group only acts as an intermediary/ broker of insurance services with regard to the aforementioned types of insurance and is therefore an agent.	1. The commission from the third-party lessor is reported as a gross amount and collected when the contract is signed. 2. The commission from brokerage services must be recognized as revenue when the policy is arranged, because the service is performed at the time the contract is signed. The total transaction price (commission plus customer premium) is recognized as income from commissions after deduction of the claims service and insurance premiums paid to the insurance company. Revenue is therefore recognized for all of the insurance policies presented here in the amount of the net margin.

Type of product/ service	Type and time of performance obligation and material payment terms	Revenue recognition under IFRS 15
Customer/ claims service	The Group performs the following additional services for the aforementioned types of insurance: 1. In respect of lessors: Claims settlement in connection with the liability and wear-and-tear insurance for the third-party lessor. The Group receives monthly fixed compensation for the services provided. 2. In respect of the insurance company: Claims service, i.e., settlement of claims reported under the liability and wear-and-tear insurance and activities such as providing support to end customers (employees of the lessee) and suppliers as well as preparing, following up and reporting claims to the insurance company. The Group does not receive any separate compensation for this service.	1. The claims service for the third-party lessor is governed by a stand-ready agreement. Compensation is paid monthly and is recognized as revenue in this amount continually over the period. Revenue is reported as a gross amount. 2. The portion of the premium payments and commission paid as compensation for the customer and claims service is deferred upon payment and recognized proportionally over the term of the lease. The total transaction price is divided into the premium payments by the customer and the commission using the individual selling prices by applying the expected-cost-plus-margin method. The costs calculated directly are personnel expenses for the employees explicitly involved in claims settlement as well as the costs of the software licenses used. Revenue is recognized on a net basis as described above.
Service packages	The Group sells insurance covering the servicing and maintenance of bicycles and e-bikes. Service packages permit the lessee's employees to take advantage of a specified number of inspections during the lease term. Employees pay a monthly fixed premium to the Group for this service. The Group acts as principal for this service and is therefore responsible for performing the inspections or arranging for performance of inspections by third parties. The initial inspection may be performed within 1 to 18 months and the second within 19 to 36 months. Users are entitled to a third inspection only when the term is 48 months. If the customer does not take advantage of the inspections within the periods specified above, the relevant performance obligation expires without refund of the premiums paid.	Advance payments received for inspections still to be rendered are recognized as contract liabilities. The proportional premiums paid are recognized as revenue when the customer takes advantage of the inspection or when a performance obligation expires. In the event of an inspection claim at the start of the term or during a period in which the contract liabilities recognized are not sufficient, a contract asset must be recognized, which is reduced thereafter by the amount of the subsequent premium payments.
Sale of previously leased bicycles and e-bikes at the end of the lease term	At the end of the lease term, users of the leased bicycles and e-bikes are offered the opportunity to acquire the asset at attractive terms and conditions. Users receive the offer from the Group three months prior to expiration of the lease. If they agree, the purchase is invoiced at the halfway mark of the last month of the lease term. The invoice amount is obtained by direct debit a few days after the end of the lease term. If no sale is made to the user, the bicycles and e-bikes are offered for sale to a bicycle retailer or sold to third parties for recycling. The sale contracts do not permit the buyer to return the purchased products.	Revenues are recognized when the user agrees to the purchase and after invoicing. In contrast, revenues from the sale of bicycles to third parties are recognized at the time the bicycles are delivered to the retailer or recycler.
Sale of operating lease assets	After expiration of the lease term, the lessor exercises the option to sell, allowing the underlying asset to be sold to B2B customers. The portfolio of underlying assets comprises a collection of various assets (e.g., machines, equipment, etc.).	When the lessor exercises the option to sell, the revenues are recognized after invoicing.

The Group generates revenue from the sale of standard measuring devices and related system solutions in the Environmental Technologies operating segment. In the Security Technologies operating segment, the Group generates revenue from the sale of KVM devices and KVM systems. The Financial Technologies operating segment generates revenue from commissions, customer and insurance services, and from the sale of bicycles, e-bikes and other leased assets at the end of their lease terms.

Revenue from product sales is recognized at the time of transfer of the significant risks and rewards of ownership of the goods sold to the buyer if it is reasonably certain that the economic benefits from the sale will flow to the Group. The amount of revenue recognized is based on the fair value of the consideration received or receivable, less any cash discounts and rebates. The Group grants certain wholesalers (also referred to as sales partners or distributors) rebates or price discounts that are factored into the process of revenue recognition.

Other revenue comprises revenue from leases in accordance with IFRS 16 and the associated refinancing of leases in accordance with IFRS 9. The disclosure here is attributable to the acquisition of the Financial Technologies sub-group. Please refer to Notes 9.2 and 39.2 for further information.

Contracts with customers do not stipulate the right to return the goods within a certain period of time. Goods returns are only permitted due to defects within the regular warranty period.

As a rule, the Group applies the practical expedient for current advance payments from customers. That means that the promised amount of consideration for the effects of a significant financing component is adjusted if the period between the transfer of a promised good or service and payment is one year or less.

The Group receives advance payments from customers for arranging insurance policies with a lead time of 36 months from the date the policy is concluded and the payment is received. These policies contain an insignificant financing component in the period between payment by the customer and their transfer.

The Group generally issues a two-year warranty for general repairs of defects that existed at the date of the sale, as required by law. These warranties are recognized in accordance with IAS 37 Provisions (Note 32).

5.4 Employee benefits

Short-term employee benefits

Short-term employee benefits are expensed as soon as the related service has been rendered. A liability must be recognized for the amount expected to be paid if the Group currently has a legal or constructive obligation to pay that amount on the basis of work performed by an employee and the obligation can be reliably estimated.

Termination benefits

Benefits paid upon termination of employment are expensed at the earlier of the following times: when the Group can no longer rescind the offer of such benefits or when the Group recognizes restructuring expenses. Benefits are discounted if they are not expected to be settled wholly within twelve months of the reporting date.

Equity-settled share-based payments

The Group has a stock option program enabling it to issue rights to purchase shares of the parent company to Executive Board members and employees of the Company and to managing directors and employees of subsidiaries.

The total amount to be recognized as expense for employee services received is determined by reference to the fair value of the share-based payment at the grant date. The fair value of stock options is determined using a Monte Carlo simulation, taking the long-term performance targets into account. The fair value determined at the grant date is recognized as expense over the vesting period (the period during which all the specified vesting conditions must be satisfied). The offsetting entry is recorded in equity. The vesting period generally starts on the grant date of the stock options. However, the expense can be recognized at an earlier date if the employee starts rendering services before the formal approval of issuance of the options.

The Group recognizes the remuneration expense from the start of the period when the services are rendered even if the issue date is later than the start of employment. The expense for share-based payment is based on the estimated fair value of the stock options as of the grant date in the period between when the services start being rendered and the grant date. As soon as the grant date is known, the estimated fair value is adjusted to ensure that the expense is prospectively recognized based on the actual fair value at the grant date of the equity instruments granted.

No further expense is recognized for share allocations that cannot vest, with the exception of equity-settled share-based payment plans where vesting is dependent on a market condition or a non-vesting condition. These equity instruments are treated as being exercisable regardless of whether a market condition or non-vesting condition applies, provided all other service or employment conditions are satisfied.

Based on the non-market-based vesting conditions, the Company estimates the number of options and shares that are expected to be exercisable at the end of each reporting period. Possible changes compared with the original estimates are recognized in profit or loss with a corresponding offsetting entry in equity.

If the contractual terms of an equity-settled payment arrangement are modified, expenses are recognized, as a minimum, at the fair value of the equity instruments granted at the grant date, unless those equity instruments cannot vest because of failure to satisfy a vesting condition (other than a market condition) that was specified at the grant date. The Group also recognizes the effects of modifications that increase the total fair value of the share-based payment arrangement or are otherwise beneficial to the employee. These are measured at the date of the modification.

Expenses arising in connection with an equity-settled payment arrangement are recognized as personnel expenses.

Cash-settled share-based payments

In the case of cash-settled share-based payment arrangements, the Group recognizes a provision for the services rendered by employees. The Group measures the fair value of the liability at each reporting date and again at the settlement date. Changes in the entitlement are recognized in personnel expenses in the amount of the portion attributable to the grant date fair value over the vesting period. The remaining change in the entitlement is reported in the financial result.

5.5 Finance income and costs

Interest income and expense is recognized in profit or loss using the effective interest method. The effective interest rate is the rate that exactly discounts estimated future cash receipts and payments over the expected life of the financial instrument or a shorter period, if appropriate, to the net carrying amount of the financial asset or financial liability. To calculate interest income and expense, the effective interest rate is applied to the gross carrying amount of the financial asset (if it is not credit-impaired) or to the amortized cost of the financial liability. By contrast, for financial assets that become credit-impaired after initial recognition, interest income is calculated by applying the effective interest rate to the amortized cost of the financial asset. If the asset is no longer credit-impaired, calculation of interest income returns to a gross basis.

5.6 Government grants

Government grants are recognized if there is reasonable assurance that the grants will be made and the entity complies with the conditions attached to them. Expense-related grants are recognized as income over the period required to offset them against the corresponding expenses for which the grants are intended. Grants for an asset reduce the carrying amount of the asset. Government grants were received for research and development projects and in connection with the COVID-19 pandemic. There are no unfulfilled conditions or contingencies attached to these grants.

5.7 Current and deferred income taxes

The tax expense for a period comprises current and deferred taxes. Taxes are recognized in profit or loss, unless they relate to transactions recognized in other comprehensive income or directly in equity. In such cases, taxes are recognized in other comprehensive income or directly in equity, respectively.

Current tax is measured as the amount expected to be reimbursed by, or paid to, the tax authorities. The amount is calculated on the basis of the tax rates and tax laws applicable as of the reporting date.

Deferred taxes are recognized, applying the liability method, for taxable temporary differences as of the reporting date between the carrying amount of an asset or liability in the statement of financial position and its tax base. Deferred taxes are recognized for all taxable temporary differences, with the exception of the following.

No deferred taxes are recognized from the initial recognition of

> goodwill or
> an asset or liability in a transaction that
> is not a business combination and
> at the time of the transaction, affects neither IFRS profit or loss nor taxable profit or loss.

No deferred taxes are recognized in respect of taxable temporary differences

> that relate to investments in subsidiaries, associates and interests in joint ventures,
> if the timing of the reversal of temporary differences can be controlled and
> it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences, unused tax loss carryforwards and unused tax credits to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, unused tax loss carryforwards and tax credits can be utilized.

The carrying amount of a deferred tax asset is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred tax asset to be utilized. Previously unrecognized deferred tax assets are reassessed at each reporting date and recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are measured using the tax rates expected to apply to the period in which an asset is realized or a liability is settled. The amount is calculated on the basis of the tax rates and tax laws enacted as of the reporting date. The combined tax rate is 30% (previous year: 31%). Deferred tax assets and deferred tax liabilities are offset against one another if the Company has a legally enforceable claim to set off current tax assets against current tax liabilities and these amounts relate to income taxes levied on the same taxable entity by the same taxation authority.

5.8 Property, plant and equipment

Property, plant and equipment is recognized at cost less accumulated depreciation and accumulated impairment losses. The carrying amount of an item of property, plant and equipment is derecognized on disposal or when no future economic benefits are expected from its use or disposal. The gain or loss arising from the derecognition of an item of property, plant and equipment is recognized in profit or loss. The residual values, useful lives and depreciation methods are reviewed at the end of each fiscal year and adjusted as necessary. Items of property, plant and equipment are depreciated on a straight-line basis over their estimated useful life. The useful lives applied are as follows.

	Years
Leasehold improvements	10
Office furniture	10-13
Other equipment, operating and office equipment	3-10
Technical equipment and machinery	3-10

For the items of property, plant and equipment acquired in the course of acquisitions, the relevant applicable remaining useful life is determined based on the aforementioned useful lives and the useful life already lapsed at the date of acquisition.

Impairment testing and the recognition of impairment losses and reversals are performed using the approach for finite-lived intangible assets. Please refer to Note 5.9 for further information.

5.9 Intangible assets and goodwill

Goodwill arising from business combinations is measured at cost less accumulated impairment losses.

Expenditure for research activities is recognized in profit or loss as incurred. Development expenditure is capitalized only if development costs can be reliably measured, the product or process is technically and commercially feasible, future benefits are probable and the Group intends and has sufficient resources to be able to complete development and use or sell the asset. Capitalized development expenditure is measured at cost less accumulated amortization and accumulated impairment losses.

Other intangible assets that are acquired by the Group and have finite useful lives are measured at cost less accumulated amortization and any accumulated impairment losses.

Subsequent expenditures are capitalized only if they increase the future economic benefits of the asset to which they relate. All other expenditure, including expenditure on internally generated goodwill and trademarks, is recognized in profit or loss as incurred.

Goodwill is tested for impairment annually; other intangible assets with finite useful lives and items of property, plant and equipment are tested for impairment if there are specific indications of impairment. An impairment loss is recognized in profit or loss in the item “Other depreciation of property, plant and equipment and amortization of intangible assets” in the statement of comprehensive income if an asset’s recoverable amount falls below its carrying amount. Recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. The recoverable amount is the higher of net realizable value and value in use. Net realizable value is equal to the recoverable amount less costs to sell arising from the sale of an asset on an arm’s length basis. Value in use is calculated based on the estimated cash flows from the use and disposal of an asset using the discounted cash flow method. The cash flows are derived from the long-term corporate planning, which takes account of historical developments and macroeconomic trends. The value in use of the relevant cash-generating unit (**CGU**) is used to test the recoverability of goodwill. The annual goodwill impairment test is performed at the level of our operating segments, since there are no levels below that at which goodwill is monitored for internal management purposes.

Amortization

Intangible assets are amortized on a straight-line basis over their estimated useful lives. Amortization charges are generally recognized in profit or loss. Goodwill is not amortized. The useful lives applied are as follows.

	Years
Patents and trademarks	10
Capitalized development costs	5
Software	3
Licenses and other rights	3-10
Basic technologies	5-8
Customer base	10-15

Amortization methods, useful lives and residual values are reviewed at each reporting date and adjusted if appropriate.

5.10 Inventories

Inventories of raw materials, consumables and supplies are recognized at the lower of average purchase prices and realizable values. Raw materials, consumables and supplies are not written down below cost if the finished goods in which they will be incorporated are expected to be sold at least at cost. Finished goods and work in progress are recognized at the lower of cost or net realizable value using individual calculations which are based on the current cost accounting. In addition to directly attributable material and production costs, cost includes an appropriate share of material and production overheads, as well as amortization and depreciation expenses attributable to production and production-related administrative expenses. General administrative costs and borrowing costs are not capitalized.

5.11 Financial instruments

Classification at initial recognition and the subsequent measurement of financial assets depend on an entity's business model for managing its financial instruments and on the characteristics of the contractual cash flows of the financial instruments.

The Group's business model for the management of its financial instruments reflects how the entity manages its financial assets to generate cash flows. Depending on the business model, cash flows are realized through the collection of contractual cash flows ("hold to collect" business model), the sale of financial assets ("for sale" business model) or both ("hold to collect and for sale" business model).

In order to classify and measure a financial asset as at "amortized cost" or "fair value through other comprehensive income," the cash flows must comprise "solely payments of principal and interest" (SPPI) on the principal amount outstanding. This assessment is called an "SPPI test" and is conducted at the level of the individual financial instrument.

Initial recognition and measurement

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. If the timing of the trade date and the settlement date can diverge, the settlement date is used for initial recognition. Financial instruments are initially measured at fair value. Transaction costs are generally included.

As of the reporting date, the Group only has primary financial instruments and financial liabilities in the "amortized cost" category that are allocated to the "hold to collect" business model.

The Group has entered into interest rate cap contracts. Please refer to Note 34.4 for further information on interest risks.

Subsequent measurement

Financial instruments at amortized cost are primary financial instruments that generate solely payments of principal and interest (cash flow characteristics) and are held to collect contractual cash flows (business model test). The Group's financial instruments at amortized cost comprise trade receivables and payables, other financial assets and liabilities, cash and cash equivalents, as well as bank loans, securitized liabilities and other loans. After initial recognition, such financial instruments are measured at amortized cost using the effective interest method, net of any impairment losses. The calculation of amortized cost takes into account any premium or discount upon acquisition as well as fees or transaction costs that are an integral component of the effective interest rate. The carrying amount of current financial assets and financial liabilities represents an appropriate approximation of fair value.

Impairment

Impairment losses on financial assets measured at amortized cost are recognized on the basis of expected credit losses (ECL). ECLs are based on the difference between the contractually due cash flows and all cash flows that the Group expects to obtain, discounted using the approximate value of the original effective interest rate. Expected cash flows comprise cash flows from the sale of collateral held or other credit enhancements that are an integral component of the loan agreement. A three-stage model is used for the allocation of impairment loss allowances.

Stage 1: Expected credit losses over the next twelve months | Stage 1 includes all contracts which have not experienced a significant increase in credit risk since initial recognition. This typically includes new contracts and those with payments due in less than 31 days. Expected credit losses that are attributable to a potential default within the next twelve months are recognized in this stage.

Stage 2: Lifetime expected credit losses – not credit-impaired | If a financial asset experiences a significant increase in credit risk but it is not credit-impaired, it is allocated to Stage 2. The assessment to determine whether a financial asset has experienced a significant increase in credit risk is based on an assessment of probability of default conducted at least quarterly. This takes account of external rating information and internal information on the credit quality of the financial asset. Expected credit losses over the lifetime of the financial assets are recognized as a loss allowance.

Stage 3: Lifetime expected credit losses – credit-impaired | If a financial asset is credit-impaired or in default, it is allocated to Stage 3. Expected credit losses over the lifetime of the financial assets are recognized as a loss allowance. Objective evidence that a financial asset is credit-impaired or in default includes being past due for 91 days or more and further internal and external information indicating that the Group is not able to collect the full amount of outstanding contractual cash flows, taking into account any credit enhancements. A financial asset is derecognized if there is no realistic expectation of recovering contractual cash flows. Effective interest income is determined based on the gross carrying amount in Stages 1 and 2. As soon as a financial asset is credit-impaired and allocated to Stage 3, effective interest income is calculated based on the net carrying amount (gross carrying amount less loss allowance). Expected credit losses are calculated based on global probabilities of default. Impairment losses are recognized in profit or loss. Please refer to Note 34.4 for information on the Group's credit risk.

In addition to the general approach (three-stage model), IFRS 9 provides for a simplified model for trade receivables, contract assets and lease receivables falling within the scope of application of IFRS 16. Changes in credit risk are not tracked when applying the simplified approach. Instead, a risk provision is recognized in the amount of the lifetime expected credit loss upon initial recognition and at each subsequent reporting date. The Group applies this approach for trade receivables, contract assets and lease receivables.

The probabilities of default are calculated using third-party credit ratings by market data suppliers per debtor. The loss given default (LGD) model reflects historical losses and determines the loss given an actual default expressed as a percentage. Contract-specific components are used to calculate the LGD.

Derecognition of financial assets

The Group derecognizes financial assets when the contractual rights to the cash flows from the financial asset expire or when the contractual right to the cash flows from the financial asset is transferred and substantially all risks and rewards of ownership of the financial assets are transferred.

5.12 Subscribed capital

Ordinary shares

The costs directly attributable to the issuance of ordinary shares are recognized as a deduction from equity. Income taxes on equity transaction costs are recognized in accordance with IAS 12.

Treasury shares

Insofar as Group companies hold shares of Brockhaus Technologies AG, these are reported at cost as deduction from equity in the consolidated statement of financial position. The treasury shares held by the Group confer neither voting rights at annual general meetings nor dividend rights etc.

5.13 Provisions

Provisions are determined by discounting the expected future payment obligations at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognized as finance cost.

Warranties

A provision for warranties is recognized when the underlying products or services are sold. The provision is based on historical warranty data and a weighting of all possible outcomes against their associated probabilities.

5.14 Leases – Group as lessee

A lease is an agreement for the right to use an asset (underlying asset) for an agreed period of time against payment. As a lessee, the Group recognizes all leases of right-of-use assets and liabilities for assumed payment financial obligations at their present value in the statement of financial position. Lease liabilities comprise the following lease payments.

- fixed payments less lease incentives to be provided by the lessor,
- variable lease payments that depend on an index or a rate,
- expected payments under residual value guarantees,
- the exercise price of a purchase option if exercise of the option was assessed as reasonably certain and
- penalties for the termination of the lease if its term reflects exercise of an option to terminate the lease.

Lease payments are discounted using the interest rate implicit in the lease if this can be determined. In other cases, discounting uses the incremental borrowing rate.

Right-of-use assets are measured at cost and their composition is as follows.

- lease liability
- any lease payments made at or before the commencement date, less lease incentives received
- initial direct costs
- asset retirement obligations

Right-of-use assets are subsequently measured at amortized cost. Right-of-use assets are depreciated using the straight-line method over the term of the lease.

The Group makes use of the practical expedients for low-value underlying assets and short-term leases (less than twelve months) and the payments are recognized as an expense. The lease accounting requirements explained above are not applied to leases of intangible assets. The Group exercises the option not to separate the components in the case of agreements that include lease components and non-lease components.

In some cases, especially for leases of real estate, leases may include extension options and termination options. To determine the lease terms, all circumstances and conditions are considered that offer an economic incentive to exercise extension options or not to exercise termination options. Term modifications arising from the exercise or non-exercise of such options are only considered in the lease term if they are reasonably certain.

5.15 Leases – Group as lessor

In the case of leases where the Group is the lessor, a distinction is drawn between operating leases and finance leases in accordance with IFRS 16.

Operating leases

In an operating lease, the lessor remains the beneficial owner of the leased asset and recognizes it as an asset at amortized cost under property, plant and equipment. The lease payments received in the period are reported as revenue.

Finance leases

Leases are treated as finance leases if the lessee receives substantially all of the risks and rewards associated with ownership of an asset. At the time the leased asset is transferred, the lessor recognizes a lease receivable on its balance sheet in the amount of the net investment in the lease and derecognizes the underlying asset from non-current assets. The net investment usually includes the present value of future contractual lease payments. Any lease incentives to be paid by the lessee, variable lease payments linked to an index or interest rate and any residual value guarantees or other contractual payment claims in respect of the lessee can be added. Upon initial recognition of the net investment or lease receivable, the lessor applies the interest rate implicit in the lease. The cash lease payments are divided into an interest item recognized in profit or loss and a principal item recognized in equity, with the interest item reported in revenue. The net investment and lease receivable are subsequently measured using the effective interest method.

5.16 Fair value measurement

Assets and liabilities are measured at fair value upon initial recognition and for subsequent measurement.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value measurement assumes that the transaction to sell the asset or transfer the liability takes place either

> in the principal market for the asset or liability, or
> in the absence of a principal market, in the most advantageous market for the asset or liability.

The Group must have access to the principal or most advantageous market. The fair value of an asset or liability is measured using the assumptions that market participants would use when pricing the asset or liability. It is assumed in this context market participants act in their economic best interest.

Fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Group uses valuation techniques that are appropriate for the relevant circumstances and for which sufficient data is available to measure fair value. This involves maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

All assets and liabilities whose fair value is determined or presented in the financial statements are classified using the fair value hierarchy described below, based on the lowest level input that is significant to the entire measurement of fair value.

> Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities
> Level 2: valuation techniques for which the lowest level input that is significant to the entire measurement of fair value is directly or indirectly observable in the market
> Level 3: valuation techniques for which the lowest level input that is significant to the entire measurement of fair value is not observable in the market

For assets and liabilities that are recorded on a recurring basis in the financial statements, the Group identifies whether reclassification between the hierarchy levels has occurred by examining the classification (based on the lowest level input that is significant to the entire measurement of fair value) at the end of each reporting period.

In order to satisfy the fair value disclosure requirements, the Group has defined groups of assets and liabilities based on their nature, characteristics and risks as well as the levels of the fair value hierarchy explained above.

5.17 Other financial obligations

Other financial obligations are not recorded in the statement of financial position. They arise if there is a legal or constructive external obligation for the Group at the reporting date. They are measured at fair value on initial recognition. Existing rental and lease commitments are accounted for in accordance with IFRS 16. Exceptions represent rental and lease commitments outside of the scope of IFRS 16. Contingent liabilities are measured at their settlement value.

5.18 Summary of the measurement policies

Provided there are no impairment losses, the Group's measurement policies are summarized and in simplified form as follows.

Statement of financial position item	Assessment
Assets	
Intangible assets	
with finite useful lives	Amortized cost
with indefinite useful lives	Impairment-only approach
Property, plant and equipment (including right-of-use assets)	Amortized cost
Lease receivables	Amortized cost
Trade receivables	Amortized cost
Inventories	Lower of cost and net realizable value
Cash and cash equivalents	Amortized cost
Accrued expenses	Amortized cost
Other financial assets	Amortized cost
Other non-financial assets	Amortized cost
Deferred tax assets	Measured (without discounting) at the tax rates that apply in the period when the asset is realized or a liability is settled

Statement of financial position item	Assessment
Liabilities	
Liabilities to banks	Amortized cost
Deferred tax liabilities	Measured (without discounting) at the tax rates that apply in the period when the asset is realized or a liability is settled
Income tax liabilities	Expected payment to tax authorities that is based on tax rates that apply at the reporting date or shortly thereafter
Trade payables	Amortized cost
Deferred income	Amortized cost
Other provisions	Expected discounted amount that will result in an outflow of resources
Other financial liabilities (including lease liabilities)	Amortized cost

5.19 New and amended standards

The accounting policies applied in the consolidated financial statements are generally the same as the policies applied in the previous year. New and amended standards adopted by the EU and effective for periods beginning on or after January 1, 2021 did not materially affect the Group's results of operations, net assets and financial position.

There are no new or amended standards that could materially affect future financial statements of the Group.

6. Use of judgments, estimates and assumptions

Judgments that affect the amounts in the financial statements are necessary in some instances to apply accounting policies. In addition, for the preparation of the financial statements, forward-looking assumptions and estimates must be made that may have an impact on the carrying amounts of items in the statement of financial position as well as the amount for income and expenses. Actual amounts may differ from these estimates. The most important forward-looking assumptions and other sources of estimation uncertainty that may require future material adjustments are explained below.

6.1 Judgments

Development costs

Development costs are capitalized in accordance with the described accounting policy. Initial capitalization of costs is based on the Group's assessment that technical and economic feasibility has been demonstrated. For instance, technical feasibility is assessed using the development of prototypes or feasibility studies. Economic feasibility is assessed using project planning, which includes the necessary material costs and personnel expenses and their financing.

Consolidation of structured entities

The Group uses an asset-backed security program for refinancing the leasing business in which lease receivables are securitized using a structured entity called Debt Marketplace SARL. Companies can securitize receivables through this entity whereby the receivables are sold to various compartments of Debt Marketplace SARL. Compartment B of Debt Marketplace SARL is used to securitize lease receivables. Investors in Compartment B alone are exposed to the credit risk of the Group's lease receivables. Moreover, there are no cross-compartment credit enhancements by third parties.

The Group has no ability to influence the management of the structured entities. However, the Group handles a material activity of the structured entity by servicing the lease receivables and recovering them upon default by the lessee. The Group additionally assumes the credit risk associated with the lease receivables by way of a purchase price discount and participates substantially in the variable returns of the structured entity by receiving a share of the excess spread. In the overall assessment, the Group has control over Compartment B of Debt Marketplace SARL within the meaning of IFRS 10. The company must therefore be consolidated in accordance with IFRS.

6.2 Estimates and assumptions

The most important forward-looking assumptions and other major sources of estimation uncertainty on the reporting date that have a significant risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the next fiscal year are explained below.

Equity-settled share-based payments

The Group has analyzed the conditions for its share-based payments in order to determine the appropriate classification in accordance with IFRS 2. The stock options issued are subject to conditions determining how the stock options may be exercised by the beneficiaries. The Group has identified two settlement scenarios based on this analysis. One scenario would be viewed as full cash settlement, the other scenario as full settlement using equity instruments. In light of the Executive Board's intention to settle by issuing new shares, the Group concluded that it does not have a present obligation to settle in cash and will settle the share-based payment arrangement using equity instruments. This assessment by management is made again at each reporting date. For further information, please refer to Note 38.1.

Within the Group, expenses arising from granting stock options of the Company to employees are measured at the fair value of these equity instruments at the grant date. In order to estimate the fair value of share-based payments, it is necessary to determine the most suitable valuation technique. The Group uses a Monte Carlo simulation for this purpose. This depends on the grant conditions. For this estimation, it is also necessary to determine suitable inputs for this valuation technique, in particular the expected volatility derived from comparable listed companies and BKHT and the expected term of the option, the dividend yield and the risk-free interest rate. The assumptions and techniques used to estimate fair value are presented in Note 38.1.

Cash-settled share-based payments

In the case of cash-settled share-based payment arrangements, the Group recognizes a provision for the services rendered by employees. The Group measures the fair value of the liability at each reporting date and again at the settlement date. Changes in the entitlement are recognized in personnel expenses in the amount of the portion attributable to the grant date fair value over the vesting period. The remaining change in the entitlement is reported in the financial result.

The component attributable to personnel expenses is measured at fair value at the grant date. In order to estimate the fair value of share-based payments, it is necessary to determine the most suitable valuation technique. The Group uses the Black-Scholes model for this purpose. This depends on the grant conditions. For this estimation, it is also necessary to determine suitable inputs for this valuation technique, in particular the expected volatility derived from comparable listed companies and the expected term, the dividend yield and the risk-free interest rate. The assumptions and techniques used to estimate fair value are presented in Note 38.2.

Deferred taxes

Deferred tax assets for unused tax loss carry forwards are currently not recorded in the Group. No deferred taxes were recognized for these matters as future taxable earnings in the relevant income tax consolidation groups were not sufficiently concrete at the date of preparing the financial statements. This assumption is reviewed by management on each reporting date.

Business combinations

Business combinations are accounted for using the acquisition method. At initial recognition, goodwill from a business combination is measured at cost, which is calculated as the excess of the cost of the acquisition over the fair value of the acquired identifiable assets, liabilities and contingent liabilities. Costs arising in the context of the business combination are expensed in the profit or loss for the period.

The determination of the respective fair value of the acquired assets and liabilities on the acquisition date is subject to significant estimation uncertainty. For the identification of intangible assets, depending on the type of the intangible asset and the complexity of determining fair value, either opinions of external valuation experts are drawn upon or the fair value is determined in-house using an appropriate valuation method for the respective intangible asset, the basis of which is typically used for the forecast of overall expected future generated cash and cash equivalents. These measurements are closely related to management's assumptions and estimates made regarding the future development of the respective assets and the discount rate to be applied.

Goodwill impairment test

A cash-generating unit is impaired if its carrying amount exceeds its recoverable amount. The recoverable amount of a cash-generating unit is the higher of its fair value less costs to sell and its value in use. The fair value less costs to sell is calculated using the German income approach. Cash flows are derived from the financial budgets for the next period of up to five years. The discounted cash flow method is used to calculate value in use. Cash flows are also derived from the financial budgets for the next period of up to five years. The recoverable amount in both cases depends on the discount rate used in the German income method or discounted cash flow method as well as on the expected future cash flows and the growth rate used for extrapolation purposes. These estimates are the key factor for determining the fair value less the costs to sell and value in use. The basic assumptions used to determine recoverable amount for the various cash-generating units are presented and explained in more detail in Note 20.

Provisions

A provision is recognized when the Group has a legal or constructive obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation (Notes 5.13 and 32). Such estimates are subject to significant uncertainty.

Accounting for estimated residual value at the end of the lease in calculating the present value of lease receivables

In bicycle leasing, the unguaranteed (estimated) residual value is accounted for when calculating the present value of lease receivables in accordance with the definition in IFRS 16. The estimated residual value at the end of the lease term is calculated depending on the maturity category of the respective lease and includes the expected proceeds from recovery at the end of the term based on historical values. For lease receivables from bicycle finance leasing, historical values based on experience produce a weighted average residual value of 10.77%. The residual value for leasing other than bicycle leasing generally amounts to 5% and in exceptional cases up to 20% of the acquisition cost.

Calculating impairment losses on trade receivables, contract assets and lease receivables

For information on the assumptions and estimates involved in calculating impairment losses on trade receivables, contract assets and lease receivables, see Notes 5.11 and 34.4.

II. Notes to the statement of comprehensive income

7. Alternative performance measures

In addition to the information disclosed in the consolidated statement of comprehensive income, management uses additional performance measures to manage the Group. These comprise the **pro forma consolidated statement of comprehensive income** and **adjusted alternative performance measures**.

Pro forma consolidated statement of comprehensive income

In the reporting period, Bikeleasing's and kvm-tec's income and expenses were only included for December in the consolidated statement of comprehensive income because control was obtained (the acquisition was closed) at the end of November 2021 in each case. As the informative value of the consolidated statement of comprehensive income for the 2021 fiscal year is limited, particularly its suitability for deriving projections, the Executive Board analyses earnings figures on a pro forma basis. This presents the Group's statement of comprehensive income as if Bikeleasing and kvm-tec had already been acquired as of January 1, 2021.

To calculate the prior-year period pro forma income and expenses, management assumed that the preliminary fair value adjustments made as at date of acquisition of Bikeleasing and kvm-tec would also have applied if the acquisition had taken place on January 1, 2021 and that the post-acquisition financing structure would already have existed at the beginning of the year.

Pro forma consolidated statement of comprehensive income

€ thousand	2021	2020
Revenue before PPA	**126,523**	**51,581**
Decreased earnings due to value step-up	6,215	-
Revenue	**120,308**	**51,581**
Increase/ (decrease) in finished goods and work in progress	(209)	(113)
Other own work capitalized	1,396	869
Total output	**121,495**	**52,336**
Cost of materials	(36,705)	(13,782)
Gross profit	**84,790**	**38,555**
Gross profit before PPA	**91,005**	**38,555**
Gross profit margin	71.9%	74.7%
Personnel expenses excluding share-based payments	(28,353)	(19,287)
Personnel expenses from share-based payments	(279)	(242)
Other operating expenses	(32,252)	(12,042)
Impairment loss on trade receivables	(245)	(147)
Other operating income	2,736	1,494
EBITDA	**26,399**	**8,331**
Adjusted EBITDA	**48,180**	**12,270**
Adjusted EBITDA margin	38.1%	23.8%
Amortization of intangible assets identified in initial consolidation	(15,434)	(7,708)
Other depreciation of property, plant and equipment and amortization of intangible assets	(3,180)	(1,665)
Finance costs from NCI put	(2,741)	(1,614)
Other finance costs	(12,813)	(2,276)
Finance income	139	95
Financial result	(15,414)	(3,795)
Earnings before tax	**(7,629)**	**(4,838)**
Income tax expense	(9,310)	(1,921)
Profit or loss for the period	**(16,939)**	**(6,759)**
Adjusted earnings	**16,721**	**4,406**

Adjusted alternative performance measures

The Group discloses **revenue before PPA**, **gross profit before PPA**, adjusted earnings before interest and tax (**adjusted EBIT**), adjusted earnings before interest, tax, depreciation and amortization (**adjusted EBITDA**) and **adjusted earnings**. The percentage ratio of these indicators to revenue before PPA is calculated as the respective margin (**gross profit margin before PPA**, **adjusted EBITDA margin** and **adjusted EBIT margin**). **Adjusted earnings per share** are additionally disclosed. Management uses these performance measures to manage the Company and considers them to be significant for an understanding of the Group's financial performance. The alternative performance measures are not defined in IFRS and the Group's definitions are potentially not comparable with similarly designated performance indicators of other companies.

According to IFRS, lease receivables must be remeasured as part of the purchase price allocation in connection with the Bikeleasing acquisition. This remeasurement was chiefly based on the discounting of future lease payments at current market rates. However, as a rule, leases generated by Bikeleasing have internal rates of return significantly higher than the market rates applied here. This leads to a situation where the remeasured carrying amounts of the lease receivables significantly exceed the previous carrying amounts at amortized cost (known as a value step-up). As a result, the income from these lease receivables (particularly income from interest and disposals) after the remeasurement is substantially lower than before. The **decreased earnings due to value step-up** item relates to financial figures independent of the financial figures of the individual Group companies. This item is not found in any of the single-entity annual financial statements of the Group companies. The decrease in earnings is not a cash effect and does not affect the Group's ability to distribute dividends. The considerably lower earnings according to IFRS due to the value step-up result solely from the fact that an M&A transaction took place. The financial performance presented is thus considerably poorer solely because of the consolidation. For this reason, the Group additionally reports these figures before PPA. At issue here are lease receivables that existed as of November 30, 2021.

In the consolidated statement of comprehensive income, income from the **reversal of deferred tax liabilities** is attributable to the decreased earnings due to value step-up item. These are eliminated at the respective amount when the after-tax figures are calculated.

Management eliminates expenses from **share-based payments** under IFRS 2.51 (a) from the performance indicators relevant for managing the Company. The reason for this is that these are not attributable economically to the Company, but to its shareholders. The issuance of options and shares does not represent an outflow of resources for the Group. Consequently, management eliminates the relevant expenses from share-based payments for the analysis of the Group's financial performance. Please refer to Note 38 for further information.

The earnings figures for analyzing the Group's performance are also adjusted for the **cost of acquisition of subsidiaries** under IFRS 3.53. Such costs are only incurred when companies are successfully acquired. In terms of BKHT's business model, these costs are therefore of a recurring nature, but amount to zero in each case assuming no change in the scope of consolidation (meaning no companies bought or sold). In the opinion of management, such expenses would have to be recognized as acquisition costs if they were incurred in the course of acquisitions outside of business combinations.

When new shares were issued in the course of BKHT going public in the comparative period, a portion of the related costs was accounted for as a direct deduction from capital reserves and were therefore not recognized as an expense in profit or loss. The requirements for direct recognition of such expenses in equity are governed by IAS 32.37. Costs that do not satisfy these criteria are recognized in profit or loss. Due to the extraordinary nature of such costs, the Group eliminates these expensed **costs of equity transactions** from the adjusted earnings figures.

Equally, amortization expenses of and impairment losses on intangible assets identified in the course of purchase price allocation for acquisitions (**PPA amortization expenses**) are eliminated from underlying the IFRS figures for the purposes of value-enhancing management of the Company. These amortization expenses and impairment losses relate – like the value step-up described before – to accounting entries that are independent of the financial figures of the individual Group companies. They are not found in any of the single-entity annual financial statements of the Group companies. These expenses are recognized solely at the level of consolidation. They are non-cash expenses and not relevant for the Group's ability to pay dividends and no replacement investment spending will also be incurred for them in future cash flows. The considerably lower earnings according to IFRS due to the PPA amortization expenses result solely from the fact that an M&A transaction took place. The financial performance presented is thus considerably poorer solely because of the consolidation. For this reason, the Group additionally reports these figures before PPA amortization expenses. It is also possible that a subsidiary will develop considerably more favorably than projected, but it is still required to recognize substantial PPA amortization expenses in the consolidated financial statements.

In the consolidated statement of comprehensive income, income from the **reversal of deferred tax liabilities** is attributable to PPA amortization expenses. These are eliminated at the respective amount when the after-tax figures are calculated.

Because the anticipated acquisition method is applied with regard to the remaining 30% of the shares of Palas, a financial liability and a provision are recognized in the consolidated statement of financial position instead of non-controlling interests (NCI). The increase in such liabilities and provisions is recognized partly in personnel expenses as share-based payments and partly in the financial result. The Group eliminates the **financial result from the NCI put** attributable to this issue when calculating adjusted earnings.

IFRS require all figures to be consolidated, meaning the presentation of all income and expenses of all majority interests from the date that control is obtained as if the Group were a single entity. As a consequence, only a portion of the business volume of acquisitions completed in the course of a fiscal year is presented in the consolidated statement of comprehensive income. To enhance the quality of information provided to users of these financial statements, the performance measures are additionally presented on a **pro forma** basis. Under the pro forma approach, expenses and income from subsidiaries acquired in a reporting period are consolidated from the beginning of the reporting period in which the relevant acquisition took place. Bikeleasing and kvm-tec are therefore included in the consolidated statement of comprehensive income for the period beginning on January 1, 2021. In some instances, management's estimates are also taken into consideration in this regard.

Calculation of revenue before PPA

	Pro forma	From date when control obtained	
€ thousand	2021	2021	2020
Revenue	**120,308**	**60,321**	**51,581**
Decreased earnings due to value step-up	6,215	6,215	-
Revenue before PPA	**126,523**	**66,536**	**51,581**

Calculation of gross profit before PPA

	Pro forma	From date when control obtained	
€ thousand	2021	2021	2020
Gross profit	**84,790**	**47,269**	**38,555**
Decreased earnings due to value step-up	6,215	6,215	-
Gross profit before PPA	**91,005**	**53,484**	**38,555**
Gross profit margin before PPA	*71.9%*	*80.4%*	*74.7%*

Calculation of adjusted EBITDA

	Pro forma	From date when control obtained	
€ thousand	2021	2021	2020
Earnings before tax	**(7,629)**	**(15,380)**	**(4,838)**
Financial result	15,414	6,116	3,795
Amortization, depreciation and impairment losses	18,614	9,683	9,373
EBITDA	**26,399**	**419**	**8,331**
Decreased earnings due to value step-up	6,215	6,215	-
Share-based payments	279	279	242
Cost of acquisition of subsidiaries	15,288	14,928	(169)
Cost of equity transactions	-	-	3,865
Adjusted EBITDA	**48,180**	**21,841**	**12,270**
Adjusted EBITDA margin	*38.1%*	*32.8%*	*23.8%*

Calculation of adjusted EBIT

	Pro forma	From date when control obtained	
€ thousand	2021	2021	2020
Earnings before tax	**(7,629)**	**(15,380)**	**(4,838)**
Financial result	15,414	6,116	3,795
EBIT	**7,785**	**(9,264)**	**(1,043)**
Decreased earnings due to value step-up	6,215	6,215	-
PPA amortization	15,434	7,590	7,708
Share-based payments	279	279	242
Cost of acquisition of subsidiaries	15,288	14,928	(169)
Cost of equity transactions	-	-	3,865
Adjusted EBIT	**45,000**	**19,747**	**10,604**
Adjusted EBIT margin	*35.6%*	*29.7%*	*20.6%*

Calculation of adjusted earnings and adjusted earnings per share

	Pro forma	From date when control obtained	
€ thousand	2021	2021	2020
Profit or loss for the period	**(16,939)**	**(18,761)**	**(6,759)**
Decreased earnings due to value step-up	6,215	6,215	-
Share-based payments	279	279	242
Financial result from NCI put	2,741	2,741	1,614
Cost of acquisition of subsidiaries	15,288	14,928	(169)
Cost of equity transactions	-	-	3,865
PPA amortization	15,434	7,590	7,708
Deferred taxes attributable to decreased earnings due to value step-up and PPA amortization	(6,296)	(3,963)	(2,096)
Adjusted earnings	**16,721**	**9,028**	**4,406**
of which: attributable to BKHT shareholders	6,700	4,785	4,436
of which: non-controlling interests	10,021	4,242	(30)
Number of shares outstanding	10,946,536	10,433,339	8,341,577
Adjusted earnings per share (€)	**0.61**	**0.46**	**0.53**

A contribution-in-kind capital increase was implemented in February 2022 to finance the acquisition of Bikeleasing. The effect of this capital increase on the number of outstanding shares was reflected in the pro forma perspective.

8. Operating segments

The Group currently comprises three strategic divisions, which constitute the Group's reportable segments. The segments offer different products and services and are separately administrated since they operate in different markets and therefore require different technology and marketing strategies. BKHT's Executive Board reviews internal management reports for each segment on a monthly basis.

The **Financial Technologies** operating segment comprises companies specializing in developing and operating highly automated digital B2B finance platforms for arranging, financing and managing employee benefits through the employer. Specifically, this relates to Bikeleasing, whose income and expenses in the reporting period are only included in the consolidated financial statements in December 2021. For this reason, the amounts reported are of limited informational value. In December 2021, one of Bikeleasing's forfaiting contracts with one of its banks was modified. As a result, the lease receivables forfaited under the relevant contract were derecognized. The income from the disposal of these lease receivables amounted to €7,112 thousand.

The **Security Technologies** operating segment includes companies that develop, produce and distribute KVM (keyboard, video and mouse) technology for high-security, reduced-latency and loss-free data transmission in mission-critical applications. At the end of November 2021, the Group acquired kvm-tec, a manufacturer of KVM products, to expand the range of IP-based technology. The company acquired was assigned to the Security Technologies segment. The income and expenses attributable to kvm-tec are included in these consolidated financial statements only for the month of December 2021. In the pro forma presentation of the operating segments, the income figures are presented as if kvm-tec had been acquired as of January 1, 2021. The disclosures for the reference period do not include any of kvm-tec's income or expenses. As a result, the comparability of the amounts is limited. Please refer to Note 35.1 for further information on the acquisition of kvm-tec.

The **Environmental Technologies** operating segment comprises companies that develop, produce and distribute high-precision devices for measuring, characterizing and generating particulate matter in the air.

Please refer to Note 7 for information on the alternative performance measures presented here, including the reconciliations to revenue and earnings before tax.

The operating activities of the Group as well as their segment reporting substantially depends on further company acquisitions. There may therefore be substantial adjustments to both the definition of segments as well as the figures reported on a regular basis in the future. Please refer to Note 9 for information on the allocation of revenue to the groups of products and services. Segment performance measures are reported on the basis of the management accounting, which largely corresponds to IFRS. Non-current assets are located almost exclusively in Germany.

Key performance indicator by business segment

	Reportable segments													
	Financial Technologies		Security Technologies		Environmental Technologies		Total		Central Functions		Consolidation		Group	
€ thousand	2021	2020*	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Revenue before PPA	16,332	-	28,924	33,543	21,279	18,114	66,534	51,657	361	-	(359)	(76)	66,536	51,581
Gross profit before PPA	15,607	-	20,616	24,680	17,095	13,874	53,318	38,555	361	-	(195)	-	53,484	38,555
Adjusted EBITDA	**13,702**	**-**	**8,037**	**11,778**	**7,328**	**6,283**	**29,067**	**18,061**	**(7,222)**	**(5,793)**	**(5)**	**-**	**21,841**	**12,270**
Trade working capital**	8,844	-	8,936	11,292	6,189	4,637	23,969	15,929	(2,684)	(472)	-	-	21,285	15,457
Cash and cash equivalents	9,641	-	9,328	9,486	4,078	5,442	23,047	14,927	7,280	108,616	-	-	30,327	123,544
Financial liabilities excluding leases	74,550	-	42,476	40,749	14,403	16,381	131,429	57,130	16,745	314	(7,241)	(3,184)	140,933	54,261
Financial liabilities from lease refinancing	128,179	-	-	-	-	-	128,179	-	-	-	-	-	128,179	-
Revenue by region														
EMEA	**10,117**	**-**	**16,971**	**19,186**	**14,478**	**14,228**	**41,565**	**33,414**	**361**	**-**	**(359)**	**(76)**	**41,567**	**33,338**
Germany	10,117	-	4,143	6,152	6,265	6,874	20,524	13,027	361	-	(359)	(76)	20,526	12,950
Netherlands	-	-	5,804	4,789	9	6	5,813	4,794	-	-	-	-	5,813	4,794
United Kingdom	-	-	302	406	1,698	912	2,000	1,318	-	-	-	-	2,000	1,318
France	-	-	1,542	2,004	1,713	1,769	3,255	3,773	-	-	-	-	3,255	3,773
Italy	-	-	656	449	1,285	486	1,942	935	-	-	-	-	1,942	935
Other	-	-	4,524	5,386	3,508	4,180	8,032	9,567	-	-	-	-	8,032	9,567
Americas	**-**	**-**	**7,534**	**9,237**	**2,456**	**1,952**	**9,990**	**11,189**	**-**	**-**	**-**	**-**	**9,990**	**11,189**
U.S.A.	-	-	7,470	9,214	1,969	1,693	9,439	10,907	-	-	-	-	9,439	10,907
Other	-	-	64	23	487	259	551	282	-	-	-	-	551	282
APAC	**-**	**-**	**4,419**	**5,120**	**4,345**	**1,934**	**8,764**	**7,054**	**-**	**-**	**-**	**-**	**8,764**	**7,054**
China	-	-	1,325	2,942	2,911	589	4,236	3,532	-	-	-	-	4,236	3,532
Other	-	-	3,094	2,178	1,433	1,345	4,527	3,522	-	-	-	-	4,527	3,522
Total* **	**10,117**	**-**	**28,924**	**33,543**	**21,279**	**18,114**	**60,319**	**51,657**	**361**	**-**	**(359)**	**(76)**	**60,321**	**51,581**

* The Group's Financial Technologies segment did not yet exist in the prior-year period. The blank entries were not audited as part of the audit of the consolidated financial statements.

** Trade working capital comprises inventories and trade receivables, less trade payables.

*** The presentation of revenue by region takes into account decreased earnings due to value step-up.

Pro forma operating segments

	Reportable segments													
	Financial Technologies		Security Technologies		Environmental Technologies		Total		Central Functions		Consolidation		Group	
€ thousand	2021	2020*	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Revenue before PPA	72,555	-	32,688	33,543	21,279	18,114	126,522	51,657	361	-	(359)	(76)	126,523	51,581
Gross profit before PPA	51,243	-	22,502	24,680	17,095	13,874	90,839	38,555	361	-	(195)	-	91,005	38,555
Adjusted EBITDA	**39,765**	**-**	**8,315**	**11,778**	**7,328**	**6,283**	**55,407**	**18,061**	**(7,222)**	**(5,793)**	**(5)**	**-**	**48,180**	**12,270**
Trade working capital**	8,844	-	8,936	11,292	6,189	4,637	23,969	15,929	(2,684)	(472)	-	-	21,285	15,457
Cash and cash equivalents	9,641	-	9,328	9,486	4,078	5,442	23,047	14,927	7,280	108,616	-	-	30,327	123,544
Financial liabilities excluding leases	74,550	-	42,476	40,749	14,403	16,381	131,429	57,130	16,745	314	(7,241)	(3,184)	140,933	54,261
Financial liabilities from lease refinancing	128,179	-	-	-	-	-	128,179	-	-	-	-	-	128,179	-
Revenue by region														
EMEA	**66,340**	**-**	**20,393**	**19,186**	**14,478**	**14,228**	**101,211**	**33,414**	**361**	**-**	**(359)**	**(76)**	**101,212**	**33,338**
Germany	66,340	-	5,824	6,152	6,265	6,874	78,429	13,027	361	-	(359)	(76)	78,430	12,950
Netherlands	-	-	5,868	4,789	9	6	5,878	4,794	-	-	-	-	5,878	4,794
United Kingdom	-	-	302	406	1,698	912	2,000	1,318	-	-	-	-	2,000	1,318
France	-	-	1,549	2,004	1,713	1,769	3,262	3,773	-	-	-	-	3,262	3,773
Italy	-	-	841	449	1,285	486	2,126	935	-	-	-	-	2,126	935
Other	-	-	6,009	5,386	3,508	4,180	9,517	9,567	-	-	-	-	9,517	9,567
Americas	**-**	**-**	**7,729**	**9,237**	**2,456**	**1,952**	**10,185**	**11,189**	**-**	**-**	**-**	**-**	**10,185**	**11,189**
U.S.A.	-	-	7,470	9,214	1,969	1,693	9,439	10,907	-	-	-	-	9,439	10,907
Other	-	-	259	23	487	259	746	282	-	-	-	-	746	282
APAC	**-**	**-**	**4,566**	**5,120**	**4,345**	**1,934**	**8,910**	**7,054**	**-**	**-**	**-**	**-**	**8,910**	**7,054**
China	-	-	1,454	2,942	2,911	589	4,365	3,532	-	-	-	-	4,365	3,532
Other	-	-	3,112	2,178	1,433	1,345	4,545	3,522	-	-	-	-	4,545	3,522
Total* **	**66,340**	**-**	**32,688**	**33,543**	**21,279**	**18,114**	**120,307**	**51,657**	**361**	**-**	**(359)**	**(76)**	**120,308**	**51,581**

* The Group's Financial Technologies segment did not yet exist in the prior-year period. The blank entries were not audited as part of the audit of the consolidated financial statements.

** Trade working capital comprises inventories and trade receivables, less trade payables.

*** The presentation of revenue by region takes into account decreased earnings due to value step-up.

9. Revenue

The Group generates revenue from contracts with customers according to IFRS 15 primarily from the following products and services.

- **Financial Technologies:** Brokering insurance policies and selling services as well as bicycles and e-bikes at the end of the lease term
- **Security Technologies:** Sale of KVM devices and KVM systems
- **Environmental Technologies:** Sale of measuring equipment and test rigs

Revenue is also generated from leases in accordance with IFRS 16.

- **Financial Technologies:** Interest income from finance leases, payments collected from operating leases and income from the disposal of lease receivables
- **Environmental Technologies:** Income from short-term leases of devices

9.1 Revenue from contracts with customers

The following table classifies the Group's revenue from contracts with customers (IFRS 15) by the most important product and service lines and the timing of revenue recognition. For information on primary geographical markets, please refer to Note 8. No customer accounted for more than 10% of the Group's revenue in the reporting period.

Contract balances

The following table shows trade receivables, contract assets and contract liabilities from contracts with customers.

€ thousand	Dec. 31, 2021	Dec. 31, 2020
Trade receivables	20,022	7,235
Contract assets	155	-
Contract liabilities	(1,430)	(1,055)

The acquisition of the Financial Technologies segment increased trade receivables in the reporting period by €26,111 thousand. (see Note 35.2). In the reporting period, an allowance for expected losses from trade receivables was reversed in the Financial Technologies segment in the amount of €9 thousand.

The contract assets relate to the newly acquired Financial Technologies segment. With service packages, an inspection may be performed at a time when the value of the service exceeds the amount invoiced up to this point. This surplus is deferred in the form of a contract asset. The net amount of this item varies depending on the contract month in which the inspection was performed.

The contract liabilities are realized as revenue in different periods depending on the segment. Contract liabilities in the Environmental Technologies and Security Technologies segments include advance payments from customers that are expected to be collected in the form of revenue within 12 months of the reporting date. Advance payments are of short-term nature. Advance payments of €378 thousand are attributable to test rigs and other measuring devices. Advance payments of €681 thousand were made by customers for extended warranty agreements.

The acquisition of the Financial Technologies segment increased contract liabilities from prepayments received for service packages in the reporting period by another €371 thousand.

The amount of €1,055 thousand contained in contract liabilities at the December 31, 2020 prior-year reporting date was recognized as revenue in the reporting period.

Unfulfilled performance obligations

The transaction price attributable to (unfulfilled or partly unfulfilled) remaining performance obligations for bicycle service packages is broken down as follows.

€ thousand	Dec. 31, 2021	Dec. 31, 2020
Within one year	267	-
In more than one year	1,981	-
Total	**2,248**	**-**

The Group expects revenue to be recognized for the remaining performance obligations/ claims service within one year or a fixed hourly rate will be billed. As per IFRS 15.B16, the Group does not report the transaction price for the unfulfilled performance obligations.

Disaggregation of revenue

	Financial Technologies		Security Technologies		Environmental Technologies		Group	
€ thousand	2021	2020	2021	2020	2021	2020	2021	2020
External customers								
Products sold	1,034	-	33,390	39,202	24,731	21,580	59,155	60,782
Services rendered	59	-	449	207	1,053	861	1,562	1,067
Customer/ claims service	(6)	-	-	-	-	-	(6)	-
Service packages	39	-	-	-	-	-	39	-
Commissions	431	-	-	-	-	-	431	-
External gross revenue	**1,558**	**-**	**33,839**	**39,409**	**25,784**	**22,441**	**61,182**	**61,849**
Sales allowances	-	-	(4,916)	(5,942)	(4,541)	(4,392)	(9,456)	(10,333)
Revenue from contracts with customers	**1,558**	**-**	**28,924**	**33,467**	**21,243**	**18,049**	**51,726**	**51,516**
Rental income	5	-	-	-	36	65	41	65
Interest income from finance leases	1,440	-	-	-	-	-	1,440	-
Payments from operating leases	1	-	-	-	-	-	1	-
Servicing of forfaited receivables	1	-	-	-	-	-	1	-
Income from the disposal of lease receivables	7,112	-	-	-	-	-	7,112	-
Revenue from leases	**8,559**	**-**	**-**	**-**	**36**	**65**	**8,595**	**65**
Revenue	**10,117**	**-**	**28,924**	**33,467**	**21,279**	**18,114**	**60,321**	**51,581**
Timing of revenue recognition								
Point in time	1,386	-	28,474	33,260	20,190	16,743	50,050	50,004
Over time	172	-	449	207	1,053	1,306	1,676	1,512
Revenue from contracts with customers	**1,558**	**-**	**28,924**	**33,467**	**21,243**	**18,049**	**51,726**	**51,516**
Other revenue	8,559	-	-	-	36	65	8,595	65
Revenue	**10,117**	**-**	**28,924**	**33,467**	**21,279**	**18,114**	**60,321**	**51,581**

9.2 Revenue from leases

In addition to revenue from contracts with customers in accordance with IFRS 15, the Group generates various types of income from leases (IFRS 16 and IFRS 9). These result directly from the Group's original business activities, particularly in the Financial Technologies segment and are therefore also reported in revenue.

Revenue includes interest income from finance leases, payments collected from operating leases and income from the disposal of lease receivables.

Income from the disposal of lease receivables arises as a result of the non-recourse forfaiting of lease receivables. In the event of forfaiting, the right to receive future lease payments and/ or residual values of leases is sold to a third-party financing partner. If the terms of this sale result in substantially all of the risks and rewards of the lease receivable sold transferring to the buyer, then the Group must derecognize the lease receivables. Forfaiting takes place at a discount from the nominal value of the lease payments to be collected in the future. Despite this discount, the selling price is normally well over the amortized cost that the Group applied to generate the lease. This results in income, which must be recognized in profit or loss for the period, that the Group reports in revenue.

10. Own work capitalized

Of own work capitalized, €861 thousand (previous year: €392 thousand) is attributable to development costs required to be capitalized under IAS 38. These development costs relate in particular to investments in the development of sensory measurement instruments.

The remaining €535 thousand results chiefly from internally produced demonstration devices that are provided without charge to customers on a temporary basis for marketing purposes (previous year: €477 thousand).

11. Cost of materials

Cost of materials is disaggregated as follows.

€ thousand	2021	2020
Cost of raw materials, consumables and supplies and purchased merchandise	12,860	13,377
Cost of purchased services	1,379	405
Cost of materials	**14,239**	**13,782**

The cost of purchased services relates mainly to the Financial Technologies segment and includes commission expenses of €257 thousand, flat tax assumed by the Group of €383 thousand and interest expense from the buyback obligation for bicycles at the end of the term from third-party leasing companies.

12. Personnel expenses

Personnel expenses break down as follows.

€ thousand	2021	2020
Wages and salaries	18,931	17,210
Social security and post-employment benefit costs	2,544	2,077
Personnel expenses excluding share-based payments	**21,475**	**19,287**
Share-based payments	279	242
Personnel expenses	**21,754**	**19,529**

Please refer to Note 38 for further information on share-based payment arrangements.

13. Other operating expenses

Other operating expenses break down as follows.

€ thousand	2021	2020
Costs from M&A transactions	14,528	-
Due diligence costs	1,102	995
Advertising and travel expenses	1,921	1,738
Preparation and audit of financial statements	1,214	816
Other legal and consulting fees	1,516	854
Insurance and contributions	791	953
Supervisory Board remuneration	276	185
IT costs	501	244
Other lease expenses (incidental costs, service components)	154	60
Expenses for leases of low-value assets	117	109
Foreign exchange losses	53	343
Incidental transaction costs	64	50
Expenses for short-term leases	31	16
Costs of initial listing	-	3,865
Other costs	4,616	1,813
Other operating expenses	**26,884**	**12,042**

Costs from M&A transactions relate to the acquisition of Bikeleasing and kvm-tec and mainly comprise a performance-based commission, expenses for due diligence and legal advice and notary costs. By contrast, the due diligence costs relate to the detailed examination of potential acquisitions that were either terminated in the reporting period or are still in progress as of the reporting date.

14. Other operating income

Other operating income breaks down as follows.

€ thousand	2021	2020
Currency translation gains	300	437
Prior-period income	300	271
Loan forgiveness (PPP loan)	213	218
Vehicle benefits in kind	190	161
Investment grants under IAS	118	195
Singapore support programs	21	66
Miscellaneous other operating income	808	147
Other operating income	**1,950**	**1,494**

Please refer to Note 2 for further information on loan forgiveness (PPP loans) the Singapore support programs.

15. Amortization, depreciation and impairment losses

Depreciation, amortization and impairment losses comprise depreciation of property, plant and equipment and amortization of intangible assets amounting to €9,684 thousand (previous year: €9,373 thousand). €2,093 thousand (previous year: €1,665 thousand) of this amount relates to depreciation of property, plant and equipment, right-of-use assets from leases and amortization of intangible assets not identified in the course of the purchase price allocation for the acquisition of subsidiaries. Depreciation of right-of-use assets from leases amounts to €701 thousand (previous year: €544 thousand).

Amortization of intangible assets identified in the course of acquisitions of subsidiaries are also included. These amounts are attributable to capitalized intangible assets as follows.

€ thousand	2021	2020
Basic technologies	3,421	3,400
Customer base	3,041	2,468
Trademarks	1,128	1,020
Order backlog	-	820
Total	**7,590**	**7,708**

16. Financial result

Finance costs are composed of the following items.

€ thousand	2021	2020
Interest on financial liabilities at amortized cost	2,814	1,945
Negative interest on bank balances	565	299
Interest on lease liabilities	37	31
Unwinding of discount on NCI put liability	129	119
Remeasurement of NCI put provision	2,611	1,496
Finance costs	**6,156**	**3,890**

Please refer to Note 40 for further information on the NCI put.

17. Income tax expense

Income taxes recorded in profit or loss for the period break down as follows.

€ thousand	2021	2020
Current tax expense		
Current year	3,492	3,558
Deferred tax income		
Reversal of temporary differences	(111)	(1,637)
Total	**3,381**	**1,921**

Change in deferred taxes

€ thousand	Jan. 1	Acquired through business combinations	Recognized in profit or loss	Net exchange differences	Dec. 31 Net	Dec. 31 Deferred tax assets	Dec. 31 Deferred tax liabilities
2021							
Goodwill	452	-	(45)	36	443	443	-
Other intangible assets	(16,296)	(29,447)	1,865	(220)	(44,098)	-	(44,098)
Property, plant and equipment	-	60,548	(13)	-	60,535	60,535	-
Inventories	90	-	(18)	-	72	72	-
Trade receivables	-	(5,168)	3,803	-	(1,365)	-	(1,365)
Contract assets	-	(44)	(2)	-	(46)	-	(46)
Lease receivables	-	(74,750)	38,823	-	(35,928)	-	(35,928)
Other non-financial assets	-	7,368	346	-	7,715	7,715	(0)
Contract liabilities	-	103	9	-	111	111	-
Financial liabilities	-	5,549	(44,649)	-	(39,100)	-	(39,100)
Trade payables	-	-	(9)	24	15	15	-
Tax assets (liabilities) before offsetting					**(51,645)**	**68,891**	**(120,537)**
Offsetting of taxes						(68,348)	68,348
Tax assets (liabilities), net					**(51,645)**	**544**	**(52,189)**
2020							
Goodwill	542	-	(46)	(44)	452	452	-
Other intangible assets	(18,556)	-	2,004	256	(16,296)	-	(16,296)
Property, plant and equipment	-	-	11	-	11	11	-
Inventories	440	-	(350)	-	90	90	-
Trade payables	-	-	18	(8)	10	10	-
Tax assets (liabilities) before offsetting					**(15,733)**	**563**	**(16,296)**
Offsetting of taxes					-	-	-
Tax assets (liabilities), net					**(15,733)**	**563**	**(16,296)**

The deferred tax liabilities of €52,189 thousand relate almost entirely to the customer bases, basic technologies and trademarks identified in the course of purchase price allocation for the acquisitions of the subsidiaries (PPA assets) and will be reversed through profit or loss (but with no effect on cash flow) in the future as these PPA assets are amortized. No tax payments are included in this figure, so there is no outflow of cash.

Reconciliation of effective tax rate

The differences between the expected income tax expense based on the calculated tax rate and the actual income tax expense can be seen in the following table. The applied tax rate is based on the German Group income tax rate. The German Group tax rate comprises the corporate income tax rate of 15% (previous year: 15%), plus the solidarity surcharge of 5.5% (previous year: 5.5%) and a trade tax rate of 14.7% (previous year: 15.1%). The tax rate for trade tax is determined by the average trade tax multiplier of 420% (previous year: 430%).

Deferred taxes for the assets identified at Palas were recognized based on the tax rate of 31% (previous year: 31%).

Deferred taxes for the assets identified at IHSE were recognized based on the tax rates of 17% to 28% (previous year: 17% to 28%).

Deferred taxes for the assets identified at Bikeleasing were recognized based on the tax rate of 30%.

Income tax reconciliation

€ thousand	2021	% of earnings	2020	% of earnings
Earnings before tax	**(15,380)**		**(4,838)**	
Tax based on German tax rate of the entity	**4,614**	**30%**	**1,494**	**31%**
Tax-exempt income	103	1%	89	2%
Tax rate effects	(87)	(1%)	(69)	(1%)
Permanent differences	(1,322)	(9%)	(524)	(11%)
Non-deductible operating expenses	(3,190)	(21%)	(34)	(1%)
Trade tax effects	(25)	(0%)	-	-
Losses in the current year for which no deferred tax asset was recognized	(3,744)	(24%)	(2,883)	(60%)
Recognition of tax effects of previously unrecognized tax loss carryforwards	294	2%	10	0%
Prior-period (taxable profit)/ tax loss	(24)	(0%)	(4)	(0%)
Income tax expense	**(3,381)**	**(22%)**	**(1,921)**	**(40%)**

Unrecognized deferred tax assets

Group entities have tax loss carryforwards of €45,466 thousand at the reporting date (previous year: €22,755 thousand). This would result in a tax effect of €14,264 thousand (previous year: €7,263 thousand). No deferred tax assets were recognized for these tax loss carryforwards as future taxable earnings in the relevant income tax consolidation groups were not sufficiently concrete at the date of preparing the financial statements.

18. Earnings per share

The following table presents the calculation of earnings per share, based on the profit or loss attributable to the shareholders of BKHT.

	2021	2020
Profit or loss for the period in € thousand	(15,881)	(6,729)
Weighted average number of shares outstanding	10,433,339	8,341,577
Earnings per share (€)	**(1.52)**	**(0.81)**

Adjusted pro forma earnings per share are shown as follows. Please refer to Note 7 for further information.

Adjusted pro forma	2021	2020
Profit or loss for the period in € thousand	6,700	4,436
Weighted average number of shares outstanding	10,946,536	8,341,577
Adjusted earnings per share (€)	**0.61**	**0.53**

III. Notes to the statement of financial position

19. Property, plant and equipment

There were no indicators of any need to charge impairment losses on property, plant and equipment in the reporting period. Please refer to Note 29 for information on pledges of items of non-current assets as collateral for liabilities.

Please refer to Note 39.1 for further information on right-of-use assets under leases.

€ thousand	Land and buildings	Technical equipment and machinery	Operating and office equipment	Prepayments, construction in progress	Total
Acquisition cost					
Jan. 1, 2020	**8,084**	**1,616**	**1,199**	**-**	**10,899**
Additions	1	639	305	10	954
Disposals	-	(179)	(17)	-	(195)
Net exchange differences	-	-	(12)	-	(12)
Dec. 31, 2020	**8,085**	**2,076**	**1,475**	**10**	**11,646**
Acquisitions through business combinations	355	821	575	-	1,751
Additions	13	2,314	412	3	2,741
Disposals	-	(119)	(23)	-	(142)
Reclassifications			10	(10)	
Net exchange differences	-	26	35	-	62
Dec. 31, 2021	**8,453**	**5,117**	**2,485**	**3**	**16,058**
Accumulated depreciation					
Jan. 1, 2020	**18**	**195**	**125**	**-**	**337**
Amortization, depreciation and impairment losses	215	350	403	-	968
Disposals	-	(114)	(16)	-	(131)
Net exchange differences	-	(0)	(10)	-	(10)
Dec. 31, 2020	**233**	**430**	**501**	**-**	**1,164**
Amortization, depreciation and impairment losses	217	522	388	-	1,126
Disposals	-	(70)	(10)	-	(81)
Net exchange differences	-	7	24	-	31
Dec. 31, 2021	**450**	**888**	**903**	**-**	**2,241**
Right-of-use assets, January 1, 2020	518	242	-	-	760
Right-of-use assets, December 31, 2020	893	341	-	-	1,233
Right-of-use assets, December 31, 2021	**1,545**	**795**	**-**	**-**	**2,339**
Carrying amounts					
Jan. 1, 2020	8,584	1,664	1,074	-	11,322
Dec. 31, 2020	8,744	1,986	974	10	11,715
Dec. 31, 2021	**9,547**	**5,024**	**1,582**	**3**	**16,156**

20. Intangible assets and goodwill

Intangible assets changed as follows in the reporting period.

€ thousand	Goodwill	Development expenses	Other intangible assets: IT licenses, software, website	Prepayments	Trademarks	Basic technologies	Customer base	Total
Acquisition cost								
Jan. 1, 2020	**91,358**	**794**	**197**	**87**	**10,200**	**25,100**	**34,900**	**162,636**
Additions	-	392	95	-	-	-	-	487
Disposals	-	-	-	-	-	-	-	-
Reclassifications	-	-	87	(87)	-	-	-	-
Net exchange differences	-	-	-	-	-	-	(1,378)	(1,378)
Dec. 31, 2020	**91,358**	**1,186**	**379**	**-**	**10,200**	**25,100**	**33,522**	**161,746**
Acquisitions through business combinations	152,221	526	387	-	13,100	3,374	82,000	251,609
Additions	-	861	338	97	-	-	-	1,296
Disposals	-	-	-	-	-	-	-	-
Reclassifications	-	-	87	(87)	-	-	-	
Net exchange differences	-	-	3	-	-	-	1,220	1,223
Dec. 31, 2021	**243,579**	**2,573**	**1,194**	**10**	**23,300**	**28,474**	**116,743**	**415,874**
Accumulated depreciation								
Jan. 1, 2020	**-**	**84**	**41**	**-**	**255**	**983**	**688**	**2,050**
Amortization, depreciation and impairment losses	-	78	75	-	1,020	3,400	2,468	7,041
Disposals	-	-	-	-	-	-	-	-
Net exchange differences	-	-	(0)	-	-	-	(81)	(81)
Dec. 31, 2020	**-**	**163**	**117**	**-**	**1,275**	**4,383**	**3,074**	**9,012**
Amortization, depreciation and impairment losses	-	102	164	-	1,128	3,421	3,041	7,856
Disposals	-	-	-	-	-	-	-	-
Net exchange differences	-	-	0	-	-	-	134	134
Dec. 31, 2021	**-**	**265**	**281**	**-**	**2,403**	**7,804**	**6,249**	**17,001**
Carrying amounts								
Jan. 1, 2020	91,358	710	157	87	9,945	24,117	34,212	160,585
Dec. 31, 2020	91,358	1,024	262	-	8,925	20,717	30,448	152,733
Dec. 31, 2021	**243,579**	**2,309**	**913**	**10**	**20,897**	**20,670**	**110,494**	**398,872**

The useful lives of other amortized intangible assets by category are as follows.

	Years
IT, software, licenses, website	3
Trademarks	10
Basic technologies	5-8
Customer base	10-15

Capitalized development expenses are amortized on a straight line basis over five years when the development is complete and series production has started.

The annual impairment test of goodwill was conducted as of December 31, 2021. The value in use or the fair value less the costs to sell of the relevant cash-generating unit (**CGU**) are generally used to test the recoverability of goodwill.

Long-term corporate planning in each case extends to the end of the detailed planning period of up to five years after the reporting date. The significant assumptions to which the long-term corporate planning is sensitive are growth in new business and the purchase price of materials. These developments were assessed and identified based on past experience, publicly available data and by using the existing sales pipeline and management's assessment of future sales market conditions. Cash flows are discounted using risk-appropriate (pre-tax) discount rates on the reporting date. The cost of capital or cost of equity rates used for discounting are based on the risk-free rate and on a market risk premium. In addition, the beta factor, borrowing costs and the capital structure are taken into account; these were derived individually for the CGUs based on an appropriate peer group. The revenue growth rates for the relevant markets were used as the basis for determining cash flows. The assumptions made are subject to a certain sensitivity.

Goodwill of €22,001 thousand acquired in the course of the purchase of Palas GmbH in December 2018 was allocated to the "Palas" CGU for impairment testing. The assumptions used to determine the recoverability of goodwill are shown in the following table.

	Dec. 31, 2021	Dec. 31, 2020
Determination of recoverable amount	Value in use	Value in use
Discount rate	7.18%	6.99%
Pre-tax discount rate	7.51%	7.11%
Sustainable growth rate	1.4%	1.5%
Forecast EBITDA growth rate (average for the next five years)	24%	21%

The difference between the recoverable amount of the "Palas" CGU and the carrying amount is positive. For this reason, there was no impairment of the "Palas" CGU as of the reporting date.

Goodwill of €69,357 thousand acquired in the course of the acquisition of IHSE in December 2019 was allocated to the "IHSE" CGU for impairment testing. The goodwill of kvm-tec, which was acquired in the reporting period, was also assigned to the "IHSE" CGU. The assumptions used to determine the recoverability of goodwill are shown in the following table.

	Dec. 31, 2021	Dec.31, 2020
Determination of recoverable amount	Value in use	Value in use
Discount rate	8.48%	8.36%
Pre-tax discount rate	8.64%	8.49%
Sustainable growth rate	1.4%	1.5%
Forecast EBITDA growth rate (average for the next five years)	20%	18%

The difference between the recoverable amount of the "IHSE" CGU and the carrying amount is positive. For this reason, there was no impairment of the "IHSE" CGU unit as of the reporting date.

Goodwill of €141,300 thousand acquired in the course of the acquisition of Bikeleasing in December 2021 was allocated to the "Bikeleasing" CGU for impairment testing. The assumptions used to determine the recoverability of goodwill are shown in the following table.

	Dec. 31, 2021	Dec. 31, 2020
Determination of recoverable amount	Fair value less costs to sell	-
Discount rate	10.26%	-
Pre-tax discount rate	10.26%	-
Sustainable growth rate	1.0%	-
Forecast EBT growth rate (average for the next two years)	58%	-

The difference between the recoverable amount of the "Bikeleasing" CGU and the carrying amount is positive. For this reason, there was no impairment of the "Bikeleasing" CGU unit as of the reporting date.

21. Inventories

Inventories are composed of the following items.

	Dec.31, 2021	Dec. 31, 2020
Raw materials and consumables	7,441	5,299
Work in progress	2,203	2,556
Finished goods	2,924	1,855
Inventories	**12,568**	**9,710**

All inventories are used to secure liabilities. Please refer to Note 29 for further information. No impairment losses or reversals of impairment losses were recognized in profit or loss in the reporting period.

22. Trade receivables, contract assets and lease receivables

Trade receivables amount to €20,022 thousand (previous year: €7,235 thousand). The increase was mostly attributable to the Financial Technologies segment. Insurance margins to be collected in the future are reported in trade receivables. Lease receivables from finance leases total €119,759 thousand (previous year: €- thousand).

An impairment loss is expected when certain issues arise, such as late payment over time or the initiation of enforcement measures are in place. The following table shows changes in impairment losses relating to trade receivables and contract assets and lease receivables. Please refer to Note 5.11 for further information.

	Impairment losses according to the simplified approach		
€ thousand	Trade receivables	Contract assets	Lease receivables
Jan. 1, 2021	583	-	-
Utilization	(43)	-	(8)
Direct write-down	-	-	-
Acquisitions through business combinations	17	-	160
Addition	8	-	153
Reversal	(15)	-	-
Exchange rate-related and other changes	34	-	-
Dec. 31, 2021	**583**	**-**	**305**
Jan. 1, 2020	450	-	-
Utilization	-	-	-
Direct write-down	-	-	-
Acquisitions through business combinations	-	-	-
Addition	147	-	-
Reversal	-	-	-
Exchange rate-related and other changes	(14)	-	-
Dec. 31, 2020	**583**	**-**	**-**

23. Other assets

Other assets amounted to €15,280 thousand (previous year: €394 thousand) and relate mainly to unavailable cash in the SPV from the securitization of lease receivables and claims for reimbursement of VAT as well as security deposits paid.

24. Cash and cash equivalents

Cash and cash equivalents consist of the following items.

€ thousand	Dec. 31, 2021	Dec. 31, 2020
Bank balances	30,324	123,540
Cash in hand	3	4
Cash and cash equivalents in statement of financial position	**30,327**	**123,544**
Overdraft facilities used for cash management	(995)	-
Cash and cash equivalents shown in the statement of cash flows	**29,331**	**123,544**

The carrying amount of these assets corresponds to their fair value.

25. Subscribed capital

BKHT's share capital as of December 31, 2021 amounts to €10,386,808 (previous year: €10,386,808) and is composed of 10,386,808 registered shares, each with a notional value of €1.00 per share.

The classification of and changes in equity during the reporting period are presented in the consolidated statement of changes in equity.

According to voting rights disclosures, the distribution of the shares among the shareholders as of the reporting date was as follows.

Shareholder	% interest
Marco Brockhaus (direct and indirect)	22.4%
Kayne Anderson Rudnick Investment Management LLC (Virtus Investment Partners, Inc.)	10.0%
DWS Investment GmbH	7.2%
ABACON Invest GmbH	6.0%
ACUSTICA Zweite Verwaltungs GmbH	5.1%
Janus Henderson Group plc	4.8%
ORGENTEC Holding GmbH	3.9%
VESTA GmbH	3.3%
Dr. Liedtke Vermögensverwaltung GmbH	3.0%
Paladin Asset Management Investmentaktiengesellschaft	3.0%
Other free float	31.4%
Total	**100.0%**

Authorized and contingent capital

At the Company's Annual General Meeting on June 27, 2019, the share capital was contingently increased by up to €425,200 (**Contingent Capital 2019/I**). The contingent capital serves to grant rights to holders of share warrants from the stock option program. Please refer to Note 38.1 for further information.

On July 9, 2020, the Annual General Meeting authorized the Executive Board, with the consent of the Supervisory Board, to increase the share capital on one or more occasions until July 8, 2025, in exchange for cash and/ or contributions in kind up to a total of €4,959,029, with the option to exclude shareholders' preemptive rights (**Authorized Capital 2020/II**). At the same time, the remaining Authorized Capital 2017/I, 2019/I and 2020/I were revoked. Additionally, the share capital was contingently increased by up to €2,000,000 (**Contingent Capital 2020/I**). In connection with the creation of Contingent Capital 2020/I, the Executive Board was authorized, with the consent of the Supervisory Board, to issue bonds with warrants and/ or convertible bonds in a maximum total amount of €75,000,000.

26. Capital increase not yet implemented

The consideration for the acquisition of Bikeleasing paid partially in BKHT shares totaled 560,829 new shares valued at €13,003 thousand. As of the reporting date, the capital increase had not yet been entered in the commercial register. It was therefore reported under the "Capital increase not yet implemented" item in the statement of financial position. This capital increase was entered in the commercial register on February 10, 2022. Please refer to Notes 35.2 and 42 for further information.

27. Capital reserves

The capital reserve includes the premiums arising from the issue of shares, less costs for the capital increases and distributable capital reserves.

28. Other reserves

Other reserves include the accumulated personnel expenses from equity-settled share-based payments under IFRS 2. Please refer to Note 38.1 for further information.

29. Financial liabilities

Financial liabilities are composed of the items below.

Financial liabilities

€ thousand	Non-current Dec. 31, 2021	Non-current Dec. 31, 2020	Current Dec. 31, 2021	Current Dec. 31, 2020	Total Dec. 31, 2021	Total Dec. 31, 2020
Senior loans	**64,335**	**40,249**	**15,644**	**5,127**	**79,979**	**45,376**
Senior acquisition loans	64,335	40,249	5,644	5,127	69,979	45,376
Registered bond	-	-	10,000	-	10,000	-
Subordinated loans	**49,696**	**-**	**-**	**-**	**49,696**	**-**
Subordinated acquisition loans	34,571	-	-	-	34,571	-
Vendor loans	15,125	-	-	-	15,125	-
Real estate loans	**5,540**	**5,796**	**402**	**384**	**5,942**	**6,180**
Other financial liabilities	**4,375**	**2,073**	**941**	**632**	**5,316**	**2,705**
Lease liabilities	1,409	621	941	632	2,350	1,253
NCI put liability	1,581	1,451	-	-	1,581	1,451
Success fee liability Bikeleasing	1,385	-	-	-	1,385	-
Financial liabilities excluding leases	**123,946**	**48,118**	**16,987**	**6,143**	**140,933**	**54,261**
Lease refinancing	**115,654**	**-**	**12,525**	**-**	**128,179**	**-**
Securitized liabilities	65,000	-	110	-	65,110	-
Loans for lease financing	31,924	-	995	-	32,919	-
Financial liabilities from forfaiting	398	-	5,874	-	6,272	-
Buyback and servicing of third-party leases	18,332	-	5,546	-	23,878	-
Total financial liabilities	**239,600**	**48,118**	**29,512**	**6,143**	**269,112**	**54,261**

Senior loans

Senior acquisition loans | The senior acquisition loans were taken out at the time of the acquisition of Palas, IHSE and Bikeleasing. They serve the proportionate debt financing of the purchase prices of the interests in the M&A transactions and are fully secured by the assignment of non-current and current assets as collateral.

Registered bond | Bikeleasing uses a registered bond for its financing independently of acquisitions.

Subordinated loans

Subordinated acquisition loan | As part of the acquisition of Bikeleasing, a subordinated acquisition loan was assumed in the reporting period at the level of the intermediate holding company BCM Erste Beteiligungs GmbH. The purpose of the subordinated loan is the partial debt financing of the purchase price of the interest in the acquisition.

Vendor loan | In the same context, BKHT financed a portion of the purchase price payment for the interests in Bikeleasing not with cash but with a vendor loan from Bikeleasing's founders.

Real estate loans

The real estate loans relate to construction finance for IHSE's headquarters in Oberteuringen on Lake Constance. They are fully secured by land charges.

Other financial liabilities

Lease liabilities | The Group's lease liabilities represent the recognized present values of future lease payments discounted to the reporting date. Financial liabilities arising from leases in the amount of €558 thousand were repaid and €35 thousand was paid as interest expense for leasing in the reporting period. Future cash flows at the reporting date amounted to €2,401 thousand. Potential further future cash outflows were not recognized as lease liabilities as it is not reasonably certain that the leases will be extended or terminated. Disclosures on right-of-use assets from leases can be found in Note 39.1.

NCI put liability | In the course of the acquisition of Palas in the short fiscal year 2018, the Group entered into an obligation to the remaining shareholder manager to acquire their 30% share at a later date and applies the anticipated acquisition method to the accounting for this liability. Under this method, the acquisition is presented as if the other shareholder had already exercised their purchase option. This means that the shares underlying the option are already deemed to be acquired as of the acquisition date. Consequently, there are no non-controlling interests in the Group in relation to Palas Holding GmbH. A portion of the obligation arising from this option is recorded as an NCI put liability in the consolidated statement of financial position. The liability is recognized at amortized cost and changes in its value are recognized in profit or loss. Please refer to Note 40 for further information.

Success fee liability Bikeleasing | In the reporting period, the broker received a fee for brokering the Bikeleasing transaction. This was recognized in profit or loss for the period. In addition, the broker has the right to claim a proportional interest in a possible future increase in Bikeleasing's value. This claim comes due upon sale of the shares or, if no sale occurs, then 10 years after acquisition. The claim must be reported as a liability.

Lease refinancing

Securitized liabilities | In order to finance its robust growth, Bikeleasing launched a securitization program in August 2021 with a major German insurance company in parallel to its existing funding options. The securitization transaction involved selling lease receivables to a special purpose vehicle (SPV) in several tranches for a total volume of up to €100,000 thousand. The SPV issues a series of notes to the investor for the purchase of the lease receivables. The lease receivables held in the Group are the source and collateral for settling the notes. As of the reporting date, these totaled €46,464 thousand. The securitization transaction remains in the ramp-up phase until April 2022. Due to availability, a situation may arise where fewer lease receivables are purchased than notes are issued. Accordingly, these may not be used otherwise as collateral; only the investor is entitled to them. The notes carry annual interest of 1.25%, and all of the tranches rank equally. Due to its contractual structure, the SPV must be consolidated by the Group, which is why both the lease receivables and the securitized liabilities (notes) are reported in the consolidated statement of financial position.

Calculation of net financial debt

€ thousand	2021	2020
Senior loans	79,979	45,376
Subordinated loans	49,696	-
Real estate loans	5,942	6,180
Cash and cash equivalents*	(30,327)	(123,544)
Net debt from loans	**105,290**	**(71,988)**
Other financial liabilities	**5,316**	**2,705**
Lease refinancing	128,179	-
Lease receivables	(119,759)	-
Net debt from leasing	**8,420**	**-**
Net debt	**119,027**	**(69,284)**

* Cash and cash equivalents are deducted from the loan in this presentation for purposes of analysis. There is no corresponding ring fencing in this case.

Loans for lease refinancing | Another form of refinancing in the leasing business is loan financing, i.e., the Group assumes loans from banks in the amount of the lease volume to be financed. The lease receivables and lease assets serve as collateral for the Group's loan liabilities. A total of €33,035 thousand in lease receivables are financed with loans.

Financial liabilities from forfaiting | In addition to the securitization transaction and conventional loans, leases can also be refinanced through forfaiting. Forfaiting involves assigning the claims from leases along with all associated rights to banks. To the extent that the terms of the forfaiting agreement do not permit the forfaited lease receivables to be derecognized, they remain on the consolidated statement of financial position and must be reported as a liability in the amount of the amount received by way of forfaiting. In addition, the Group as a lessor provides additional services such as dunning, liquidating leased assets from terminated leases, document retention and reporting. In order to service the forfaited lease receivables from finance leases, the Group recognizes liabilities from administration and settlement obligations totaling €2,668 thousand. This generally relates to deferred future personnel expenses.

Buyback and servicing of third-party leases | Part of the leasing business is handled by non-Group leasing companies. The bicycles are sold to third-party leasing partners in return for a commission for this purpose. At the same time, the Group commits to buying back these bicycles at the end of the lease term at a price amounting to 10% of the original net purchase price. In accounting terms, this is not treated as a sale due to the fixed buyback agreement, but instead a finance lease for which a residual value receivable and a liabilities for the buyback obligation are recognized in the same amount, €21,209 thousand. This is a balance sheet extension based on special rules in IFRS 16. At the end of the lease term, approximately 97% of the bicycles are sold to the employees/ users. The remaining amount of the liability relates, as in the case of forfaiting, to future servicing.

Information on the extent to which the Group is exposed to interest rate and liquidity risks can be found in Note 34.4.

Reconciliation of changes in liabilities to cash flows from operating and financing activities

	Operating activities			Financing activities								
€ thousand	Financial liabilities used for refinancing	Securitized liabilities	Total	Senior loans	Subordinated loans	Real estate loans	Lease liabilities	Financial liabilities from forfaiting	Buyback and servicing of third-party leases	Success fee liability	NCI put liability	Total
Jan. 1, 2021	**-**	**-**	**-**	**45,376**	**-**	**6,180**	**1,253**	**-**	**-**	**-**	**1,451**	**54,260**
Loans and other borrowed funds raised	-	5,000	5,000	29,100	34,300	-	-	-	-	-	-	63,400
Repayment of lease liabilities	-	-	-	-	-	-	(558)	-	-	-	-	(558)
Repayment of loans and other borrowed funds	-	-	-	(4,583)	-	(607)	-	-	(189)	-	-	(5,379)
Interest paid	-	(17)	(17)	(1,578)	(97)	(87)	(35)	-	-	-	-	(1,797)
Total change in cash flows	**-**	**4,983**	**4,983**	**68,315**	**34,203**	**5,486**	**660**	**(0)**	**(189)**	**-**	**1,451**	**109,926**
New leases according to IFRS 16	-	-	-	-	-	-	481	-	-	-	-	481
Changes due to the acquisition of subsidiaries	31,820	60,000	91,820	10,000	15,000	368	1,175	5,839	20,885	1,385	-	54,653
Change in overdraft facilities	660	-	660	-	-	-	-	-	-	-	-	-
Other changes	-	-	-	-	-	-	-	433	3,182	-	-	3,614
Interest expense	439	127	566	1,664	493	87	35	-	-	-	130	2,409
Dec. 31, 2021	**32,919**	**65,110**	**98,029**	**79,979**	**49,696**	**5,941**	**2,350**	**6,272**	**23,878**	**1,385**	**1,581**	**171,083**

Reconciliation of changes in liabilities to cash flows from financing activities, previous year

€ thousand	Liabilities to banks	Other financial liabilities	Lease liabilities	NCI put liability	Total
Jan. 1, 2020	**56,023**	**3,199**	**770**	**1,332**	**61,324**
Loans and other borrowed funds raised	-	-	-	-	-
Repayment of lease liabilities	-	-	(539)	-	(539)
Repayment of loans and other borrowed funds	(4,553)	(3,000)	-	-	(7,553)
Interest paid	(1,673)	(299)	(31)	-	(2,003)
Total change in cash flows from financing activities	**(6,226)**	**(3,299)**	**(569)**	**-**	**(10,094)**
New leases according to IFRS 16	-	-	1,021	-	1,021
Interest income	(86)	-	-	-	(86)
Interest expense	1,845	100	31	119	2,095
Dec. 31, 2020	**51,556**	**-**	**1,253**	**1,451**	**54,261**

30. Trade payables

Trade payables amounted to €11,305 thousand (previous year: €1,488 thousand). Information on the Group's liquidity risks relating to trade payables can be found in Note 34.4.

31. Other liabilities

Other liabilities amount to €15,100 thousand (previous year: €4,852 thousand). The non-current portion of this item amounting to €4,570 thousand results from the contingent consideration from the acquisition of kvm-tec (Note 35.1). The current portion totaling €10,531 thousand relates primarily to outstanding invoices, personnel-related and other accruals and liabilities from taxes and duties.

32. Other provisions

Other provisions developed as follows.

€ thousand	Warranties	NCI put provision	Total
Jan. 1, 2021	**293**	**1,905**	**2,198**
Acquisitions through business combinations	50	-	50
Provisions recognized	96	2,694	2,790
Provisions utilized	(151)	-	(151)
Provisions reversed	-	-	-
Dec. 31, 2021	**288**	**4,599**	**4,887**
of which: Non-current	165	4,599	4,764
of which: Current	123	-	123
Jan. 1, 2020	**287**	**327**	**614**
Provisions recognized	61	1,578	1,639
Provisions utilized	(55)	-	(55)
Provisions reversed	-	-	-
Dec. 31, 2020	**293**	**1,905**	**2,198**
of which: Non-current	142	1,905	2,048
of which: Current	151	-	151

Please refer to Note 40 for information on the NCI put provision.

33. Contingent liabilities

Current and non-current assets have been assigned as security and land charges are in place as collateral for bank loans.

IV. Other disclosures

34. Financial instruments

34.1 Classification and fair values

The Group has financial instruments that are not measured at fair value in the statement of financial position. In the case of these instruments, the fair values do not differ significantly from the carrying amounts, as the interest receivables and interest payables either approximate current market rates or the instruments are short term.

The adjacent table shows the carrying amounts and fair values of financial assets and financial liabilities, including their level in the fair value hierarchy. It does not contain information on the fair value of financial assets and financial liabilities that are not measured at fair value if the carrying amount represents an appropriate approximation of the fair value.

Financial instruments not measured at fair value

Type	Valuation technique
Financial liability	Discounted cash flows: The measurement model takes account of the present value of the expected payments, discounted using the Group-specific current interest rate.

Carrying amounts and fair values

	Carrying amount			Fair value			
€ thousand	Financial assets at amortized cost	Other financial liabilities	Total	Level 1	Level 2	Level 3	Total
Dec. 31, 2021							
Trade receivables	20,022	-	20,022				
Other receivables	15,280	-	15,280				
Lease receivables (valued under IFRS 16)	119,759	-	119,759	-	119,759	-	119,759
Cash and cash equivalents	30,327	-	30,327				
Assets not measured at fair value	**185,388**	**-**	**185,388**				
Loans		135,617	135,617	-	135,617	-	135,617
NCI put liability (Note 40)		1,581	1,581	-	-	1,581	1,581
Trade payables		11,305	11,305				
Lease refinancing		128,179	128,179	-	128,179	-	128,179
Success fee liability Bikeleasing		1,385	1,385	-	-	1,385	1,385
Other liabilities		10,648	10,648				
Financial liabilities not measured at fair value		**288,715**	**288,715**				
Contingent consideration		4,452	4,452	-	-	4,452	4,452
Financial liabilities measured at fair value		**4,452**	**4,452**				
Dec. 31, 2020							
Trade receivables	7,235	-	7,235				
Other receivables	394	-	394				
Lease receivables	-	-	-				
Cash and cash equivalents	123,544	-	123,544				
Assets not measured at fair value	**131,173**	**-**	**131,173**				
Secured bank loans	-	51,556	51,556	-	51,224	-	51,224
NCI put liability (Note 40)	-	1,451	1,451	-	-	1,451	1,451
Securitized liabilities	-	-	-				
Trade payables	-	1,488	1,488				
Financial liabilities not measured at fair value	**-**	**54,496**	**54,496**				

34.2 Net profits and losses

The following table shows the net profits and losses from financial assets and financial liabilities at amortized cost.

€ thousand	2021	2020
Financial assets		
Interest	-	-
Impairment losses	(161)	(147)
Amortization	-	-
Profit or loss from disposal	7,112	-
Net profit or loss	**6,951**	**(147)**
Financial liabilities		
Interest	(5,554)	(3,560)
Impairment losses	-	-
Amortization	1	-
Profit or loss from disposal	-	-
Net profit or loss	**(5,553)**	**(3,560)**

Profit or loss from the disposal of forfaited lease receivables in the amount of €7,112 thousand is included in the profit or loss from financial assets carried at amortized cost (previous year: €- thousand).

Liabilities from administration and settlement obligations for servicing forfaited lease receivables are amortized over the remaining term of the relevant lease in the amount of €1 thousand, which is reported in revenue.

The unwinding of the discount on liabilities for the obligation to transfer future lease and premium payments from operating lease forfaiting totaling €0 thousand is recognized as finance cost.

34.3 Credit risk exposure

The following overview outlines trade receivables, contract assets and lease receivables categorized according to the three-stage model. The simplified approach was applied to calculate the risk provision in accordance with IFRS 9 for all trade receivables, contract assets and lease receivables.

Assignment to the risk classes is based on third-party rating information. A heightened risk is assumed when the underlying credit risk index exceeds a certain threshold. Another increase over a second threshold then results in assignment to the "non-performing" category.

	Dec. 31, 2021			Dec. 31, 2020		
€ thousand	Low risk	Heightened risk	Non-performing	Low risk	Heightened risk	Non-performing
Simplified Approach						
Trade receivables	20,475	149	504	7,639	89	404
Contract assets	155	0	0	-	-	-
Lease receivables	119,608	225	239	-	-	-

34.4 Financial risk management

The Company's Executive Board is responsible for developing and monitoring the risk management system. At the level of the subsidiaries, the managing directors are responsible for risk management. Appropriate processes for payables and receivables management, liquidity planning, monthly reporting, etc., are implemented at Palas, IHSE and Bikeleasing.

The Executive Board defines the principles and goals of the Group's financial management. The primary goals are to safeguard liquidity and limit financial risks. Despite the current low interest rate level, our goal is therefore not to enter into any risks from the investment of the Group's cash funds. To ensure this, these funds are held in bank accounts at domestic credit institutions until they are needed to finance acquisitions.

There are no plans to pay dividends until further notice under BKHT's dividend policy. The aim is to invest existing cash funds to acquire high-margin, fast-growing technology companies.

Credit risk

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. Credit risk essentially arises from trade and lease receivables. The carrying amounts of financial assets represent the maximum exposure to credit risk. On December 31. 2021, the Group had cash and cash equivalents of €30,327 thousand (previous year: €123,544 thousand). This amount thus represents the maximum exposure to credit risk relating to these assets. The Executive Board continuously monitors the financial situation of the banks where credit balances are held.

The Group's exposure to credit risk is influenced mainly by the individual characteristics of each customer. However, the Executive Board also considers the characteristics of the overall customer base, including the credit risk of the industry and countries in which customers operate, as these factors can also have an influence on credit risk. Detailed disclosures on the concentration of revenue in certain areas can be found in Note 9.

The general economic conditions in Germany, in the eurozone and in Asia and America are actively observed. The Group limits its credit risk exposure from trade receivables by taking out trade credit insurance or by agreeing advance payments for larger orders.

In the leasing business, counterparty risk is limited because the bulk of the lease portfolio is refinanced through the sale of receivables by way of forfaiting and securitization. This transfers the risk of default to third parties. However, the credit risk associated with the securitization transactions is not transferred to the notes investors until April 2022. The remaining counterparty risk attributable to company-financed and loan-financed leases is diversified thanks to a cross-industry debtor group with low exposures per individual debtor.

To determine any necessary loss allowances, the Group has introduced a process that enables an assessment of expected losses on trade receivables. Please refer to Note 22 for further information.

The maximum exposure to credit risk from trade receivables on the reporting date is as follows. Trade credit insurance and letters of credit are deducted for trade receivables or taken into account as part of the loss given default.

€ thousand	Dec. 31, 2021	Dec. 31, 2020
Trade receivables	20,022	7,235
Secured by trade credit insurance and letters of credit	(734)	(293)
Maximum exposure to credit risk on trade receivables	**19,288**	**6,942**
Lease receivables	120,072	-
Hedging with matching sale and leaseback liabilities	21,209	-
Maximum exposure to credit risk on lease receivables	**98,863**	**-**

Refinancing of the leasing business by way of the securitization program is still in the ramp-up phase up to April 2022. After this ramp-up phase is completed, the maximum exposure to credit risk from the lease receivables will be reduced by transfer to the notes holders.

Market risk

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. A distinction is made between three categories of risk: currency risk, interest rate risk and other market risk.

Currency risk | The Group is exposed to a range of currency risks because of its global footprint. A distinction is made here between transaction and translation risk.

Transaction risks: Transaction risks arise due to exchange-rate related changes in value of primary financial instruments and entering into transactions with international counterparties that result in future cash flows in foreign currency that are not denominated in the functional currency of the entity in question. As part of financial risk management processes within Group management, currency risks are monitored and, where needed, managed by the finance departments of the relevant entities using appropriate mitigating measures. The objective of risk management is to limit to an acceptable level the effects of currency risk on future cash flows. Currency risk is partially mitigated by procuring goods and services in the relevant foreign currencies. Group entities are responsible for identifying, assessing and monitoring their transaction-related foreign currency risks.

Translation risk: Some group entities are outside of the eurozone. As the consolidated financial statements are prepared in euros, the financial statements of these entities are translated into euros, which can result in exchange rate-related differences. Hedging these differences is not the primary objective of currency risk management. A sensitivity analysis is performed for each currency that represents a significant risk to the Company, based on the following assumptions: All of the Group's monetary financial instruments that are not denominated in the functional currency of the relevant individual entities can be used in the sensitivity analysis. As a result, translation risks are not taken into account. The hypothetical effects on profit or loss and equity for each primary line item included in the sensitivity analysis are determined by comparing the carrying amount (measured using the closing rate) with the translation value obtained using a hypothetical exchange rate. If the EUR/USD exchange rate were 10% higher, earnings before tax would be €42 thousand (previous year: €73 thousand) lower. If the EUR/USD exchange rate were 10% lower, earnings before tax would be €45 thousand (previous year: €89 thousand) higher. If the EUR/CNY exchange rate were 10% lower, earnings before tax would be €45 thousand (previous year: €- thousand) higher. If the EUR/CNY exchange rate were 10% higher, earnings before tax would be €55 thousand (previous year: €- thousand) lower. The Group holds financial assets and financial liabilities solely in the functional currency.

Interest rate risk | Interest rate risk arises if the fair value of financial instruments fluctuates due to changes in market interest rates. To assess interest rate risk, financial instruments are classified into fixed- and variable-rate instruments under IAS 32. Interest rate risks arise in the case of floating-rate liabilities to banks. The loans taken out by the Group are subject in part to interest rates that are linked to changes in EURIBOR. There is no interest rate risk associated with the securitization transaction because the notes carry a fixed interest rate of 1.25%.

The Group has entered into interest rate cap contracts to mitigate risks from any future rise in EURIBOR. For a reference amount of €5,146 thousand, (previous year: €5,688 thousand), the fair value of the cap at the reporting date is €0 thousand (previous year: €0 thousand). The fair value of the interest rate hedge is discounted to the reporting date and the calculation is based on a generally accepted mathematical model (Bachelier model) and on market data available at the calculation date.

Other market risks: There are no material other market risks in the Group.

Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting obligations associated with its financial liabilities. The Executive Board monitors the liquidity position and current and future expected outflows of funds as part of budget planning and ongoing financial control.

The Group has secured bank loans that include covenants. Any future breach of the covenants can lead to the loans being subject to early repayment. In line with the agreements, the covenants are systematically monitored by the Group and regularly reported to the Executive Board in order to ensure compliance with the loan agreements.

The liquidity risk arising from leases is countered with a high rate of forfaiting and securitization. Lease receivables are sold at present value or at a purchase price discount for an increase in liquidity; they are sold to banks or to an investor through the SPV, generally at the start of the lease.

As part of the securitization transactions, the securitized liabilities are repaid from payments received from lease receivables. The liquidity risk of the securitization transactions totals only the amount of the residual credit risk associated with the purchase price discounts.

The remaining financial liabilities in connection with lease refinancing are matched by the corresponding lease receivables. The expected cash flows from lease receivables exceed the corresponding liabilities.

The contractual remaining terms of financial liabilities at the end of the reporting period, including estimated interest payments, are presented in the following table. These are undiscounted gross amounts including contractual interest payments, though the effects of offsetting are not presented.

Contractual cash flows from non-derivative financial liabilities

		Contractual cash flows				
€ thousand	Present value	Total	Up to 12 months	1 to 2 years	2 to 5 years	more than 5 years
Dec. 31, 2021						
Senior loans	79,979	(92,295)	(17,798)	(7,225)	(36,213)	(31,059)
Subordinated loans	49,696	(87,818)	-	(18,000)	-	(69,818)
Real estate loans	5,942	(6,571)	(613)	(462)	(1,355)	(4,141)
Other financial liabilities	5,316	(6,049)	(1,011)	(2,650)	(615)	(1,773)
Lease refinancing	128,179	(137,780)	(44,771)	(45,407)	(47,601)	-
Trade payables	11,305	(11,305)	(11,305)	-	-	-
Total	**280,417**	**(341,818)**	**(75,498)**	**(73,744)**	**(85,784)**	**(106,791)**
Dec. 31, 2020						
Senior loans	45,376	(52,122)	(6,649)	(6,299)	(24,712)	(14,461)
Real estate loans	6,180	(6,901)	(472)	(467)	(1,371)	(4,591)
Lease liabilities	1,253	(1,347)	(678)	(413)	(255)	-
NCI put liability	1,451	(1,875)	-	-	(1,875)	-
Trade payables	1,488	(1,488)	(1,488)	-	-	-
Total	**55,748**	**(63,733)**	**(9,287)**	**(7,180)**	**(28,214)**	**(19,052)**

35. Acquisition of subsidiaries

In the reporting period, the Group acquired two companies.

35.1 Acquisition of kvm-tec

Effective November 19, 2021, the Group acquired 100% of the shares (100% of the equity instruments carrying voting rights) of KVM-TEC Holding GmbH with its registered office in Tattendorf, Austria, thereby obtaining control over this entity. KVM-TEC Holding along with its direct subsidiary, KVM-TEC Electronic GmbH, forms a sub-group (kvm-tec). The total consideration transferred including earn-outs amounted to €14,651 thousand.

kvm-tec develops, produces and distributes KVM-over-IP solutions. Its products comprise extenders, matrix switching systems and gateways. The acquisition provides the Group access to KVM-over-IP technology and customers. These enhance IHSE's existing portfolio in the proprietary KVM field in the Security Technologies operating segment.

The Group's product portfolio has therefore grown due to the control over kvm-tec and the associated access to KVM-over-IP technology. Additionally, the Group expects further cost reductions to result from economies of scale.

The technical initial consolidation was carried out as of December 1, 2021. In the period from December 1 to December 31, 2021, kvm-tec contributed revenue of €307 thousand and a loss of €23 thousand to consolidated profit or loss. If the acquisition had taken place on January 1, 2021, consolidated revenue would have amounted to €64,085 thousand and profit or loss for the period to €-25,031, according to Executive Board estimates. In calculating these amounts, management assumed that the preliminary fair value adjustments calculated at the date of acquisition would have also been valid in the event of an acquisition on January 1, 2021. Please also refer to Note 7 in this context.

Consideration transferred

The fair value of each main consideration group effective on the date of acquisition is outlined below.

€ thousand	
Cash	10,200
Liability from contingent consideration	4,451
Consideration transferred	**14,651**

Contingent consideration was agreed with the former owner of kvm-tec as part of the purchase agreement. According to this agreement, the Group undertakes to pay the former owner additional consideration of no more than €5,000 thousand over two years if targets for agreed key indicators (such as EBITDA) are met in the next two years. Management believes that these targets will be met and therefore is planning for a future additional cash payment to the former owner of kvm-tec.

At the acquisition date, the fair value of the contingent consideration was estimated at €4,451 thousand. As of December 31, 2021, the key indicators (EBITDA) point to the target set likely being met. The fair value of the contingent consideration calculated at the acquisition date will continue to apply since this assessment has not changed.

Costs associated with the acquisition

The Group incurred costs amounting to €738 thousand for legal consulting, due diligence and notarial certification in connection with the business combination. These costs are essentially recognized in other operating expenses.

Identifiable acquired assets and assumed liabilities

Due to the timing of the transaction close to the reporting date, the measurement of the acquired assets and assumed liabilities is provisional. Within the measurement period of 12 months after the acquisition, adjustments may have to be made. The reported amounts of acquired assets and assumed liabilities at the acquisition date are outlined below.

€ thousand	
Property, plant and equipment (including right-of-use assets)	562
Intangible assets	5,013
Deferred tax assets	-
Inventories (and order backlog)	163
Trade receivables	394
Other assets	420
Cash and cash equivalents	63
Current tax liabilities	(39)
Deferred tax liabilities	(1,250)
Provisions for guarantees	(22)
Liabilities to banks	(221)
Lease liabilities	(462)
Trade payables and other liabilities	(891)
Total identifiable acquired net assets	**3,730**

The acquired trade receivables total a gross amount of €394 thousand and a fair value of €394 thousand. Management estimates that the full amount of the contractual cash flows from these receivables is likely to be recoverable.

The Group measured the acquired lease liabilities at the present value of the remaining lease payments at the date of acquisition. The rights of use were carried at the same amount as the lease liabilities and adjusted if the conditions of the lease agreement were favorable compared with market conditions.

Goodwill

The goodwill in the amount of €10,921 thousand mainly comprises the value of expected synergies from the business combination. The full amount of the goodwill is assigned to the IHSE CGU.

€ thousand	
Consideration transferred	14,651
Fair value of the identified net assets	(3,730)
Goodwill	**10,921**

The total amount of goodwill expected to be deductible for tax purposes is zero.

35.2 Acquisition of Bikeleasing

Effective November 30, 2021, the Group acquired a majority of the shares of BLS Bikeleasing-Service GmbH & Co. KG (along with its affiliated companies known as **Bikeleasing**), thereby obtaining control over this entity. The transaction was structured via two intermediate holding companies, BCM Erste Beteiligungs GmbH and BLS Beteiligungs GmbH (formerly BCM Zweite Beteiligungs GmbH). As a result, BKHT holds 52.27% of the Bikeleasing operating companies. The total consideration transferred amounted to €180,465 thousand.

Bikeleasing operates a digital and highly automated B2B financing platform for arranging, financing and managing employee benefits through the employer. The acquisition has enabled the Group to make significant progress on expanding into a leading technology group. The Executive Board's expectation that the acquisition will result in a sustained increase the Group's enterprise value for the long term was the reason for this move.

The technical initial consolidation was carried out as of December 1, 2021. In the period from December 1 to December 31, 2021, Bikeleasing contributed revenue of €10,117 thousand and a loss of €6,327 thousand to consolidated profit or loss. The company's revenue in December 2021 was marked primarily by extraordinarily high income from the disposal of lease receivables in a forfaiting tranche. The conditions of the contract for this purpose were modified in that month, which resulted in derecognition of the forfaited lease receivables in profit or loss. The effect on earnings is materially influenced by the costs of the acquisition. If the acquisition had taken place on January 1, 2021, consolidated revenue would have amounted to €116,544 thousand and profit or loss for the period to €-16,619 thousand, according to Executive Board estimates. In calculating these amounts, management assumed that the preliminary fair value adjustments calculated at the date of acquisition would have also been valid in the event of an acquisition on January 1, 2021. Please also refer to Note 7 in this context.

Consideration transferred

The fair value of each main consideration group effective on the date of acquisition is outlined below.

€ thousand	
Cash	152,465
BKHT shares	13,000
Liability from deferred purchase price payment	15,000
Consideration transferred	**180,465**

Costs associated with the acquisition

The Group incurred costs amounting to €14,190 thousand for a purely performance-based brokerage fee, legal consulting, due diligence and notarial certification in connection with the business combination. These costs are essentially recognized in other operating expenses.

Identifiable acquired assets and assumed liabilities

Due to the timing of the transaction close to the reporting date, the measurement of the acquired assets and assumed liabilities is provisional. Within the measurement period of 12 months after the acquisition, adjustments may have to be made. The reported amounts of acquired assets and assumed liabilities at the acquisition date are outlined below.

€ thousand	
Property, plant and equipment (including right-of-use assets)	2,395
Intangible assets	94,374
Long-term financial assets	121
Deferred tax assets	-
Inventories (and order backlog)	206
Trade receivables	26,111
Contract assets	146
Lease receivables	249,168
Other assets	18,238
Cash and cash equivalents	20,983
Current tax liabilities	(3,948)
Deferred tax liabilities	(34,592)
Provisions for guarantees	(50)
Financial liabilities	(224,831)
Securitized financial liabilities	(60,000)
Lease liabilities	(686)
Contract liabilities	(343)
Trade payables and other liabilities	(12,372)
Total identifiable acquired net assets	**74,921**

The acquired trade receivables total a gross amount of €29,636 thousand and a fair value of €26,111 thousand. Management estimates that the full amount of the contractual cash flows from these receivables is likely to be recoverable.

The Group measured the acquired lease liabilities at the present value of the remaining lease payments at the date of acquisition. The rights of use were carried at the same amount as the lease liabilities and adjusted if the conditions of the lease agreement were favorable compared with market conditions.

Goodwill

The goodwill of €141,300 thousand mainly comprises the company's leading market position and highly profitable growth. The full amount of the goodwill is assigned to the new CGU "Bikeleasing".

€ thousand	
Consideration transferred	180,465
Non-controlling interests based on the interest in the recognized assets and liabilities of Bikeleasing	35,756
Fair value of the identified net assets	(74,921)
Goodwill	**141,300**

The total amount of goodwill expected to be deductible for tax purposes is zero.

36. List of subsidiaries

In the reporting period, the following companies were founded and therefore included in the scope of consolidation for the first time.

Effective April 27, 2021, group company IHSE GmbH Asia Pacific Pte Ltd established the new foreign subsidiary IHSE China Co., Ltd., whose registered office is in Guangzhou, China. The business purpose of the company is to distribute IHSE products in China.

Effective August 2, 2021, BKHT founded the new subsidiary BT Zweite Beteiligungs GmbH with its registered office in Frankfurt am Main. This company is a shelf company for structuring future acquisitions.

Effective August 3, 2021, BKHT founded the new subsidiary BT Erste Beteiligungs GmbH with its registered office in Frankfurt am Main. This company is a shelf company for structuring future acquisitions.

In addition to the parent company, 26 indirect and direct subsidiaries are included in the consolidated financial statements. The following table shows the ownership interest, the equity at the reporting date and the profit or loss for the period of the consolidated entities.

BKHT's legal interest in Palas Holding GmbH amounts to 70% of the shares of this entity. For information on the remaining interest of 30%, please refer to Note 40 regarding the application of the anticipated acquisition method.

Subsidiaries

Company	Registered office	Equity interest	Equity (IFRS)	Profit (IFRS)
Palas Holding GmbH	Karlsruhe	100.00%	28,213	3,097
Palas GmbH Partikel- und Lasermeßtechnik	Karlsruhe	100.00%	6,864	516
Palas (Asia) Ltd.	Hong Kong, China	90.00%	101	(25)
Palas Instruments (Shanghai) Co. Ltd.	Shanghai, China	90.00%	559	384
IHSE AcquiCo GmbH	Oberteuringen	100.00%	105,121	3,426
IHSE Beteiligungs GmbH	Oberteuringen	100.00%	23,408	-
IHSE GmbH	Oberteuringen	100.00%	10,799	(738)
IHSE Immobilien GmbH	Oberteuringen	100.00%	2,111	125
IHSE USA LLC	Cranbury, NJ, USA	100.00%	3,534	510
IHSE GmbH Asia Pacific Pte Ltd	Singapore	100.00%	1,527	101
IHSE China, Co. Ltd.	Guangzhou, China	100.00%	219	80
KVM-TEC Holding GmbH	Tattendorf, Austria	100.00%	731	132
KVM-TEC Electronic GmbH	Tattendorf, Austria	100.00%	514	8
BT Erste Beteiligungs GmbH	Frankfurt am Main	100.00%	26	(2)
BT Zweite Beteiligungs GmbH	Frankfurt am Main	100.00%	26	(2)
BCM Erste Beteiligungs GmbH	Frankfurt am Main	95.19%	122,696	(353)
BLS Beteiligungs GmbH	Frankfurt am Main	52.27%	279,315	(582)
MFK Holding GmbH	Vellmar	52.27%	6,586	5,155
TIROX Holding GmbH	Uslar	52.27%	12,399	11,264
Iragon Grundstücks GmbH & Co. KG	Vellmar	52.27%	7	13
BLS Bikeleasing-Service GmbH & Co. KG	Vellmar	52.27%	110	16,848
Iragon Verwaltungs GmbH	Vellmar	52.27%	23	(2)
BLS Bikeleasing-Service Verwaltungsgesellschaft mbH	Vellmar	52.27%	15	(11)
BLS Verwaltungsgesellschaft mbH	Vellmar	52.27%	9	(2)
BLS Versicherungs GmbH & Co. KG	Vellmar	52.27%	3	2,706
Hofmann Leasing GmbH	Freiburg	52.27%	184	(3,218)

37. Research and development expenses

The Group's research and development expenses amounted to €2,032 thousand in the reporting period (previous year: €2,054 thousand), of which €1,930 thousand (previous year: €1,976 thousand) was attributable to research expenses and development expenses not eligible for capitalization and €102 thousand (previous year: €78 thousand) was attributable to amortization of capitalized development expenses.

38. Share-based payments

The total expense for share-based payment transactions is disaggregated as follows.

€ thousand	2021	2020
Equity-settled	196	159
Cash-settled	83	83
Total	**279**	**242**

38.1 Equity-settled share-based payments

The Annual General Meeting resolved on June 27, 2019 to launch a stock option program for the Group's employees. The reason for establishing the stock option plan is that Group management assumes that this represents a suitable performance incentive for the beneficiaries by enhancing the value of the Group. In line with the stock option conditions, holders of exercisable options have the right to acquire shares at the share price at the grant date of the options. The options are subject to a vesting period of four years after issuance and expire if the beneficiary stops being an employee of the Group. A share of 1/48 of the options granted vest each month. Vesting of options is conditional on a long-term performance target, which requires a minimum 15% increase in the share price (including dividends) between the date of issuance of the options and the exercise date. They are settled in the form of new shares of the parent entity (equity instrument) against payment of the exercise price by the beneficiary. The Group is entitled, but not obligated, to pay a cash settlement to the beneficiaries instead of equity settlement.

The resolution of the Annual General Meeting authorized the Executive Board, with the consent of the Supervisory Board, to issue a total of 425,200 stock options from authorized capital. Changes in outstanding options in the reporting period were as follows.

	Number	Exercise price in €
Outstanding options on Jan. 1, 2021	87,500	30.06
In the reporting period		
options granted	42,500	23.53
options forfeited	-	-
options exercised	-	-
options expired	-	-
Outstanding options on Dec. 31, 2021	130,000	29.90
Exercisable options on Dec. 31, 2021	-	-

* Weighted average exercise prices of stock options

Outstanding options at the reporting date have exercise prices between €23.28 and €32.00. The average weighted remaining term is 2.3 years.

Options are measured at the issue date using a Monte Carlo simulation. The parameters used to measure the options are shown in the following.

Measurement parameters	
Weighted average share price	€28.01
Weighted average exercise price	€27.93
Term of options	4 years
Expected volatility	19.5%-30.7%
Expected dividend yield	0.0%
Risk-free rate	0.0%

A percentage rate of zero was defined for the dividend yield as the option conditions include an adjustment mechanism. This mechanism provides for a reduction in the exercise price in the amount of the dividends paid per share over the term of the option. Early exercise of options was not taken into account in the measurement as this is not generally anticipated. The expected volatility was determined using the historical volatility of the share prices of comparable companies and BKHT. The expected volatility is based directly on historical volatility in this respect. To determine the fair value of options, the performance target of a 15% increase in the share price over the term of the options was considered as an additional feature by eliminating the option proceeds on simulated prices below the performance target in the Monte Carlo model.

38.2 Cash-settled share-based payments

A cash-settled share-based payment agreement was entered into that allows beneficiaries to participate in cash payments arising from an exit event in respect of their put options on shares from subsidiaries after a period of five years. The agreement requires the completion of a defined service period in future during which the service must be provided continuously.

20% of the shares of beneficiaries are earned in annual tranches and subsequently vest over a period of five years. The agreements stipulated an initial cliff vesting requirement of twelve months. In a bad leaver event, the Company is obligated to pay the lower of the cost of the share participation of the relevant beneficiary and the current market price of the shares at the time of this event. In the case of a good leaver event, in respect of the vested participation, the Company is obligated to pay the current market price of the pro rata participation of the relevant beneficiary and, in respect of the non-vested participation, the pro rata entry costs incurred for the non-vested participation. A bad leaver event is typically triggered when the employment agreement between the beneficiary and the subsidiary is terminated for good cause, or the beneficiary terminates the employment agreement without there being any good cause within the control of the group entity. A good leaver event is typically triggered when the employment agreement is terminated with due notice by the subsidiary. In respect of the amount of entry costs, the discounted amount is presented as a financial liability (see Note 29).

The remaining entitlement of beneficiaries is recognized as a provision. This includes a component for the work performed, with the change for this being recognized in personnel expenses according to IFRS 2 and a component for the annual remeasurement of the Group's obligation, with the change for this being recognized in the financial result. The personnel expense component was calculated at the issue date of the put option using the Black-Scholes model. The parameters used to measure the options are shown in the following.

Measurement parameters	
Fair value at issue	€1,875 thousand
Exercise price	€1,875 thousand
Term	5 years
Expected volatility	25.0%
Expected dividend yield	0.0%
Risk-free rate	0.0%

A percentage rate of zero was defined for the dividend yield as dividend distributions by the entity concerned are highly unlikely over the term. Early exercise was not taken into account in the measurement as this is also highly unlikely. The expected volatility was determined using the historical volatility of the share prices of comparable companies. The expected volatility is based directly on historical volatility in this respect. No further material inputs were considered in the determination of fair value. Please refer to Note 40 for further information.

39. Leases

39.1 Group as lessee

The Group leases land and buildings primarily as office space and as production and storage space. As of the reporting date, there were leases for real estate with a remaining term of up to five years. Other leases have a remaining term of up to three years. Leases can include extension and termination options. The terms and conditions are negotiated individually and include a number of differing arrangements.

Right-of-use assets relating to leased real estate and vehicles are reported in property, plant and equipment (see Note 19). The following table shows right-of-use assets from leases that are reported in non-current assets.

Right-of-use assets

€ thousand	Land and buildings	Technical equipment and machinery	Total
Balance on January 1, 2021	893	341	1,233
Acquisitions through business combinations	807	369	1,176
Additions to right-of-use assets	336	290	626
Depreciation of right-of-use assets	(495)	(206)	(701)
Exchange differences	5	-	5
Balance on December 31, 2021	**1,545**	**795**	**2,339**
Balance on January 1, 2020	518	242	760
Additions to right-of-use assets	835	186	1,021
Depreciation of right-of-use assets	(456)	(87)	(544)
Exchange differences	(4)	-	(4)
Balance on December 31, 2020	**893**	**341**	**1,233**

39.2 Group as lessor

Finance leases

The Group acts as a lessor under finance leases. The Group is acting as a lessor to a significant extent for the first time due to the acquisition in the reporting period of the Bikeleasing Group, which forms the new Financial Technologies segment. This business largely entails leasing bicycles and e-bikes to employees of companies. The Group recognizes a receivable in the amount of the net investment value from leasing. The lease payments paid by the lessees are divided into an interest and a principal portion by applying the effective interest method.

The receivable from leasing is amortized by deducting the principal amounts received. The interest portion of the payments is recognized in revenue in the profit or loss for the period. In the fiscal year, interest income from the net investment in the leases accrued in the amount of €1,440 thousand since initial consolidation on December 1, 2021.

The Financial Technologies segment refinances part of the finance lease business, mostly through forfaiting by way of banks. In the forfaiting process, the Group assigns the claims in respect of the lessee arising from the leases with all of the associated rights. Depending on the way each lease is structured, these comprise the lease payments, the residual value, the right of termination, receivables and claims arising from termination. Please refer to Note 34.4 for further information on forfaiting of lease receivables. Moreover, at the end of the lease term, approximately 97% of the bicycles are sold to the employees/ users. The remaining bicycles are sold to bicycle retailers or third-party recyclers. This is also true of bicycles leased under operating leases.

The following table contains a reconciliation of outstanding lease payments from finance leases to the net investment value.

€ thousand	Dec. 31, 2021	Dec. 31, 2020
Lease payments by maturity		
Up to 12 months	38,633	-
1 to 2 years	34,150	-
2 to 3 years	22,645	-
3 to 4 years	3,506	-
4 to 5 years	1,063	-
more than 5 years	91	-
Total	**100,088**	**-**
Unguaranteed residual value	35,509	-
Gross investments	**135,597**	**-**
Interest income not yet realized	(15,525)	-
Net investments	**120,072**	**-**

Operating leases

Assets leased under operating leases amount to €2,454 thousand as of December 31, 2021. These mainly included technical equipment and machinery totaling €2,429 thousand. Income from operating leases was €1 thousand in the reporting period.

In the coming years, the following incoming payments are anticipated from the expected, outstanding, undiscounted lease payments from operating leases.

€ thousand	Dec. 31, 2021	Dec. 31, 2020
Lease payments by maturity		
Up to 12 months	387	-
1 to 2 years	214	-
2 to 3 years	23	-
3 to 4 years	1	-
4 to 5 years	-	-
more than 5 years	-	-
Total	**625**	**-**

40. NCI put

On December 6, 2018, BKHT acquired 70% of the shares of Palas Holding GmbH, with the remaining 30% held by Palas's managing shareholder. Under an option agreement, BKHT has committed to the other shareholder to acquire their 30% interest at a later date. The option can, but does not have to, be exercised by the other shareholder in the course of 2024, with the exercise price depending on Palas's EBITDA and net financial liabilities in 2022 and 2023. The purchase price for the 30% interest may be paid in the form of BKHT shares or in cash, at BKHT's discretion. The Group applies the anticipated acquisition method to the 30% interest. Under this method, the acquisition is presented as if the other shareholder had already exercised their purchase option. This means that, since the acquisition date of the majority interest in 2018, the shares underlying the purchase option are already deemed to be acquired. Consequently, no non-controlling interests are present in relation to Palas Holding GmbH. The obligation under the option is recognized in the consolidated statement of financial position partly as a provision and partly as a financial liability.

NCI put liability | The financial liability relates to the share of the purchase price of €1,875 thousand paid by the other shareholder for the shares they acquired as part of the acquisition. At each reporting date, the discounted present value of this amount is reported and the unwinding of the discounting is recognized in profit or loss in each reporting period.

NCI put provision | The provision relates to the vesting of a share-based payment component (see Note 38.2) and to the remeasurement of this obligation at each reporting date. In the first instance, the NCI put provision increases each year by the share-based payment component of €83 thousand. In addition, the potential entitlement of the other shareholder is remeasured at each reporting date, based on the assumption that the other shareholder would already be allowed to exercise the option. The difference between this claim and the obligation already recognized as a liability under the NCI put liability and the NCI put provision is added to the provision by way of a financing cost from remeasurement.

The following overview shows the effects of applying the anticipated acquisition method to the NCI put on the profit or loss, as well as on the consolidated statement of financial position.

Effects of the NCI put on the consolidated financial statements

€ thousand	2021	2020
Impact on the consolidated statement of comprehensive income		
Personnel expenses from share-based payments	(83)	(83)
Finance cost from unwinding of discounts	(129)	(119)
Finance cost from remeasurement	(2,611)	(1,496)
Effect on profit or loss for the period	**(2,823)**	**(1,697)**
Impact on the consolidated statement of financial position		
NCI put liability on January 1	1,451	1,332
Unwinding of discounts	129	119
NCI put liability on December 31	**1,581**	**1,451**
NCI put provisions on January 1	1,905	327
Personnel expenses from share-based payments	83	83
Finance cost from remeasurement	2,611	1,496
NCI put provisions on December 31	**4,599**	**1,905**

41. Related party transactions

Related parties are considered to be entities and individuals who are able to control the Group or to exert significant influence on its financial and business policies. Such entities and individuals include key management within the Group and entities that are controlled by key management personnel or are under their significant influence.

Key management personnel

In respect of the Group, key management personnel include the members of the Executive Board and Supervisory Board of BKHT and the managing directors of the subgroup parent companies (Palas Holding GmbH, IHSE AcquiCo GmbH and BLS Beteiligungs GmbH).

One member of the Supervisory Board advised the Group as an industry expert in the software/ IT sector in the course of due diligence examinations to evaluate potential acquisitions.

In the reporting period, the Group acquired all of the shares of kvm-tec. The Group plans to sell shares of kvm-tec to executives in the Security Technologies segment in the course of a management co-investment program. In preparation for this program, one of the segment's managers already made a prepayment on the shares to be acquired as of the reporting date.

Other related parties

Executive Board members hold positions in other entities in which they are able to control or significantly influence the financial and business policies of those entities. Some of those entities conducted transactions with Brockhaus Technologies in the reporting period.

Brockhaus Private Equity GmbH (registered office in Frankfurt) is controlled by Executive Board members of BKHT. There was a service relationship with Brockhaus Private Equity GmbH in the reporting period resulting from a sublease agreement.

	Value of transactions		Outstanding balances	
€ thousand	2021	2020	Dec. 31, 2021	Dec. 31, 2020
Key management personnel				
Issuance of shares	-	3,127	-	-
Due diligence costs	11	38	-	-
Co-invest kvm-tec	58	-	58	-
Other related parties				
Sublease	110	106	-	-
Recharging of costs	-	3	-	3

42. Events after the reporting period

The capital increase totaling 560,829 new shares was entered in the commercial register on February 10, 2022. This increased the Company's subscribed capital by €560,829 from €10,386,808 to €10,947,637.

In reference to these consolidated financial statements, the Russian war on Ukraine begun at the end of February 2022 does not constitute an adjusting event and has no effect on the recognition and measurement of assets and liabilities as of the reporting date. An impact on the results of operations, net assets and financial position in fiscal 2022 cannot be ruled out at this time. Due to the volatile geopolitical situation, possible effects are not currently quantifiable. For information on the impact on risks, see the risk and opportunity report in the combined management report.

No other events of material significance occurred after the balance sheet date.

43. Auditor's fees

The auditor's fees show the fees of KPMG AG Wirtschaftsprüfungsgesellschaft recognized as an expense for the services provided to BKHT and to the consolidated subsidiaries. They are disaggregated as follows.

€ thousand	2021	2020
Financial statement audits	646	362
Other assurance services	419	428
Other services	12	21
Total	**1,077**	**811**

In fiscal year 2021, the financial statement audit services relate to the audit of the consolidated financial statements and the annual financial statements, as well as to all services required for the audits of the financial statements and the review of the half-yearly report. Other assurance services in fiscal year 2021 include preparatory work for the issuance of comfort letters and the review of pro forma financial information, the review of the remuneration report and the issuance of review reports. Other services relate to the handling of issues ahead of the Bikeleasing acquisition. The fees not attributable to the audit of the consolidated financial statements or the annual financial statements relate primarily to a planned capital increase that was ultimately not carried out.

44. Employees

The following overview shows the average number of employees in the Group.

Average number	2021	2020
Full-time	201	146
Part-time	57	48
Other	20	17
Total employees	**278**	**211**

The number of employees as of the reporting date was as follows.

Number	Dec. 31, 2021	Dec. 31, 2020
Full-time	327	158
Part-time	83	52
Other	37	21
Total employees	**447**	**231**

45. Governing bodies of the Company

The members of BKHT's Executive Board are.

- Chairman of the Executive Board (CEO): Marco Brockhaus, Königstein im Taunus
- Member of the Executive Board (COO/ Legal Counsel): Dr. Marcel Wilhelm, Kronberg im Taunus

The Supervisory Board of BKHT consists of six members, unless otherwise required by law and was composed of the following members in the reporting period.

- Chairman: Dr. Othmar Belker, Managing Director of Murnauer Markenvertrieb GmbH, Kleinwallstadt
- Deputy Chairman: Michael Schuster, lawyer in private practice, Königstein im Taunus
- Member of the Supervisory Board: Martin Bestmann, managing director of a consulting firm, Neunkirchen am Brand
- Member of the Supervisory Board: Prof. Dr. Christian Hütten, independent management consultant, Mannheim (since April 16, 2021)
- Member of the Supervisory Board: Dr. Cornelius Liedtke, entrepreneur and investor, Hamburg
- Member of the Supervisory Board: Andreas Peiker, entrepreneur, Königstein im Taunus

46. Total remuneration of members of governing bodies

The Chairman of the Supervisory Board receives annual fixed remuneration of €90 thousand, the Deputy Chairman receives €60 thousand and the other members of the Supervisory Board each receive annual fixed remuneration of €30 thousand. Members of the Supervisory Board (but not the Chairman or Deputy Chairman) receive an additional €2 thousand each year for membership in a committee and an additional €20 thousand for chairmanship of a committee. In addition, the members of the Supervisory Board are reimbursed for their out-of-pocket expenses and any value added tax payable on their remuneration. The remuneration of the Supervisory Board amounted to €276 thousand in the reporting period (previous year: €161 thousand).

The remuneration of members of the Executive Board amounted to €2,337 thousand in the reporting period (previous year: €2,277 thousand).

The basic principles behind the remuneration system and disclosure of the remuneration of individual Executive Board and Supervisory Board members are presented in the remuneration report.

47. Appropriation of net profit

BKHT's accumulated losses brought forward from the previous year, together with the net loss for the reporting period, are carried forward to new account. As of December 31, 2021, the parent entity reported net accumulated losses under German GAAP of €35,028 thousand.

48. Corporate Governance Codex statement 2021

The Corporate Governance Codex statement of Brockhaus Technology AG's Executive Board and Supervisory Board for the fiscal year 2021 pursuant to HGB section 314 number 8 in conjunction with AktG section 161 was issued. The statement is permanently accessible on the Company's website (www.brockhaus-technologies.com) in the section entitled Investor Relations, subsection Corporate Governance.

Frankfurt am Main, April 29, 2022

Brockhaus Technologies AG
The Executive Board

Marco Brockhaus Dr Marcel Wilhelm

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 assets, liabilities, financial position and profit or loss of the Group and the combined 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.

Frankfurt am Main, April 29, 2022

Brockhaus Technologies AG
The Executive Board

Marco Brockhaus Dr Marcel Wilhelm

Independent Auditor's Report

To Brockhaus Technologies AG, Frankfurt am Main

Report on the Audit of the Consolidated Financial Statements and of the Combined Management Report

Opinions

We have audited the consolidated financial statements of Brockhaus Technologies AG, (until 30 September 2021: Brockhaus Capital Management AG), Frankfurt am Main, and its subsidiaries, which comprise the consolidated statement of financial position as at 31 December 2021, and the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the financial year from 1 January to 31 December 2021, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the management report of the Company and the Group (combined management report) of Brockhaus Technologies AG for the financial year from 1 January to 31 December 2021.

In accordance with German legal requirements, we have not audited the content of those components of the combined management report specified in the "Other Information" section of our auditor's report.

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

> the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Section 315e (1) HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at 31 December 2021, and of its financial performance for the financial year from 1 January to 31 December 2021, and

> the accompanying combined management report as a whole provides an appropriate view of the Group's position. In all material respects, this combined management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our opinion on the combined management report does not cover the content of those components of the combined management report specified in the "Other Information" section of the auditor's report.

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

Basis for the Opinions

We conducted our audit of the consolidated financial statements and of the combined management report in accordance with Section 317 HGB and the EU Audit Regulation No 537/2014 (referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Combined Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2)(f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the combined management report.

Key Audit Matters in the Audit of the Consolidated Financial Statements

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 2021. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, we do not provide a separate opinion on these matters.

Impairment testing of goodwill for the IHSE cash-generating unit

Please refer to Note 5.9 of the notes to the consolidated financial statements for more information on the accounting policies applied. Disclosures on the amount of goodwill and the assumptions made can be found in Note 20 of the notes to the consolidated financial statements. Explanatory notes on the development of the IHSE cash-generating unit can be found in the combined management report in the "Segment reporting" section.

THE FINANCIAL STATEMENT RISK

In the consolidated financial statements of Brockhaus Technologies AG as at 31 December 2021, EUR 80.3 million of goodwill is allocated to the IHSE cash-generating unit, which corresponds to approx. 13.1% of total assets.

Goodwill is tested for impairment annually at the level of the cash-generating units. If triggering events arise during the financial year, an event-driven goodwill impairment test is also carried out during the year. The impairment test compares the carrying amount with the recoverable amount of the cash-generating unit. If the carrying amount exceeds the recoverable amount, an impairment loss is recognised. The recoverable amount of the IHSE cash-generating unit is determined as value in use using a discounted cash flow method based on the expected cash flows of the cash-generating unit. The reporting date for impairment testing is 31 December 2021.

The COVID-19 pandemic and component shortages had a negative impact on IHSE's revenue and earnings in financial year 2021. There is a risk that the expected future cash flows continue to be affected by this.

Impairment testing of goodwill is complex and based on a range of assumptions that require judgement. These include the expected revenue and earnings performance of the IHSE cash-generating unit for the next five years, the assumed long-term growth rates and the discount rate used.

As a consequence of the significant decline in revenue and earnings of the IHSE cash-generating unit as at 30 June 2021, goodwill was subjected to event-driven impairment testing. As a result of the impairment test performed, Brockhaus Technologies AG did not identify a requirement to recognise an impairment. Furthermore, no requirement to recognise an impairment was identified in the course of the annual impairment test as at 31 December 2021.

There is the risk for the consolidated financial statements that any existing impairment affecting the IHSE cash-generating unit has not been identified. There is also the risk that the related disclosures in the notes are not appropriate.

OUR AUDIT APPROACH

For the indicator-based impairment testing of the IHSE cash-generating unit, we evaluated with due regard to our findings from the audit of the annual impairment test of the prior year, among other things, the appropriateness of the significant assumptions and the calculation method. For the annual impairment test, with the involvement of our valuation experts we also evaluated the appropriateness of the discount rate used for the impairment test of the IHSE cash-generating unit and compared the assumptions and data underlying the discount rate, especially the risk-free interest rate, the market risk premium and the beta factor, with our own assumptions and publicly available data. Furthermore, we discussed the expected revenue and earnings performance as well as the assumed long-term growth rates with those responsible for planning. We also reconciled this information with the budget prepared by management and provisionally approved by the Supervisory Board, as well as with the medium-term planning.

We also confirmed the accuracy of the Company's previous forecasts for the cash-generating unit by comparing the budgets of previous financial years with actual results and analysing deviations. In addition, we selected items based on risk for order intake for the first three months of financial year 2022 and reconciled these with the relevant orders.

To assess the methodically and mathematically correct implementation of the valuation method, with the involvement of our valuation experts we verified the Company's valuation using our own calculations and analysed deviations. To this end, we also assessed whether the valuation methods are consistent with the applicable accounting policies. In order to take account of forecast uncertainty, we examined how changes in assumptions on revenue, the EBITDA margin and investments in perpetuity, as well as the long-term growth rate, affect value in use by calculating alternative scenarios and comparing them with the values stated by the Company (sensitivity analysis).

Finally, we assessed whether the disclosures in the notes regarding impairment of goodwill for the IHSE cash-generating unit are appropriate.

OUR OBSERVATIONS

The calculation method used for impairment testing of goodwill for the IHSE cash-generating unit is appropriate and in line with the accounting policies to be applied. The assumptions and data used to measure the IHSE cash-generating unit are reasonable.

The related disclosures in the notes are appropriate.

Acquisition of the Bikeleasing Group

Please refer to Note 5.1 of the notes to the consolidated financial statements for more information on the accounting policies applied. Disclosures on the acquisition of the Bikeleasing Group are presented in Note 35.2 to the consolidated financial statements.

THE FINANCIAL STATEMENT RISK

With effect from 30 November 2021, the Brockhaus Technologies Group acquired the majority of shares in the Bikeleasing Group. The total consideration transferred amounted to EUR 180.5 million. Taking into account the acquired net assets and the non-controlling interests, goodwill amounted to EUR 141.3 million.

The identifiable assets acquired and liabilities assumed at the acquisition date are generally recognised at fair value in accordance with IFRS 3. In addition to intangible assets (customer relationships, trademarks and base technology), the identified assets comprise lease receivables in particular. Brockhaus Technologies AG engaged an external expert to identify, classify and measure the identifiable assets acquired and the liabilities assumed.

The identification, classification and measurement of the acquired assets is complex and based on assumptions of the Executive Board that require judgement. In order to identify the acquired intangible assets, assumptions were made regarding the identification criteria, particularly with regard to the evaluation of control by Brockhaus Technologies AG and with regard to separability. For the classification of leases, assumptions were made with regard to certain indicators, for instance whether the present value of the lease at the inception of the lease was at least equivalent to the approx. total fair value of the underlying asset. The key assumptions for measurement concern the expected cash inflows from the leases, the budgeted revenue and margin performance of the acquired business operations, the licence fees used and the cost of capital.

There is the risk for the consolidated financial statements that the acquired assets are inappropriately identified, classified or measured inaccurately. There is also the risk that the related disclosures in the notes are not appropriate.

OUR AUDIT APPROACH

With the involvement of our valuation experts, we also assessed the appropriateness of key assumptions as well as the identification, classification and valuation methods used. To that end, we first gained an understanding of the acquisition by interviewing employees of Finance and Investment and by evaluating the relevant contracts.

We reconciled the total purchase price with the underlying purchase agreement and the structure memorandum of the transaction advisor for the transaction.

We evaluated the competence, professional skills and impartiality of the independent expert engaged by Brockhaus Technologies AG. Furthermore, we evaluated the process of identifying the acquired assets against the backdrop of our knowledge of the business model of the Bikeleasing Group for compliance with the requirements of IFRS 3. We examined the valuation methods used for their compliance with the accounting policies. We evaluated the classification of leases for compliance with IFRS 16.

We discussed the fulfilment of the identification criteria for the acquired intangible assets – customer relationships, trademarks and base technology – with external experts engaged by the Company and employees from Finance. In addition, we assessed the existence of the necessary identification criteria, in particular control by Brockhaus Technologies AG and separability. We evaluated the classification of leases into finance leases and operating leases by considering the relevant present value criterion for this, the underlying assumption and the percentage limits. We recalculated the expected future cash inflows from leases for items selected based on risk. We discussed the expected revenue and margin performance with the external experts. We validated the licence fees used to measure intangible assets based on our industry experience. We compared the assumptions and data underlying the cost of capital, in particular the risk-free rate, the market risk premium and the beta coefficient, with our own assumptions and publicly available data.

To assess computational accuracy, we verified selected calculations based on risk criteria. Finally, we assessed whether the disclosures in the notes regarding the acquisition of the Bikeleasing Group are appropriate.

OUR OBSERVATIONS

The approach used for identifying, classifying and measuring the acquired assets is appropriate and in line with the accounting policies to be applied. The key assumptions and data have been appropriately derived and the related disclosures in the notes to the consolidated financial statements are appropriate.

Other Information

Management and/or the Supervisory Board are/is responsible for the other information. The other information comprises the following components of the combined management report, whose content was not audited:

- the combined corporate governance statement for the Company and the Group referred to in the combined management report,
- information extraneous to the combined management report and marked as unaudited.

The other information also comprises the other parts of the annual report.

The other information does not include the consolidated financial statements, the combined management report information audited for content and our auditor's report thereon.

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

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

- is materially inconsistent with the consolidated financial statements, with the combined management report information audited for content or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

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

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

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

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

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the combined management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Combined 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 combined management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the combined management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Section 317 HGB and the EU Audit Regulation 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 combined management report.

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

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the combined management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the combined management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies used by management and the reasonableness of estimates made by management and related disclosures.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the combined management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the combined management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.
- Evaluate the consistency of the combined management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.
- Perform audit procedures on the prospective information presented by management in the combined management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by management as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

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

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Other Legal and Regulatory Requirements

Report on the Assurance on the Electronic Rendering of the Consolidated Financial Statements and the Combined Management Report Prepared for Publication Purposes in Accordance with Section 317 (3a) HGB

We have performed assurance work in accordance with Section 317 (3a) HGB to obtain reasonable assurance about whether the rendering of the consolidated financial statements and the combined management report (hereinafter the "ESEF documents") contained in the electronic file "Brockhaus_KA_2021.zip" (SHA256 hash value: 22f53c33099ff8df100dbf75df2d929c728e880d2957416454a5a263 6e237bfc) made available and prepared for publication purposes complies in all material respects with the requirements of Section 328 (1) HGB for the electronic reporting format ("ESEF format"). In accordance with German legal requirements, this assurance work extends only to the conversion of the information contained in the consolidated financial statements and the combined management report into the ESEF format and therefore relates neither to the information contained in these renderings nor to any other information contained in the file identified above.

In our opinion, the rendering of the consolidated financial statements and the combined management report contained in the electronic file made available, identified above and prepared for publication purposes complies in all material respects with the requirements of Section 328 (1) HGB for the electronic reporting format. Beyond this assurance opinion and our audit opinion on the accompanying consolidated financial statements and the accompanying combined management report for the financial year from 1 January to 31 December 2021 contained in the "Report on the Audit of the Consolidated Financial Statements and the Combined Management Report" above, we do not express any assurance opinion on the information contained within these renderings or on the other information contained in the file identified above.

We conducted our assurance work on the rendering of the consolidated financial statements and the combined management report contained in the file made available and identified above in accordance with Section 317 (3a) HGB and the IDW Assurance Standard: Assurance Work on the Electronic Rendering of Financial Statements and Management Reports Prepared for Publication Purposes in Accordance with Section 317 (3a) HGB (IDW AsS 410 (10.2021)). Our responsibility in accordance therewith is further described below. Our audit firm applies the IDW Standard on Quality Management 1: Requirements for Quality Management in Audit Firms (IDW QS 1).

The Company's management is responsible for the preparation of the ESEF documents including the electronic rendering of the consolidated financial statements and the combined management report in accordance with Section 328 (1) sentence 4 item 1 HGB and for the tagging of the consolidated financial statements in accordance with Section 328 (1) sentence 4 item 2 HGB.

In addition, the Company's management is responsible for such internal control that they have considered necessary to enable the preparation of ESEF documents that are free from material intentional or unintentional non-compliance with the requirements of Section 328 (1) HGB for the electronic reporting format.

The Supervisory Board is responsible for overseeing the process of preparing the ESEF documents as part of the financial reporting process.

Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material intentional or unintentional non-compliance with the requirements of Section 328 (1) HGB. We exercise professional judgement and maintain professional scepticism throughout the assurance work. We also:

> Identify and assess the risks of material intentional or unintentional non-compliance with the requirements of Section 328 (1) HGB, design and perform assurance procedures responsive to those risks, and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance opinion.
> Obtain an understanding of internal control relevant to the assurance on the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance opinion on the effectiveness of these controls.
> Evaluate the technical validity of the ESEF documents, i.e. whether the file made available containing the ESEF documents meets the requirements of the Delegated Regulation (EU) 2019/815, as amended as at the reporting date, on the technical specification for this electronic file.
> Evaluate whether the ESEF documents provide an XHTML rendering with content equivalent to the audited consolidated financial statements and the audited combined management report.
> Evaluate whether the tagging of the ESEF documents with Inline XBRL technology (iXBRL), in accordance with the requirements of Articles 4 and 6 of Delegated Regulation (EU) 2019/815, as amended as at the reporting date, enables an appropriate and complete machine-readable XBRL copy of the XHTML rendering.

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor at the Annual General Meeting on 16 June 2021. We were engaged by the Supervisory Board on 5 April 2022. We have been the group auditor of Brockhaus Technologies AG since its initial public offering in 2020.

We declare that the opinions expressed in this auditor's report are consistent with the additional report to the Audit Committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

Other Matter – Use of the Auditor's Report

Our auditor's report must always be read together with the audited consolidated financial statements and the audited combined management report as well as the examined ESEF documents. The consolidated financial statements and the combined management report converted to the XHTML format – including the versions to be published in the German Federal Gazette [Bundesanzeiger] – are merely electronic renderings of the audited consolidated financial statements and the audited combined management report and do not take their place. In particular, the ESEF report and our assurance opinion contained therein are to be used solely together with the examined ESEF documents made available in electronic form.

German Public Auditor Responsible for the Engagement

The German Public Auditor responsible for the engagement is Markus Fox.

Frankfurt am Main, 2 May 2022

KPMG AG
Wirtschaftsprüfungsgesellschaft

Fox	Kast
Wirtschaftsprüfer	Wirtschaftsprüfer
[German Public Auditor]	[German Public Auditor]

Supplementary information

Supplementary information

Basis of reporting

The **reporting period** for this Annual Report is the period from January 1, 2021, to December 31, 2021. The **reporting date** is December 31, 2021.

This Annual Report has been translated from German into English. In the case of any discrepancies between the two language versions, the German version takes precedence.

Rounding

The performance metrics appearing in this report have been rounded in line with standard commercial practice. This rounding method does not necessarily preserve totals, so that it is possible that the amounts in this report do not add up precisely to the total shown.

Financial calendar

May 16, 2022	Quarterly Statement Q1 2022
June 22, 2022	Annual General Meeting
August 15, 2022	Publication of Half-Yearly Report 2022
November 14, 2022	Quarterly Statement Q3 2022

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