voxeljet AG

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Report of Independent Registered Public Accounting Firm

To the Shareholders and Supervisory Board of voxeljet AG

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial position of voxeljet AG and its subsidiaries (the "Company") as of December 31, 2022 and 2021, and the related consolidated statements of comprehensive loss, changes in equity and cash flows for each of the three years in the period ended December 31, 2022, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

Substantial Doubt about the Company's Ability to Continue as a Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the consolidated financial statements, the Company has incurred recurring net losses, has incurred recurring negative cash flows from operating activities and has existing financial obligations that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as

a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Recognition, Valuation, and Derecognition of Embedded Derivative Financial Instruments

As described in Notes 5 and 11 to the consolidated financial statements as of December 31, 2022, the Company as per December 31, 2021 recognized embedded derivative financial assets amounting to kEUR 2,827 and embedded derivative financial liabilities amounting to kEUR 516 (collectively referred to as the "embedded derivative financial instruments"), which were presented as current assets and non-current liabilities, respectively. The embedded derivative financial instruments, which were embedded in Tranche A and B1 of the loan granted in EUR by the European Investment Bank (the "EIB"), were required to be bifurcated and accounted for separately from the host contract because their value was dependent on the share price of the Company, which was not closely related to the host contract. The embedded derivative financial instruments were revalued at each balance sheet date, with changes in their fair value recorded within the financial result of the consolidated statements of comprehensive loss. The fair value of the embedded derivative financial instruments, which were not traded in an active market, was determined by management using valuation techniques which were dependent on inputs such as share price, share volume. discount rates and foreign currency exchange rates. Due to the early settlement of Tranche A and B1 of the loan granted from the EIB, the fair value of the bifurcated embedded derivative financial instruments relating to the performance participation interest for Tranche A and B1 was determined for the accounting of the derecognition as of September 30, 2022. The transaction resulted in a finance expense (Tranche A) in an amount of kEUR 2,827 as well as a finance income (Tranche B1) in an amount of to kEUR 516 for the year ended December 31, 2022. The deferred tax assets and liabilities resulting from the temporary differences from the respective tax base amounting to kEUR 791 for Tranche A (deferred tax liability) and kEUR 144 for Tranche B (deferred tax asset) as per December 31, 2021 were derecognized as well. The derecognition resulted in a deferred tax income in the amount of kEUR 791 (Tranche A) and deferred tax expense in the amount of k EUR 144 (Tranche B).

The principal considerations for our determination that performing procedures relating to the recognition, valuation, and derecognition of embedded derivative financial instruments is a critical audit matter are that there is significant judgment and estimation by management when evaluating the recognition and valuation as well as the derecognition of the embedded derivative financial instruments. This in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures to evaluate management's conclusion on the recognition, valuation, and derecognition of the embedded derivative financial instruments. Furthermore, the audit effort involved the use of professionals with specialized skills and knowledge to assist in performing these procedures and evaluating the audit evidence obtained. As disclosed by management, a material weakness existed related to this matter.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included, among others,

- i. executing audit procedures regarding the appropriateness of the recognition, valuation, and derecognition of the embedded derivative financial instruments as they were bifurcated from the host contract, the valuation techniques used as well as the reasonableness of management's assumptions and estimates included in the calculation of fair values of the embedded derivative financial instruments,
- ii. evaluating management's process for determining the fair values of the embedded derivative financial instruments as well as the recognition, valuation and derecognition of deferred tax assets and liabilities on the embedded derivative financial instruments,
- iii. evaluating the quantitative factors (which consider share prices, discount rates and currency exchange rates) used by the Company in the calculation of the fair values of the embedded derivative financial instruments to source data provided by the Company and/or to externally available data,
- iv. evaluating the compliance of the underlying assumptions and input factors used in the fair value calculations performed by the Company for the determination of the fair values of the embedded derivative financial instruments with the terms of the loan agreements, including the correct application of the formulas used in the fair value calculations,
- v. evaluating the effective date for the derecognition of Tranche A and B1 of the loan and derecognition of the derivative financial instruments,

- vi. assessing the permanence of methods used for the determination of deferred tax assets and liabilities on the embedded derivative financial instruments, and
- vii. evaluating management's assessment of the disclosure requirements in reference to the embedded derivative financial instruments including their maturity and the Company's compliance with financial covenants referenced in the agreement with the EIB.

Munich, Germany March 30, 2023

PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft

/s/ Sebastian Stroner Wirtschaftsprüfer (German Public Auditor) /s/ ppa. Martin Veit Wirtschaftsprüfer (German Public Auditor)

We have served as the Company's auditor since 2020.

voxeljet AG
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

	_	December 31,	
	_	2022	2021
	Notes	(€ in thousar	nds)
Current assets		35,481	42,748
Cash and cash equivalents	3	12,119	7,027
Financial assets	3, 11	2,047	18,522
Trade receivables	3, 7, 18	6,165	6,107
Inventories	8	11,136	9,482
Income tax receivables		23	23
Other assets		3,991	1,587
Non-current assets		19,639	24,711
Financial assets	3, 11	944	4
Intangible assets	9	819	878
Property, plant and equipment	9, 21	17,799	23,719
Other assets		77	110
Total assets		55,120	67,459
		December 3	R1
	-	2022	2021
	Notes	(€ in thousar	nds)
Current liabilities		11,374	21,716
Trade payables	3	2,683	2,594
Contract liabilities	3	4,877	2,132
Financial liabilities	3, 11, 20	1,161	14,882
Other liabilities and provisions	10	2,653	2,108
		10.001	10.05
Non-current liabilities		19,024	13,256
Deferred tax liabilities	2	 201	87
Contract liabilities	3	281	231
Financial liabilities	3, 11, 20	18,743	12,938
Equity		24,722	32,487
Subscribed capital	24	9,135	7,027
Capital reserves	24	112,996	110,264
Accumulated deficit	3	(97,240)	(85,974)
Accumulated other comprehensive income	-	(464)	1,400
Equity attributable to the owners of the company		24,427	32,717
Non-controlling interests.		295	(230)
Total equity and liabilities		55,120	67,459

See accompanying notes to these consolidated financial statements.

voxeljet AG
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

		Year Ended December 31,		1,
		2022	2021	2020
	Notes	(€ in thousands, e	xcept share and pe	r share data)
Revenues	3, 17	27,832	24,826	21,567
Cost of sales.	12	(19,646)	(16,876)	(14,812)
Gross profit		8,186	7,950	6,755
Selling expenses		(7,975)	(6,420)	(5,816)
Administrative expenses		(6,584)	(6,577)	(6,407)
Research and development expenses		(6,865)	(6,149)	(6,500)
Other operating expenses	13	(2,591)	(618)	(2,799)
Other operating income	13	10,447	2,970	1,603
Thereof income (expense) from changes in impairment allowance included in other operating income (expense)		(116)	(99)	(29)
Operating loss		(5,382)	(8,844)	(13,164)
Finance expense	14	(6,749)	(2,601)	(2,589)
Finance income	14	620	924	184
Financial result	14	(6,129)	(1,677)	(2,405)
Loss before income taxes		(11,511)	(10,521)	(15,569)
Income tax (expense) income	15	102	(65)	88
Net loss		(11,409)	(10,586)	(15,481)
Other comprehensive income (loss) that may be reclassified subsequently to profit or loss		(1,865)	(304)	933
Total comprehensive loss		(13,274)	(10,890)	(14,548)
Loss attributable to:				
Owner of the Company		(11,266)	(10,511)	(15,339)
Non-controlling interests		(143)	(75)	(142)
		(11,409)	(10,586)	(15,481)
Total comprehensive loss attributable to:				
Owner of the Company		(13,131)	(10,815)	(14,406)
Non-controlling interests		(143)	(75)	(142)
		(13,274)	(10,890)	(14,548)
Weighted average number of ordinary shares outstanding		7,350,792	6,302,458	4,836,000
Loss per share - basic/diluted (EUR)		(1.53)	(1.68)	(3.20)

See accompanying notes to these consolidated financial statements.

voxeljet AG

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(€ in thousands)

	Attributable to the owners of the company						
				Accumulated other		Non-	
	Subscribed capital	Capital reserves	Accumulated deficit	comprehensive gain (loss)	Total	controlling interests	Total equity
Balance at January 1, 2020	4,836	88,077	(60,124)	742	33,531	(13)	33,518
Loss for the period			(15,339)		(15,339)	(142)	(15,481)
Foreign currency translations				933	933		933
Equity-settled share-based payment		671			671		671
Balance at December 31, 2020	4,836	88,748	(75,463)	1,675	19,796	(155)	19,641
Loss for the period			(10,511)		(10,511)	(75)	(10,586)
Foreign currency translations				(304)	(304)		(304)
Issue of ordinary shares in the form of ADS, net of transaction costs and tax	2,191	21,212			23,403		23,403
Equity-settled share-based payment		304			304		304
Change in deferred tax asset				29	29		29
Balance at December 31, 2021	7,027	110,264	(85,974)	1,400	32,717	(230)	32,487
Loss for the period			(11,266)		(11,266)	(143)	(11,409)
Foreign currency translations				(360)	(360)		(360)
Reclassification to profit or loss on deconsolidation of subsidiary				(1,475)	(1,475)		(1,475)
Issue of ordinary shares in the form of ADS, net of transaction costs and tax	2,108	3,335			5,443		5,443
Equity-settled share-based payment		65			65		65
Change in deferred tax asset				(29)	(29)		(29)
Change of non-controlling interests due to capital increase		(668)			(668)	668	
Balance at December 31, 2022	9,135	112,996	(97,240)	(464)	24,427	295	24,722

See accompanying notes to these consolidated financial statements.

voxeljet AG
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2022	2021	2020
		(€ in thousands)	
Cash Flow from operating activities			
Loss for the period	(11,409)	(10,586)	(15,481)
Depreciation and amortization.	2,926	3,100	3,442
Foreign currency exchange differences on loans to subsidiaries	(619)	(1,200)	1,466
Foreign currency translation reserve reclassified to profit or loss	(1,475)		
Change in fair value of bond funds	773	291	11
Share-based compensation expense	65	305	671
Change in impairment of trade receivables	116	99	29
Non-cash expense on financial liabilities.	10	1,976	1,505
Change in fair value of derivative equity forward	2,311	(752)	715
Change in inventory allowance	945	851	(1)
Interest paid	3,121	263	258
Interest received.	(77)	(85)	(92)
Loss on disposal of intangibles and property, plant and equipment	20	17	42
Gain from sale-leaseback of property	(4,335)		
Other	(117)	92	63
Oulci	(117))2	03
Change in working capital	(1,439)	(908)	774
Trade and other receivables, inventories and current assets	(4,714)	(1,375)	1,501
Trade payables	(73)	585	(781)
Other liabilities, contract liabilities and provisions	3,349	(82)	(417)
Change in restricted cash	·	(44)	463
Income tax payable/receivables	(1)	8	8
Total	(9,184)	(6,537)	(6,598)
Cash Flow from investing activities			
	(700)	(1.041)	(120)
Payments to acquire property, plant and equipment and intangible assets.	(789)	(1,041)	(139)
Proceeds from disposal of property plant and equipment	26,036		
Proceeds from disposal of financial assets	12,581		4,962
Payments to acquire financial assets		(10,486)	(994)
Interest received	77	85	92
Total	37,905	(11,442)	3,921
Cash Flow from financing activities			
Change in security deposit.		16	
Repayment of lease liabilities	(637)	(334)	(412)
	(19,667)	(1,004)	(863)
Repayment of long-term debt	. , ,		, ,
Proceeds from issuance of long-term debt	 5 420	26.610	5,000
Proceeds from issuance of shares	5,429	26,619	
Share issue cost	(776)	(3,217)	
Change in restricted cash	(645)	(2,298)	(2.50)
Interest paid	(7,407)	(263)	(258)
Total	(23,703)	19,519	3,467
Net increase (decrease) in cash and cash equivalents	5,018	1,540	790
Cash and cash equivalents at beginning of period	7,027	5,324	4,368
Changes to cash and equivalents due to foreign exchanges rates	74	163	166
Cash and cash equivalents at end of period	12,119	7,027	5,324

See accompanying notes to these consolidated financial statements.

Please refer to Note 21. – Leases for the non-cash flow transactions arising from the Sale-Leaseback.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Basis of preparation

1. The reporting entity

voxeljet AG (in the following referred to as "voxeljet", "Group", or the "Company") is a high-tech company headquartered in Friedberg, Germany which is listed on the NASDAQ Capital Market (the "NASDAQ"). The Company consists of voxeljet AG, voxeljet America Inc. ("voxeljet America"), voxeljet India Pvt. Ltd ("voxeljet India") and voxeljet China Co. Ltd. ("voxeljet China"). voxeljet AG owns 100% of the issued and outstanding shares of voxeljet America and voxeljet India, as well as 88.52% of voxeljet China.

In December 2020, management initiated the wind-up of voxeljet UK Ltd. ("voxeljet UK"), which was finalized on February 17, 2022, when upon submission of final account by liquidators to the Companies House, the affairs of voxeljet UK were fully wound up. On deconsolidation of voxeljet UK in February 2022, the foreign currency translation reserve amounting to kEUR 1,475 recorded in other comprehensive income has been reclassified to profit and loss account.

The former minority shareholder of voxeljet China, Suzhou Meimai Fast Manufacturing Technology Co., Ltd. ("Meimai"), on September 1, 2021 transferred half of its equity interest in voxeljet China, or 15% of voxeljet China's equity, to its shareholder MK Holding GmbH and the remaining half of its equity interest, or 15% of voxeljet China's equity, to its shareholder Mr. Jin Tianshi, the managing director of voxeljet China. On June 15, 2022, the shareholders of voxeljet China approved the increase of registered capital of voxeljet China from RMB 20,000,000 (EUR 2,671,191) to RMB 52,250,000 (EUR 7,227,885). After this capital increase, voxeljet AG owns 88.52% of voxeljet China and is entitled to nominate three directors, while each of MK Holding GmbH and Mr. Jin Tianshi owns 5.74% of voxeljet China and is entitled to nominate one director.

The Company's American Depositary Shares ("ADSs") were listed on the New York Stock Exchange (the "NYSE") from October 2013 to August 2020, and have been listed on the NASDAQ since August 2020, under the ticker symbol "VJET."

As a manufacturer of three-dimensional ("3D") printing systems, voxeljet specializes in the development, production and distribution of industrial printing machines and the production and sale of customized printed products to industrial customers. The Company operates in two business divisions: Systems and Services.

The voxeljet Systems business division develops, manufactures and sells innovative 3D printers. Today, voxeljet has a product range that reaches from smaller entry models to large-format machines, and therefore offers 3D printer systems for a wide range of application areas.

Through its Services business division, the Company offers customized printed products such as sand molds and plastic models based on computer-aided design data through its "on-demand production" service centers. In addition, the Company offers casting services to its customers. In those cases, the casting process is performed by external suppliers supported by voxeljet's molds and models. Small-batch and prototype manufacturers utilize the Company's machines for the automatic, patternless manufacture of their casting molds and 3D models. The Company's customer base includes automotive manufacturers, aerospace industries, foundries and suppliers as well as companies from the arts and design industries as well as universities and research institutes.

2. Preparation of financial statements

The consolidated financial statements of the Group have been prepared in accordance with International Financial Reporting Standards ("IFRS") as set forth by the International Accounting Standards Board ("IASB") and interpretations of the IFRS Interpretations Committee (IFRIC).

The consolidated financial statements were authorized for issue by the Management Board on March 30, 2023.

These consolidated financial statements were prepared on the basis of historical cost except for the following items, which are measured on an alternative basis on each reporting date.

Debt securities at fair value through profit or loss

Non-derivative financial instruments at fair value through profit or loss

Fair value
Derivative financial instruments at fair value through profit or loss

Fair value

The consolidated financial statements are presented in thousands of Euros (kEUR) except where otherwise stated. Due to rounding, numbers presented throughout these notes may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures.

Going concern

The financial statements have been prepared on the basis of going concern which contemplates continuity of normal business activities and the realization of assets and settlement of liabilities in the ordinary course of business.

voxeljet has recognized continuous net losses during the years 2022, 2021 and 2020 amounting to kEUR 11,409 kEUR 10,586 and kEUR 15,481, respectively. Additionally, voxeljet had negative cash flows from operating activities in 2022, 2021 and 2020 of kEUR 9,184, kEUR 6,537, kEUR 6,598, respectively, mainly due to continuous net losses.

During 2021, in January, February and July, the Company completed three registered direct offerings and sales of a total of 2,190,711 ADSs, which provided voxeljet with total gross proceeds of approximately USD 32.0 million (& 26.6 million) before deducting fees and expenses. Further, on October 13, 2022, the Company announced that it has completed another registered direct offering and sale of 1,279,070 ordinary shares in the form of ADSs at a purchase price of USD 3.44 (& 3.60) per share. The gross proceeds of the offering amounted to approximately USD 4.4 million (& 4.6 million).

On October 31, 2022 the Company closed a sale and leaseback transaction (the "Sale-Leaseback") regarding voxeljet AG's properties located in Friedberg, Free State of Bavaria, Germany with IntReal International Real Estate Kapitalverwaltungsgesellschaft mbH, which was initiated on August 11, 2022. Under this agreement, voxeljet was entitled to receive proceeds from the sale amounting to € 26.5 million and entered into a long-term lease contract. Simultaneously, on August 11, 2022, voxeljet initiated the full settlement of the Finance Contract entered into with the European Investment Bank (the "EIB"), dated November 9, 2017 (the "Finance Contract"), including the repayment of tranche A and B1 thereunder, including all interest for a fixed amount of € 22.0 million. In addition, the Company initiated the early settlement of certain loans for which the sold properties were collateralized, which were granted by Sparkasse Schwaben-Bodensee, Germany (formerly Kreissparkasse Augsburg) ("Sparkasse") with a settlement of € 0.8 million in August 2022 and € 3.1 million in October 2022. Consequently, the Company has written down the bifurcated embedded derivative financial instruments relating to the performance participation interest for tranche A resulted in finance expense amounting to kEUR 2,827, and the bifurcated embedded derivative financial liability for the performance participation interest for tranche B1 resulted in finance income of kEUR 516.

The closing process of the transaction, which began through the initiation of the Sale-Leaseback at the notary on August 11, 2022, was successfully finalized on October 31, 2022. The closing included the receipt of the proceeds from IntReal International Real Estate Kapitalverwaltungsgesellschaft mbH, the settlements with EIB and Sparkasse and the subsequent initial of the release process for land charges and commencement of the long-term lease contract on November 1, 2022. These steps further improved voxeljet's liquidity and financial flexibility, and released the Company from all covenants in the Finance Contract, including a Minimum Cash/Cash Equivalents requirement (the "Minimum Cash Covenant").

In December 2022, the Company privately placed 828,943 ADSs, each representing one ordinary share, at a purchase price of USD 2.16 (\in 2.04), with the institutional investor Anzu Ventures II LLC ("Anzu"). The capital increase was registered on December 22, 2022 and the private placement was completed when voxeljet received the remaining portion of the related funds amounting to USD 0.9 million (\in 0.9 million) in January 2023. The first portion of USD 0.9 million (\in 0.8 million) was received in December 2022. This capital increase provided the Company with gross proceeds of USD 1.8 million (\in 1.7 million) before deducting fees and expenses.

In January 2023, the Company issued a promissory note to Anzu (the "Anzu Note"), in a principal amount of USD 3.2 million (€ 3.0 million). The Anzu Note matures on January 3, 2028, and includes interest payable monthly at a rate of 3% *per annum*. In addition, the Anzu Note includes a voluntary prepayment right for voxeljet, and, in the case of fundamental changes including a change of control in voxeljet, a right by voxeljet to repay the Anzu Note and a right by Anzu to require that voxeljet repurchases the Anzu Note. The aforementioned rights are considered to be embedded derivatives that have to be bifurcated. A one-time interest payment equal to the above principal amount of USD 3.2 million (€ 3.0 million) is required to be paid upon maturity or at time of prepayment. The terms of the Anzu Note include certain covenants and events of default.

The capital increases described above improved voxeljet's liquidity as well as equity ratio significantly. Also the financing received through the Anzu Note had a positive impact on the Company's cash reserves. In addition, the closing of the Sale-Leaseback in connection with the early settlement of certain loans, released voxeljet from significant financial obligations mainly related to the repayment of tranche A thereunder, including the performance participation interest from the loan received from the EIB. Tranche A would have become due in December 2022 amounting to approximately € 14.6 million reduced or increased by the fair value of the performance participation interest. The early settlement further releases the Company from all covenants in the Finance Contract, including the Minimum Cash Covenant.

In spite of this success, according to the Group's current liquidity forecasts, voxeljet will require further funding in the second half of 2023 to maintain its operations. Therefore, management is taking steps to raise additional funds, including meetings with potential new and existing investors and banks, which may include debt and/or equity financing, and there can be no assurance that the Company will be able to raise further funds on terms favorable to the Company, if at all.

The ongoing conflict between Russia and Ukraine raises further risks and uncertainties. The heightened use of trade restrictions and sanctions, including tariffs or prohibitions on technology transfers to achieve diplomatic ends could impact voxeljet's ability to conduct its business as planned. A spill-over of the conflict to neighboring countries, the European Union or NATO members could result in further adverse impacts on the Company's business, including a drop in market demand, price increases for raw materials and energy or delays in the global supply chain.

These events and conditions described above raise material uncertainties that may cast significant doubt upon voxeljet's ability to continue as a going concern. Despite the ongoing losses, reduced cash flow as well as with the existing financial obligations, management assumes that voxeljet will continue as a going concern. However, the going concern is dependent upon management and the Company being successful in:

- achievement of budgeted sales; and
- successful fund raising in form of equity and/or debt.

Those assumptions are included in the Company's current liquidity forecasts and management believes that the Company has the ability to meet its financial obligations for at least the next 12 months from the authorization for issuance of these consolidated financial statements as of and for the year ended December 31, 2022 by the Management Board on March 30, 2023 and therefore continues as a going concern.

As a U.S. Securities and Exchange Commission registrant, the Company is required to have its financial statements audited in accordance with Public Company Oversight Board ("PCAOB") standards. References in these IFRS financial statements to matters that may cast significant doubt about the Company's ability to continue as a going concern also raise substantial doubt as contemplated by the PCAOB standards.

Impairment test

Non-financial assets are tested for impairment if there are indicators that the carrying amounts may not be recoverable. Therefore, the Company performed an impairment test for the non-financial assets for the end of the reporting period. An impairment loss is recognized in the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is defined as the higher of an asset's fair value less cost to sell and its value in use. As individual assets do not generate largely independent cash flows, impairment testing is performed at the cash

generating unit level. An individual fixed asset within a CGU cannot be written down below fair value less cost incurred to sell the individual asset. The impairment test, performed by management, did not lead to any write-downs.

Assets are allocated to cash-generating units for the purpose of impairment testing. The units or groups of units are identified at the lowest level at which assets are monitored for internal management purposes, being the operating segments (i.e., the Systems segment and Services segment).

3. Summary of significant accounting policies

The principal accounting policies applied in the preparation of these financial statements are set out below. Except as described below, these policies have been consistently applied to all years presented.

Consolidation

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

Intercompany balances and transactions are eliminated in preparing the consolidated financial statements.

A joint venture is an arrangement in which the Group has joint control, whereby the Group has rights to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities. Interests in the joint venture are accounted for using the equity method. They are initially recognized at cost, which includes transaction costs. Subsequent to initial recognition, the consolidated financial statements include the Group's share of the profit or loss and other comprehensive income of equity-accounted investees, until the date on which significant influence or joint control ceases.

Revenues from contracts with customers

The Company estimates the transaction price at contract inception, including any variable consideration. The revenue is measured at the transaction price agreed under the contract, net of discount. In most cases, the consideration is due when legal title has been transferred. Where the contracts include multiple performance obligations, the transaction price is allocated to each performance obligation based on a relative stand-alone selling price. List prices are considered as the stand-alone selling price of the product.

Under IFRS 15, the Company recognizes revenue on the maintenance contracts based on the input method, such as the number of service visits or the provision of certain goods, in particular printheads, to measure the progress that depicts the transfer of control of the goods or services to the customer toward complete satisfaction of a performance obligation over time. Therefore, the expected number of service visits and goods to be provided under a contract have been estimated by the Company's service department based on historical experience.

Revenue on the sale of new or refurbished 3D printers is recognized at the point in time after completed installation of 3D printers at the customer site and evidenced through final acceptance by the customer. Customers obtain control of the 3D printers when the customers have accepted the assets. Refurbished 3D printers usually were produced for and used in the Company's Services segment. On average, these refurbished printers have been operating within a voxeljet service center for 1.5 to 2.5 years prior to their sale. Before these 3D printers are sold, they are fully refurbished and a new printhead is installed. The cost of sales include the residual value as well as the costs related to the refurbishment.

The Group provides customers with statutory warranty on all 3D printers for one year. The warranty presents assurance-type warranty and is not treated as a separate performance obligation. After the initial one-year warranty period, the Group offers its customers optional maintenance contracts, which are accounted for as separate performance obligations.

The Company, from time to time, offers to customers, to operate their purchased 3D printer and perform 3D printing on custom-ordered printed products for a temporary period before the customers' facility is configured according to required technical specifications. The Company recognizes revenue for the use of space on Company premises over time under the term of the contracts. The Company recognizes revenue from the sale of customized printed products from the customer's purchased 3D printer, upon transfer of control of ownership to the customers, generally upon shipment.

Revenue on the sale of customized printed products is recognized at the point in time when the control of ownership of the assets is transferred to the customers, generally upon shipment.

Shipping, packaging and handling costs billed to customers for the sales of customized printed products and consumables are not considered as a separate performance obligation. The Company recognized the gross revenue at the point in time as the service is provided, i.e. upon shipment. Costs incurred by the Company associated with shipping, packaging and handling are included in selling expenses in the consolidated statements of comprehensive loss.

Invoices from revenue streams, besides the sale of new or refurbished 3D printers are usually payable within 30 to 60 days. The Company also recognizes that longer payment periods are customary in some countries where it transacts business. To reduce credit risk in connection with the sale of new or refurbished 3D printers, the Company generally requires advance payments prior to shipment and requires international customers to furnish letters of credit. These advance payments are recognized as contract liabilities. Maintenance contracts are generally billed to customers in advance on a monthly, quarterly, or annual basis, and are initially recorded as a contract liability as the Company has an enforceable right to payment after the contract has been signed.

It is the Group's policy that it does not offer products to the end customer with a right of return. Therefore, neither a refund liability nor a right to the returned goods are recognized.

A contract liability is recognized when the Company has received consideration (i.e. advance payment) from customers before satisfying a performance obligation or has an unconditional right to payment under a non-cancellable contract before it transfers the related goods or services to the customer under maintenance and extended warranty contracts. The extended warranty is considered as service-type warranty and therefore accounted as a separate performance obligation.

Cash and cash equivalents

Cash is cash on hand and demand deposits. Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to insignificant risk of changes in value. Investments normally only qualify as cash equivalent if they have a short maturity of three months or less from the date of acquisition.

Financial instruments

Financial instruments are contracts that give rise to a financial asset in one entity and a financial liability or equity instrument in another entity. voxeljet recognizes financial assets and financial liabilities in the balance sheet when an entity of the Group becomes a contractual party to the financial instrument.

All customary purchases and sales of financial assets are recognized on the trading date, i.e. the date on which the Company enters into the obligation to purchase the asset.

Financial assets and financial liabilities are generally reported at gross value. Netting only applies if the offsetting of the amounts is currently legally enforceable and it is intended to actually offset them. In general, voxeljet does not intend to offset any amounts.

Initial measurement

At initial recognition, voxeljet measures a financial asset at its fair value plus, in the case of a financial asset not measured at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at fair value through profit or loss ("FVTPL") are expensed immediately. A trade receivable without a significant financing component is initially measured at the transaction price.

A financial liability is initially measured at its fair value minus, in the case of a financial liability not measured at fair value through profit or loss, transaction costs that are directly attributable to the issue of the financial liability. Transaction costs of financial liabilities carried at FVTPL are expensed immediately.

Classification and subsequent measurement of financial assets and financial liabilities

Under IFRS 9, on initial recognition, a financial asset is classified as measured at: amortized cost, fair value through other comprehensive income ("FVOCI"), or FVTPL. The classification of financial assets under IFRS 9 is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics.

A financial asset is measured at amortized cost if it meets both of the following conditions and is not designated as at FVTPL:

- it is held within a business model whose objective is to hold financial assets to collect contractual cash flows; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

A financial debt instrument is measured at FVOCI if it meets both of the following conditions and is not designated as at FVTPL:

- it is held within a business model whose objectives are both to hold financial assets to collect contractual cash flows and to sell financial assets; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

On initial recognition of an equity investment that is not held for trading, the Company may irrevocably elect to record subsequent changes in the investment's fair value in OCI without recycling. This election is made on an investment-by-investment basis. The Company has utilized the option to record subsequent changes in the equity investment's fair value in OCI (FVOCI) as of December 31, 2022 and 2021. The equity investment relates to listed securities in International School Augsburg -ISA- gAG, Gersthofen, Germany, which is not held for trading and the Company has irrevocably elected to recognize the subsequent changes in fair value on OCI. The investment is held for strategic rather than for trading purpose and the Company considers this classification to be more relevant.

All financial assets not classified as measured at amortized cost or FVOCI as described above are measured at FVTPL. This includes all derivative financial assets. On initial recognition, the Company may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortized cost or at FVOCI as at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise. The Company has not utilized this option as of December 31, 2022 and 2021.

On initial recognition, a financial liability is classified as measured at amortized cost or FVTPL.

A financial liability is measured at amortized cost unless it is either held for trading, a derivative, or designated as at FVTPL. A financial liability is subsequently measured at amortized cost using the effective interest method, which allocates interest expense at a constant rate over the term of the instrument. The effective interest rate of a financial liability is calculated at initial recognition and is the rate that exactly discounts the expected cash flows through the expected life of the financial liability.

The Company may irrevocably designate a financial liability as measured at FVTPL which is either managed on a portfolio basis and its performance is evaluated on a fair value basis, or if its designation would eliminate or significantly reduce an accounting mismatch that would otherwise arise or if it is a hybrid instrument that contains one or more embedded derivatives. The Company has not utilized this option as of December 31, 2022 and 2021.

Recognition of gains and losses (by category)

The recognition of gains and losses of voxeljet's financial assets is based on their classification:

- At amortized cost: Interest income from these financial assets is reported in the financial income using the effective interest method. Gains and losses on derecognition are recorded in the income statement and, considering related foreign currency gains and losses, reported under other operating income and expenses.
- At fair value through profit or loss: Gains or losses of derivative financial instruments and short term investments, which are subsequently measured at fair value through profit or loss, are included in the income statement as finance income or finance expense in the period in which they arise.

The recognition of gains and losses of voxeljet's financial liabilities depends on their classification:

- Financial liabilities measured at amortized cost: This category includes trade payables and interest-bearing loans. After initial recognition, these are measured at amortized cost using the effective interest method. Gains and losses are recognized in profit or loss when the liabilities are derecognized as well as in case of amortization using the effective interest method. Amortization according to the effective interest method is included in interest expenses in the profit and loss account.
- Financial liabilities at fair value through profit or loss: This category includes derivative financial instruments that are not designated as hedging instruments in accordance with IFRS 9 hedge accounting rules. Gains and losses are recognized in the income statement as finance income or finance expense in the period in which they arise.

Derecognition

voxeljet derecognizes financial assets (or parts of their financial assets where applicable) when the rights to receive cash flows from the financial asset have expired or have been transferred and the Group substantially transferred all risks and rewards associated with the ownership.

A financial liability is derecognized when the obligation under the liability is settled, cancelled or expired. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, this exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability. In case of minor changes in conditions as well as changes in expected future cash flows, a change in the present value will be considered in profit or loss.

Impairment of financial assets

voxeljet assesses expected credit losses ("ECLs") associated with financial assets measured at amortized cost, lease receivables and contract assets, based on future expectations. A respective risk provision or, in case of an actual loss that already occurred, an impairment loss is recognized as other operating income or expenses.

The Company's financial assets at amortized cost consist of trade receivables, restricted cash, term deposits and cash and cash equivalents.

- General approach:

Generally, financial assets are considered as having a low default risk at initial recognition resulting in a 12-month ECL provision. In case of a significant increase in credit risk, the lifetime ECLs are recognized. Amongst others debtor's payment delays of more than 120 days are considered as an indicator for increase in default risk. Further, when determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECLs, voxeljet considers reasonable and supportable information that is relevant and available without undue cost or effort. An objective evidence of impairment is considered to be for example bankruptcy filing of the counterparty.

- Simplified approach:

For trade receivables with no significant financing component voxeljet applies the simplified approach as required by IFRS 9, which requires lifetime ECLs to be recognized from initial recognition of the receivables.

The ECLs are based on both quantitative and qualitative information and analysis, based on the Group's historical experience and third-party credit risk assessment and including forward-looking information.

A default on a financial asset is when the counterparty fails to make contractual payments within 120 days of when they fall due and there is no information available that is contradictory (e.g., the counterparty commits the payment to a later time or the Company and the counterparty agreed upon a payment plan).

Financial assets are written off when there is no reasonable expectation of recovery, such as a debtor failing to engage in a repayment plan with the Company or a counterparty had declared insolvency. Where loans or receivables have been written off, the Company continues to engage in enforcement activity to attempt to recover the receivable due. Where recoveries are made, these are recognized in profit or loss.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECLs, the Company considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on the Group's historical experience and informed credit assessment and including forward-looking information.

voxeljet AG only recognizes ECLs for trade receivables based on the simplified approach.

Trade receivables

In order to measure ECLs, trade receivables are summarized on the basis of common credit risk characteristics and overdue days.

The Company measures loss allowances for trade receivables at an amount equal to lifetime ECLs. ECLs are a probability-weighted estimate of credit losses. The Company calculates the ECL based on the risk scoring of its customers' according to an external rating agency. Following the risk score of each customer, the trade receivables are clustered into different grades. For each grade, the ECL is determined based on the risk score received from the external rating agency and actual credit loss experience. In addition, the Company uses qualitative assessment of the trade receivables, where default has incurred. For information about the exposure to credit risk and ECLs for trade receivables as of December 31, 2022 and 2021, please refer to Note 18.

Presentation of impairment

Loss allowances for financial assets measured at amortized cost are deducted from the gross carrying amount of the assets and presented within other operating expenses or other operating income.

Other financial assets at AC

Cash and cash equivalents like short term bank deposits, restricted cash and term deposits are subject to the general approach of impairment. However, no significant ECL was identified for these financial assets due to the excellent ratings of those banks to which voxeljet entrusted its funds.

Leases

Definition of a lease

The Company assesses whether a contract is or contains a lease based on the definition of a lease. Under IFRS 16, a contract is, or contains, a lease if the contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration.

At inception or on reassessment of a contract that contains a lease component, the Company allocates the consideration in the contract to each lease and non-lease component on the basis of their relative stand-alone prices.

The Company as a lessee

The Company leases assets, including properties, production equipment and vehicles. The Company recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at an amount equal to the lease liability, unless cash flows or incentives are present before or at lease commencement which may affect the right-of-use asset.

The right-of-use asset is subsequently at cost less any accumulated depreciation and impairment losses, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the Company's incremental borrowing rate.

The lease liability is subsequently measured at amortized cost using the effective interest method. It is remeasured when there is a change in the future lease payments arising from a change in an index or rate, a change in the estimate of the amount expected to be payable under a residual value guarantee, or as appropriate, changes in the assessment of whether it will exercise a purchase, extension or termination option.

The Company has applied judgement to determine the lease term for some lease contracts in which it is a lessee that include renewal options. The assessment of whether the Company is reasonably certain to exercise such options impacts the lease term, which significantly affects the amount of lease liabilities and right-of-use assets recognized.

However, the Company has elected not to recognize right-of-use assets and lease liabilities for some leases of low-value assets where the value of underlying asset when new is of less than EUR 5,000 (e.g., tools) as well as short-term leases (leases with less than 12 months of lease term). The Company recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

The Company presents right-of-use assets in "property, plant and equipment", in the same line item as it presents underlying assets of the same nature that it owns. The carrying amounts of right-of-use assets are as below:

	Property, plant and equipment			
	Property	Production equipment	Others	Total
		(€ in thousands)		
Balance at January 1, 2022	2,648	19	239	2,906
Balance at December 31, 2022	11,013	1	199	11,213

The Company presents lease liabilities within "financial liabilities" in the consolidated statements of financial position.

On August 11, 2022, management initiated the Sale-Leaseback of voxeljet AG's properties located in Germany Friedberg, Free State of Bavaria, with IntReal International Real Estate Kapitalverwaltungsgesellschaft mbH. The transaction closed on October 31, 2022 and the lease term commenced on November 1, 2022. For further information, see Note 21. "Leases" to the consolidated financial statements.

The Company as a lessor

A lease can be classified as a finance lease or as an operating lease. The classification is determined according to the distribution of the risks and rewards associated with ownership of the leased asset.

The Company leases out a small number of 3D printers. Those leases have been classified as operating leases.

Beginning December 2021, the Company has leased out office space to a third party in Friedberg, Germany. This lease has been classified as an operating lease. The lease income from operating leases where the group is a lessor is recognized in other operating income on a straight-line basis over the lease term. Lease payments from the contract do not include any variable lease payments. The credit risk arising in connection with lease receivables is considered to be immaterial. On August 11, 2022, management initiated the Sale-Leaseback of voxeljet AG's properties located in Friedberg, Free State of Bavaria, Germany with IntReal International Real Estate Kapitalverwaltungsgesellschaft mbH. The transaction closed on October 31, 2022 and the lease term commenced on November 1, 2022. Consequently, the

tenancy is continued in the form of a sublease agreement. A sublease is classified by reference to the right-of-use asset arising from the head lease (i.e., leaseback agreement with IntReal International Real Estate Kapitalverwaltungsgesellschaft mbH). Further voxeljet has leased out production space to third parties in Canton, Michigan, US, also as sublease of right of use asset. Those leases also have been classified as operating leases.

Impacts on financial statements

Impacts for the period

As per the Company's assessment under IFRS 16, as of December 31, 2022, it recognized kEUR 11,213 of right-of-use assets (as of December 2021: kEUR 2,906) and kEUR 19,734 of lease liabilities (as of December 31, 2021: kEUR 3,210).

Also in relation to those leases under IFRS 16, the Company has recognized depreciation and interest costs, instead of operating lease expenses. During the twelve months ended December 31, 2022, the Company recognized kEUR 730 (2021: kEUR 651, 2020: kEUR 682) of depreciation expenses and kEUR 311 (2021: kEUR 149, 2020: kEUR 167) of interest expense from these leases.

Within the statement of cash flows, cash payments for the principal portion of lease payments, as well as for the interest portion, have been classified as financing activities. Payments for short-term leases have been classified as operating activities. The proceeds from the Sale-Leaseback have been classified as investing activities.

Research and development expenses

All research and development costs are charged to expense as incurred as the criteria set forth in International Accounting Standards ("IAS") 38 for capitalizing such costs have not yet been met.

Government grants

Government grants awarded for project funding are recorded within other operating income in the consolidated statement of comprehensive loss if the related research and development costs have been incurred and provided that the conditions for the funding have been met. Until then, amounts received under government grants are recorded as deferred income in the statements of financial position.

Government grants in connection with government assistance to help businesses to mitigate adverse impacts from the COVID-19 global pandemic are recognized in profit or loss on a systematic basis over the periods in which the entity recognizes as expenses the related costs for which the grants are intended to compensate, provided that the entity complies with the conditions for the funding.

Employee stock option plan

In April 2017 and in November 2022, the Supervisory Board adopted and approved Option Plan 2017 and Option Plan 2022, respectively. The plans authorize to grant shares of equity-settled stock options to employees and members of the Management Board. The Company's stock-based compensation expense is estimated at the grant date based on the fair value of the award and is recognized as expense ratably over the requisite service period of the award. The Company calculated the fair value of each option award on the date of grant under the Monte Carlo simulation model. The determination of the grant date fair value of the awards using a simulation model is affected by the Company's stock price as well as assumptions regarding a number of complex and subjective variables. These variables include the expected stock price volatility over the expected life of the awards, risk-free interest rates, and expected dividends. The risk free interest rate is equal to the U.S. Treasury constant maturity rates for the period equal to the expected life. The Company does not currently pay cash dividends on common stock and does not anticipate doing so in the foreseeable future. Accordingly, the expected dividend yield is zero.

Foreign currencies

The financial statements are presented in Euros, the functional currency of voxeljet AG.

Monetary transactions denominated in foreign currencies are translated to Euro at the exchange rates prevailing on the transaction date. Gains and losses on foreign currency transactions are shown within other operating income and other operating expenses, respectively, in the consolidated statements of comprehensive loss.

The financial statements of foreign subsidiaries are translated using the concept of the functional currency in accordance with IAS 21. The assets and liabilities of foreign subsidiaries are translated at the spot rate at the end of the period, while their income statement items are translated at average exchange rates for the respective periods. All resulting exchange differences are recognized in other comprehensive income.

The loans provided to voxeljet AG's subsidiaries are not considered as net investments in foreign operations. Therefore, gains or losses from foreign exchange differences thereon are recognized in the statement of comprehensive loss as "other operating income or expenses".

The exchange rates that are most relevant for voxeljet's consolidated financial statements are as follows:

Average exchange rates to Euro:

December 31,	Average Rate				
	USD	GBP	INR	CNY	
2022	1.0530	0.8528	82.6864	7.0788	
2021	1.1827	0.8596	87.4392	7.6282	
2020	1.1422	0.8897	84.6392	7.8747	

Year end exchange rates to Euro:

December 31,	Year End Rate			
<u> </u>	USD	GBP	INR	CNY
2022	1.0666	0.8869	88.1710	7.3582
2021	1.1326	0.8403	84.2292	7.1947

Income Tax

Income tax expense (benefit) consists of current and deferred tax expense and benefit in accordance with IAS 12.

Current income tax expense (benefit) is based on taxable profit (loss) for the year. Taxable profit (loss) differs from profit (loss) as reported in the statements of comprehensive income (loss) because it excludes items of income or expense that are taxable or deductible in other years and further excludes items that are never taxable or deductible. Current income tax expense (benefit) is calculated using tax rates that have been enacted or substantively enacted by the end of the respective reporting period.

Current tax comprises the expected tax payable or receivable on the taxable income or loss for the year and any adjustment to the tax payable or receivable in respect of previous years. The amount of the current tax payable or receivable is the best estimate of the tax amount to be paid or received that reflects uncertainty related to income tax, if any. It is measured using tax rates enacted or substantively enacted at the reporting date.

Deferred income tax expense (benefit) is recognized on temporary differences between the carrying amounts of assets and liabilities in the statement of financial position and the corresponding tax basis used in the computation of taxable profit (loss).

Deferred tax liabilities are generally recognized for all taxable temporary differences and deferred tax assets, including for carry forward losses to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilized. The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer more probable than not that sufficient taxable profits will be available to allow all or a part of the assets to be recovered.

Deferred tax expense (benefit) is calculated at the tax rates that are expected to apply in the periods when the liability is settled or the asset is realized, based on tax rates (and tax regulations) that have been enacted or substantively

enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Company expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities. Deferred tax expense (benefit) is charged or credited to profit or loss, except when it relates to items charged or credited directly to equity, in which case the deferred taxation is also recorded to equity.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off tax assets against tax liabilities and when they relate to income taxes levied by the same taxation authority and the Company intends to settle its current tax assets and liabilities on a net basis.

Intangible Assets

Intangible assets, including software and licenses, that are acquired by the Company and have a finite useful life are measured at cost less accumulated amortization and any impairment losses. Amortization for intangible assets with finite useful lives is recognized on a straight-line basis over their useful lives.

The amortization of licenses is allocated to the cost of inventory and is included in cost of sales as 3D printers are sold; the amortization of software is mainly included in selling and administrative expenses.

The estimated useful economic lives of acquired intangible assets are presented in the following table:

USEFUL LIFE OF INTANGIBLE ASSETS

Software	3-5 years
Licenses	6-8 years

An intangible asset is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the item) is included in profit or loss in the period in which the item is derecognized.

Property, Plant and Equipment

Property, plant and equipment is carried at acquisition or manufacturing cost (for internally manufactured printers used in the Services segment or the research and development function) and depreciated on a straight-line basis over the estimated useful lives of the related assets, taking into account estimated residual values. Except the sale of used printers, realized gains and losses are recognized upon disposal or retirement of the related assets and are reflected within other operating income or other operating expenses in the consolidated statements of comprehensive loss. Subsequent expenditures are capitalized only if it is probable that voxeljet will receive additional economic benefits from the particular asset associated with these expenditures, and the costs can be determined reliably. In those cases the assets are depreciated over their useful lives. Repair and maintenance expenditures are expensed as incurred. Land is not depreciated. Additions to property, plant and equipment relating to self-constructed 3D printers are considered non-cash transactions.

The estimated useful economic lives of items of property, plant and equipment are as follows:

USEFUL LIFE OF PROPERTY, PLANT AND EQUIPMENT

Leasehold improvements	6-9 years
Buildings	33 years
Plant and machinery	7-8 years
Printers leased to customers under operating lease	7-8 years
Other facilities, machinery and factory equipment	2-20 years
Office equipment	3-25 years

Useful lives, depreciation methods and residual values are reviewed at least annually and, if they change significantly, depreciation charges for current and future periods are adjusted accordingly.

Inventories

Raw materials and merchandise

Raw materials are measured at the lower of acquisition cost, as determined on the weighted-average costs method, and net realizable value. Obsolete inventories are written off directly into cost of sales.

Work in progress

Work in progress is measured at the lower of manufacturing cost and net realizable value. Manufacturing costs comprise all costs that are directly attributable to the manufacturing process, such as direct material and labor, and production related overheads (based on normal operating capacity and normal consumption of material, labor and other production costs), including depreciation charges. Net realizable value is defined as the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs of the sale. For purposes of determining net realizable value, selling expenses include all costs expected to be incurred to make the sale, primarily shipping, packaging and handling as well as commissions.

The Company also uses its own printers in its service centers. Unfinished printers are generally available to be sold if a customer requests a product with a specification which can be met by one of the products in progress. Accordingly, the Company classifies printers as inventory until it removes a finished printer from its manufacturing warehouse to use the printer in a service center. The reclassification as property, plant and equipment, as a non-cash transaction, occurs at cost and depreciation starts at inception of service.

The Company evaluates the adequacy of its inventory reserves on a periodic basis in order to determine the need for an inventory reserve.

Impairment of non-financial assets

The Company continuously assesses if there is a triggering event whether there is an indication that a non-financial asset may be impaired. Such assets are tested for impairment if there are indicators that the carrying amounts may not be recoverable. An impairment loss is recognized in the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is defined as the higher of an asset's fair value less cost to sell and its value in use. As individual assets do not generate largely independent cash flows, impairment testing is performed at the cash generating unit level. An individual fixed asset within a CGU cannot be written down below fair value less cost incurred to sell the individual asset.

Earnings (loss) per share

Basic earnings per share amounts are calculated by dividing profit (loss) by the weighted-average number of ordinary shares outstanding. The weighted-average number of shares is calculated by multiplying the outstanding number of shares after considering the issuance of shares in October and December of 2022 with its time-weighted portion and thereafter summing up their respective portion. Regarding the outstanding and exercisable options refer to Note 6.

	2022	2021	2020
	(in t	housands of shares)	
Weighted-average number of ordinary shares at 31 December	7,351	6,302	4,836

4. New standards and interpretations not yet adopted

The IASB issued a number of new IFRS standards or amendments to existing standards which are required to be adopted in annual periods beginning after December 31, 2021.

Standard	Effective date	Descriptions
IFRS 3	01/2022	Reference to the Conceptual Framework
IAS 16	01/2022	Proceeds before intended use
IAS 37	01/2022	Onerous contracts – Cost of Fulfilling a Contract
IFRS 1, IFRS 9, IFRS 16 and IAS 41	01/2022	Annual Improvements to IFRS Standards 2018–2020 (IFRS 1, IFRS 9, IFRS 16 and IAS 41)
IFRS 17	01/2023	Amendments to IFRS 17 Insurance Contracts
IAS 1	01/2023	Amendments to IAS 1 and IFRS Practice Statement 2 Making Materiality Judgments
IAS 8	01/2023	Amendment to IAS 8 - Definition of Accounting Estimate
IAS 12	01/2023	Amendments to IAS 12 - Deferred Taxes in Connection with Assets and Liabilities arising from a single transaction
IFRS 17 and IFRS 9	01/2023	Initial Application of IFRS 17 and IFRS 9—Comparative Information (Amendment to IFRS 17)
IAS 1	01/2024	Classification of Liabilities as Current or Non-current and Non-current Liabilities with Covenants (Amendments to IAS 1)
IFRS 16	01/2024	Lease Liability in a Sale and Leaseback

The adoption of standards effective 01/2022 did not have a material impact on the financial statements as of and for the year ended December 31, 2022. The Company has not yet conclusively determined what impact the new standards, amendments or interpretations effective 01/2023 or later will have on its financial statements but does not expect they will have a significant impact. The Company has not early adopted any of these new and amended standards and interpretations and intend to adopt them, if applicable, when they become effective.

5. Critical accounting judgment and key sources of estimation and uncertainty

In the process of applying the Company's accounting policies, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. These estimates and associated assumptions are based on the knowledge available as of the preparation date of the financial statements and historical experiences as well as other factors that are considered to be relevant. The estimates and underlying assumptions are reviewed on an ongoing basis.

Developments outside management's control may cause actual amounts to differ from the original estimates. In that case, the underlying assumptions and, if necessary, the carrying amounts of the pertinent assets and liabilities are adjusted accordingly. Revisions to accounting estimates are recognized in the period in which the estimate is revised, if the revision affects only that period, or in the period of the revision and future periods, if the revision affects both current and future periods.

The Company faces an increasingly complex and uncertain macroeconomic and geopolitical environment, related to the ongoing conflict between Russia and Ukraine. The conflict raises further risks and uncertainties. The heightened use of trade restrictions and sanctions, including tariffs or prohibitions on technology transfers to achieve diplomatic ends could impact our ability to conduct our business as planned. A spill-over of the conflict to neighboring countries, the European Union or NATO members could result in further adverse impacts on our business, including a drop in market demand, price increases for raw materials and energy or delays in the global supply chain. Eastern Europe was not an important market for the Company in the past, therefore Management considers sales risks related to the conflict as minor.

The business year 2022 was only minimally impacted by the COVID-19 pandemic. In most of the countries of the world, governments eased or even canceled restrictions, which were implemented in order to contain the pandemic. The positive trend of recovery from the economic slow-down which voxeljet observed since the third quarter of 2021 continued. The zero-COVID strategy, pursued by the Chinese government, still led to several restrictions in China, resulting into lockdowns of entire cities or regions. This led to delays in production of raw materials and intermediate products as well as price increases, which caused adverse impacts on the global supply chain. Nevertheless, voxeljet was

able to fulfill the production plan as scheduled. In spite of the improvement of the COVID-19 situation, there are still uncertainties related to the pandemic, as the situation could worsen at any time.

The assumptions and estimates refer primarily to the assessment of the Company of the ability to continue as a going concern (see further discussion in Note 2.), recognition of revenue, and the consideration of the renewal options of the lease contracts in determining the appropriate lease terms.

The key assumptions concerning the future and other key sources of estimation uncertainty at the end of the reporting period, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next fiscal year are discussed below.

Revenue recognition

Revenue is measured based on the consideration specified in a contract with a customer. The Group recognizes revenue when it transfers control over a good or service to a customer.

Revenue on the sale of new or refurbished 3D printers is recognized at the point in time after completed installation of 3D printers at the customer site and evidenced through final acceptance by the customer. Customers obtain control of the 3D printers when the customers have accepted the assets.

The Company recognizes revenue on the maintenance contracts for 3D printers by applying the input method to measure the progress that depicts the transfer of control of the goods or services to the customer towards complete satisfaction of a performance obligation over time. The determination of the expected number of service visits and goods to be provided under a contract require significant judgment and have been estimated by the Company's service department based on historical experience.

Recognition of derivative financial instruments

The embedded derivative financial instruments, which were embedded in Tranche A and B1 of the loan granted in Euros by the EIB, were required to be bifurcated and accounted for separately from the host contract because their value was dependent on the share price of the Company, which was not closely related to the host contract. The embedded derivative financial instruments were revalued at each balance sheet date, with changes in their fair value recorded within the financial result of the consolidated statements of comprehensive loss. The fair value of the embedded derivative financial instruments, which are not traded in an active market, was determined by management using valuation techniques which were dependent on inputs such as share prices, share volume, discount rates and foreign currency exchange rates. In the prior year ended December 31, 2021, finance income related to Tranche A and Tranche B1 resulting from the revaluations described above amounted to kEUR 460 and kEUR 292, respectively. Due to the successful closing of the Sale-Leaseback on October 31, 2022, the revised expected future cash flows of tranches A and B1 related to the EIB loan after September 30, 2022, changed and the final settlement amount was determined. Consequently, the Company has written down the bifurcated embedded derivative financial instruments relating to the performance participation interest for tranche A and tranche B1 and adjusted the carrying amount of EIB loan tranches A and B1, what resulted in a finance expense of kEUR 4,664 and kEUR 907, respectively in the third quarter of 2022. The full year 2022 impact including the write-down and the derecognition of the bifurcated embedded derivative financial asset relating to the performance participation interest for tranche A resulted in finance expense amounting to kEUR 2,827, and the bifurcated embedded derivative financial liability for the performance participation interest for tranche B1 resulted in finance income of kEUR 516. The write-down resulted from the early repayment of the Finance Contract with EIB in October 2022. Through the repayment on October 31, 2022, the carrying amounts of the long-term debt related to tranche A and B1 were derecognized.

Lease term as a lessee

The Company leases certain properties which contain extension options exercisable by the Company after the end of the non-cancellable contract period. The extension options held are exercisable only by the Company and not by the lessors. The Company assesses at lease commencement date whether it is reasonably certain to exercise the extension options. The Company reassesses whether it is reasonably certain to exercise the options if there is a significant event or significant changes in circumstances within its control.

6. Share based payment arrangements

Share option plans

Option Plan 2017

On April 7, 2017, voxeljet AG established a share option plan (Option Plan 2017) that entitles key management personnel and senior employees of voxeljet AG and its subsidiaries to purchase shares of the parent company.

Total options available under the share option plan are 372,000. 279,000 options (75%, tranche 1) were granted on April 7, 2017. 93,000 options (25%, tranche 2) were granted on April 12, 2018.

The vesting conditions include a service condition (the options vest after a period of four years of continued service from the respective grant date) and a market condition (the options may only be exercised if the share price exceeds the exercise price over a period of 90 consecutive days by at least 20% in the period between the grant date and the respective exercise time frame) of which both conditions must be met. The options from tranche 1 and tranche 2 have an expiration date of April 7, 2027 and April 12, 2028, respectively.

In order to avoid insider trading, there are definded trading windows, when the options can be exercised. When those trading windows are closed, the exercise of options is not possible.

The fair value of the employee share option plan has been measured for tranches 1 and 2 using a Monte Carlo simulation. The market condition has been incorporated into the fair value at grant date.

The inputs used in the measurement of the fair value at grant date are as follows:

	Option Plan 2017			
	Tranche 1	Tranche 2		
Parameter				
Share price at grant date	USD 13.80	USD 16.15		
Exercise price	USD 13.90	USD 16.15		
Expected volatility	55.00%	58.40%		
Expected dividends				
Risk-free interest rate	2.49%	2.85%		
Fair value at grant date	USD 8.00	USD 9.74		

The respective expected volatility has been based on an evaluation of the historical volatility of the Company's share price as at the grant date. As at December 31, 2022 265,050 options are exercisable and 353,400 options are outstanding. The weighted-average contractual life of outstanding options at December 31, 2022 amounts to 4.5 years (December 31, 2021: 5.5 years).

The expense recognized in the statement of comprehensive loss related to Option Plan 2017 totaled kEUR 49, kEUR 304 and kEUR 671 for the years ended December 31, 2022, 2021 and 2020, respectively.

Option Plan 2022

On November 21, 2022, voxeljet AG established a second share option plan (Option Plan 2022) that entitles key management personnel and senior employees of voxeljet AG and its subsidiaries to purchase shares of the parent company.

Total options available under this share option plan are 330,671. 330,669 options were granted on November 23, 2022. The remaining two options will not be granted.

The vesting conditions include a service condition (the options vest after a period of four years of continued service from the respective grant date) and a market condition (the options may only be exercised if the share price exceeds the exercise price over a period of 90 consecutive days by at least 20% in the period between the grant date and

the respective exercise time frame) of which both conditions must be met. The options have an expiration date of November 23, 2032.

In order to avoid insider trading, there are definded trading windows, when the options can be exercised. When those trading windows are closed, the exercise of options is not possible.

The fair value of the employee share option plan has been measured using a Monte Carlo simulation. The market condition has been incorporated into the fair value at grant date.

The inputs used in the measurement of the fair value at grant date are as follows:

_	Option Plan 2022
Parameter	
Share price at grant date	USD 3.04
Exercise price	USD 3.04
Expected volatility	66.80%
Expected dividends	
Risk-free interest rate	3.68%
Fair value at grant date	USD 1.90

The respective expected volatility has been based on an evaluation of the historical volatility of the Company's share price as at the grant date. As at December 31, 2022, 0 options are exercisable and 330,669 options are outstanding. The weighted-average contractual life of outstanding options at December 31, 2022 amounts to 9.9 years.

The expense recognized in the statement of comprehensive loss related to Option Plan 2022 totaled kEUR 16, for the year ended December 31, 2022.

Option Plan 2017 and Option Plan 2022

	December 31,								
·	202	2	20	21	2020				
	Number of options	Weighted- average exercise price (USD)	Number of options	Weighted- average exercise price (USD)	Number of options	Weighted- average exercise price (USD)			
Outstanding at January 1	353,400	14.46	353,400	14.46	353,400	14.46			
Granted during the year	330,669	3.04							
Exercised during the year									
Forfeited during the year									
Outstanding at December 31	684,069	8.94	353,400	14.46	353,400	14.46			
Vested and exercisable at December 31	265,050	14.46	265,050	13.90					

Minority shareholding of voxeljet China

Set out below is summarized financial information for the subsidiary that has non-controlling interests that are material to the Group. The amounts disclosed for the subsidiary are based on IFRS and before intercompany eliminations.

		December 31,	
		2022	2021
voxeljet China Co. Ltd. Summarized balance sheet		(€ in thousands)	
Current assets		4,183 2,620	3,442 5,195
Current net (assets) liabilities		(1,563)	1,753
Non-current assets		853 60	1,459 735
Non-current net assets.		793	724
Net (assets) liabilities		(2,356)	1,029
Accumulated NCI		295	(230)
	Year Ended De	ecember 31,	
	2022	2021	2020
voxeljet China Co. Ltd. Summarized statements of comprehensive income		(€ in thousands)	
Revenue	3,812 (1,029)	3,843 (251)	2179 (473)
Other comprehensive income	(1,029)	(251)	(473)
Loss allocated to NCI	(143)	(75)	(142)
	Year Ended De	ecember 31,	
	2022	2021	2020
voxeljet China Co. Ltd. Summarized cash flows		(€ in thousands)	
Cash flows from operating activities	(2,137) (5) 1,824	373 (28) 36	(1,504) (39) 963
Net increase/ (decrease) in cash and cash equivalents	(318)	381	(580)

On March 1, 2019, voxeljet China moved into a new facility. Also on March 1, 2019, the minority shareholder of voxeljet China Suzhou Meimai Fast Manufacturing Technology Co., Ltd., increased its shareholding in the entity from 4.175% to 30% through an in-kind capital contribution of a lease contract on the new facility. The lease term under IFRS 16 of the contract is six years, including a rent-free period during the first three years. The transaction is accounted for as a share-based payment transaction under IFRS 2 and resulted in an increase of non-controlling interest of kEUR 216 and capital reserves of kEUR 604. The Company also recorded a right-of-use asset of kEUR 813 and the corresponding lease liability on the commencement date of the lease. The fair value of the lease contract was measured

based on the market observable lease payment of comparable properties in close proximity from the voxeljet China facility.

On September 1, 2021, the minority shareholder, Meimai transferred half of its equity interest in voxeljet China, or 15% of voxeljet China's equity, to its shareholder MK Holding GmbH and the remaining half of its equity interest, or 15% of voxeljet China's equity, to its shareholder Mr. Jin Tianshi, the managing director of voxeljet China.

On February 22, 2022, shortly before its expiration, the lease contract of voxeljet China was renewed for further two years, extending from March 1, 2022 to February 29, 2024. The renewal period previously agreed in the original contract was three years. The decrease in lease term was accounted as lease term reassessment in March 2022.

On June 15, 2022, the shareholders of voxeljet China approved the increase of registered capital of voxeljet China from RMB 20,000,000 (EUR 2,671,191) to RMB 52,250,000 (EUR 7,227,885). After this capital increase, voxeljet AG owns 88.52% of voxeljet China and is entitled to nominate three directors, while each of MK Holding GmbH and Mr. Jin Tianshi owns 5.74% of voxeljet China and is entitled to nominate one director. Non-controlling interest was adjusted to reflect the relative change in their interests in voxeljet China amounting to kEUR 668 in the second quarter of 2022.

7. Trade receivables and other assets

Credit terms provided to customers are determined individually and are dependent on already existing customer relationships and the customer's payment history.

Impairment

This table presents the reconciliation of the loss allowance provision for trade receivables.

	Year Ended December 31,				
	2022	2021			
	(€ in thousands)				
Balance at beginning of period	263	183			
Additions	252	96			
Utilization	(123)	(4)			
Reversal	(136)	(12)			
Balance at end of period	256	263			

Additions and reversal include changes in expected loss allowance which amounted to kEUR 56 and kEUR 86, respectively for fiscal year 2022 (2021: kEUR 55 and kEUR 46, respectively), and were recorded in other operating income and other operating expenses, respectively in the Company's consolidated statements of comprehensive loss. Furthermore, reversals include recovery of trade receivables previously reserved against, which amounted to a gain of kEUR 50 for fiscal year 2022 (2021: KEUR 12).

Other assets include prepayments amounting to kEUR 467 as of December 31, 2022 (2021: kEUR 497) and advance payments made to suppliers amounting to kEUR 789 as of December 31, 2022 (2021: kEUR 521)

8. Inventories

Inventories consisted of the following for the years reported:

INVENTORIES BY CATEGORY

	December 31,			
	2022	2021		
	(€ in tho	ousands)		
Raw materials	3,116	2,978		
Work in progress	8,020	6,504		
Total	11,136	9,482		

The reserve for slow-moving inventory regarding work in progress was kEUR 23 and kEUR 29 in 2022 and 2021, respectively. Related raw materials, in 2022 and 2021 of an amount of kEUR 952 and kEUR 810 have been written off, respectively, following the Company's inventory reserve policy.

9. Intangible assets and property, plant and equipment

Intangible assets

_	December 31,			
	2022	2021		
	(€ in thousands)			
Software	327	565		
Licenses	6	31		
Prepayments made on intangible assets	486	282		
Total	819	878		

The increase regarding prepayments in 2022 amounting to kEUR 204 was mainly related to capitalized customizing cost in connection with the Company's Enterprise Resource Planning system. The decrease related to software is related to the scheduled amortization partially offset by additions.

Property, plant and equipment

_	December 31,		
	2022	2021	
	(€ in thousa	ands)	
Land, buildings and leasehold improvements	12,038	18,048	
Plant and machinery	4,900	4,329	
Other facilities, factory and office equipment	784	894	
Assets under construction and prepayments made	77	448	
Total	17,799	23,719	
Thereof pledged assets of Property, Plant and Equipment	310	12,261	

The pledged assets consist of three (in 2021: five) 3D printers that serve as collateral for certain credit lines and loan agreements. Within the closing process of the Sale-Leaseback, which was initiated on August 11, 2022 and closed on October 31, 2022, certain pledges on the Company's land and buildings in Friedberg, Germany in favor of EIB and Sparkasse were removed. Upon closing of the Sale-Leaseback, the title in land and buildings were transferred to IntReal International Real Estate Kapitalverwaltungsgesellschaft mbH.

Amounts added to plant and machinery relating to self-constructed 3D printers are considered non-cash transactions, which totaled to kEUR 1,212 and kEUR 1,896 in the years ended December 31, 2022 and 2021, respectively.

The following table presents the composition of, and annual movement in, intangible assets and property, plant and equipment for the years 2022 and 2021, respectively:

2022

						(€	in thousands)						Commina
		A	equisition and	manufactu	ring cost			Acc	umulated depi	eciation and	l amortiz	ation	Carrying amount
	01/01/2022	Additions	Revaluation	Disposals	Transfer	FX	12/31/2022	01/01/2022	Current year	Disposals	FX	12/31/2022	12/31/2022
Intangible assets													
Software	2,064	23				2	2,089	1,499	261		2	1,762	327
Licenses	245						245	214	25			239	6
Prepayments made on													
intangible assets	282	204					486						486
Total	2,591	227				2	2,820	1,713	286		2	2,001	819
Property, plant and													
equipment													
Land, buildings and													
leasehold improvements .	22,943	9,165	(305)	(17,334)		194	14,663	4,895	1,011	(3,311)	30	2,625	12,038
Plant and machinery	9,358	1,619		(581)	448	161	11,005	5,029	1,271	(255)	60	6,105	4,900
Other facilities, factory and													
office equipment	4,188	270		(86)		12	4,384	3,294	357	(58)	7	3,600	784
Assets under construction													
and prepayments made	448	77			(448)		77						77
Total	36,937	11,131	(305)	(18,001)		367	30,129	13,218	2,639	(3,624)	97	12,330	17,799

Amortization expenses relating to intangible assets are included in cost of sales amounting to kEUR 86, kEUR 72 in research and development expenses, kEUR 97 in administration expenses, kEUR 30 in sales and marketing expenses.

In December 2021, the office space leased out to a third party in Friedberg, Germany has been classified as an operating lease and the proportional leased asset based on office space amounted to kEUR 911 included in land, buildings and leasehold improvements. On August 11, 2022, management initiated the Sale-Leaseback of voxeljet AG's properties located in Friedberg, Free State of Bavaria, Germany with IntReal International Real Estate Kapitalverwaltungsgesellschaft mbH. The transaction closed on October 31, 2022 and the lease term commenced on November 1, 2022. Consequently, the tenancy is continued in the form of a sublease agreement. The sublease is classified by reference to the right-of-use asset arising from the head lease (i.e., leaseback agreement with IntReal International Real Estate Kapitalverwaltungsgesellschaft mbH) and the proportional right-of-use asset based on the office space amounting to kEUR 4,023 included in land, buildings and leasehold improvements. The Company further leased out production space to third parties in Canton, Michigan, US, also as a sublease of right-of-use asset and the proportional right-of-use asset based on the production space amounting to kEUR 74 in 2022 and 2021, respectively, is included in land, buildings and leasehold improvements.

2021

	(€ in thousands)									Comming		
		Acquisit	ion and man	ufacturing o	cost		Acc	umulated de	preciation and	amortiz	ation	Carrying amount
								Current				
	01/01/2021	Additions	Disposals	Transfer	FX	12/31/2021	01/01/2021	year	Disposals	FX	12/31/2021	12/31/2021
Intangible assets												
Software	2,046	45	(61)	30	4	2,064	1,240	317	(61)	3	1,499	565
Licenses	245					245	189	25			214	31
Prepayments made on												
intangible assets	281	31		(30)		282						282
Total	2,572	76	(61)		4	2,591	1,429	342	(61)	3	1,713	878
Property, plant and												
equipment												
Land, buildings and												
leasehold improvements	22,463	7	(65)	59	479	22,943	3,765	984		146	4,895	18,048
Plant and machinery	9,660	2,327	(3,063)		434	9,358	5,678	1,332	(2,222)	241	5,029	4,329
Other facilities, factory												
and office equipment	3,976	295	(148)		65	4,188	2,937	442	(133)	48	3,294	894
Assets under construction												
and prepayments made .	55	448	(1)	(59)	5	448						448
Total	36,154	3,077	(3,277)		983	36,937	12,380	2,758	(2,355)	435	13,218	23,719

10. Other liabilities and provisions

	December 31,		
	2022	2021	
	(€ in thousand	ls)	
Employee bonus	623	512	
Liabilities from payroll	301	255	
Management compensation	167	83	
Accruals for vacation and overtime	294	230	
Accruals for compensation of Supervisory Board	180	180	
Liabilities from VAT	164	50	
Accruals for licenses	46	92	
Accruals for commissions	21	298	
Others	193	116	
Other liabilities	1,989	1,816	
Accrual for warranty	358	292	
Accruals for management compensation	192		
Labour dispute	114		
Provisions	664	292	
Total	2,653	2,108	

As of December 31, 2022, other liabilities and provisions include kEUR 0 (2021: kEUR 0) as non-current related to the line item others. Management expects that the cash outflows related to the other liabilities and provisions will be utilized within twelve months after balance sheet date. The short-term incentive for management compensation is presented within other liabilities, the long-term incentive for management compensation is presented within provisions.

Management compensation and employee bonus

Provisions related to management compensation and employee bonus are made to estimate cash outflow required for compensating the entitled employees based on the achievement of their individual targets.

Warranties

The Group generally offers a 12-month statutory warranty for its 3D printers. Management estimates the related provision for future warranty claims based on historical warranty claim information, taking into account all 3D printers that are still under statutory warranty at the end of the reporting period.

Vacation and overtime

Accruals are made for vacation and overtime based on the balances of unused vacation entitlements and overtime, in combination with the expected salaries of the individual employees.

Compensation of Supervisory Board

Accruals are made for compensation of Supervisory Board members based on the fixed remuneration system that was resolved in the Company's general shareholders' meeting on May 26, 2021.

Commissions

Accruals are made for commissions based on the individual contracts with voxeljet's sales agents considering their business within the relevant fiscal year.

Payroll

Liabilities from payroll mainly include unpaid portions of payroll tax and social security contributions.

	(€ in thousands)							
	January 1, 2022	Usage	Addition	Reversal	December 31, 2022			
Accrual for warranty	292	(214)	358	(78)	358			
Accruals for management compensation.			192		192			
Labour dispute			114		114			
Total	292	(214)	664	(78)	664			

The Group expects to settle the majority of the other liabilities and provisions over the next year.

11. Additional disclosures to financial instruments

Fair value is the price that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Based on the inputs used, the following hierarchy for determining the fair value of financial instruments is defined:

- Level 1: Quoted prices of the respective financial asset or financial liability in active markets
- Level 2: Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- Level 3: Input parameters not based on observable market data

The following table shows the carrying amounts and fair values of financial assets and financial liabilities, including their levels in the fair value hierarchy.

	Carrying amount					Fair Value			
12/31/2022	FVTPL	FVOCI	Assets at amortized cost	Liabilities at amortized cost	Total carrying amount	Level 1	Level 2	Level 3	Total
Total assets	_	4	21,271		21,275				
Current assets	_		20,331	-	20,331				
Cash and cash equivalents			12,119		12,119				
Other financial assets	_		2,047		2,047				
Restricted cash			2,047		2,047				
Trade receivables, net			6,165		6,165				
Non-current assets		4	940	-	944				
Other financial assets		4	940		944	4			4
Equity securities		4			4	4			4
Restricted cash			940		940				
Total liabilities				2,837	22,587				
Current liabilities				2,789	3,844				
Trade payables				2,683	2,683				
Other financial liabilities Current portion of long-term				106	1,161			106	106
debt				106	106			106	106
Lease liability					1,055				n/a
Non-current liabilities				48	18,743				
Other financial liabilities				48	18,743			45	45
Long-term debt				48	48			45	45
Lease liability					18,679				n/a
Security deposit					16				n/a

Carr				arrying amount			Fair Value			
12/31/2021	FVTPL	FVOCI	Assets at amortized cost	Liabilities at amortized cost	Total carrying amount	Level 1	Level 2	Level 3	Total	
12/31/2021	TVIIL	rvoci	Cost	Cost	amount	LEVELI	LEVEI 2	Level 3	1 Otal	
Total assets	13,525	4	18,131		31,660					
Current assets	13,525		18,131		31,656					
Cash and cash equivalents			7,027		7,027					
Other financial assets	13,525		4,997		18,522	10,699	2,826		13,525	
Bond funds	10,699				10,699	10,699			10,699	
Term deposit			2,655		2,655					
Restricted cash			2,342		2,342					
Derivative financial instruments	2,826				2,826		2,826		2,826	
Trade receivables, net			6,107		6,107					
Non-current assets		4			4					
Other financial assets		4			4	4			4	
Equity securities		4			4	4			4	
Total liabilities	516			26,672	30,414					
Current liabilities	_			16,879	17,476					
Trade payables				2,594	2,594					
Other financial liabilities	_			14,285	14,882		_	15,362	15,362	
Current portion of long-term debt				14,285	14,285			15,362	15,362	
Lease liability				´	597			´	n/a	
Non-current liabilities	516			9,793	12,938					
Other financial liabilities	516			9,793	12,938		516	13,826	14,342	
Derivative financial instruments	516				516		516		516	
Long-term debt	310			9,793	9,793			13,826	13,826	
Lease liability				7,173	2,613			13,020	n/a	
Security deposit					16				n/a n/a	

The other financial assets with a carrying amount of kEUR 2,991 reported on the Company's statement of financial position at December 31, 2022 were comprised of restricted cash (kEUR 2,047) reported as other current financial assets and restricted cash (kEUR 940) pledged with the bank to provide a bank guarantee as security deposit to the landlord in connection with the Sale-Leaseback and equity securities (kEUR 4), both reported as other non-current financial assets.

The other financial assets with a carrying amount of kEUR 18,526 reported on the Company's statement of financial position at December 31, 2021 were comprised of investments in three bond funds (kEUR 10,699), a term deposit (kEUR 2,655), restricted cash (kEUR 2,342) and a derivative financial instrument (kEUR 2,826), all reported as other current financial assets and equity securities (kEUR 4), reported as a other non-current financial asset.

The valuation techniques used to determine the fair value of financial instruments include the use of quoted market prices or dealer quotes for similar instruments as well as discounted cash flow analysis.

The fair value of the Company's investments in the bond funds was determined based on the quoted unit prices received by the fund management company.

The fair value of equity securities is determined by multiplying their share price and the number of shares held.

The fair values of the derivative financial instruments that are not traded in an active market are determined using valuation techniques which maximize the use of observable market data and rely as little as possible on entity-specific estimates. The fair values have been determined based on share prices and the relevant discount rates.

The fair value of long-term debt was determined using discounted cash flow models based on the relevant forward interest rate yield curves, considering the credit risk of voxeljet.

Due to their short maturity and the current low level of interest rates, the carrying amounts of cash and cash equivalents, restricted cash, trade receivables, trade payables, term deposit, credit lines and bank overdrafts approximate their fair values.

In the course of the Sale-Leaseback, voxeljet early terminated several loans granted by Sparkasse in August 2022 amounting to \in 0.8 million and in October 2022 amounting to \in 3.1 million. Further in October 2022, the Finance Contract with EIB has been fully settled including the repayment of tranche A and tranche B1 thereunder, including all interest for an amount of \in 22.0 million. Consequently, the bifurcated embedded financial derivatives related to the performance participation interest for tranche A and tranche B1 were derecognized which resulted in a finance expense amounting to \in 2.8 million for tranche A and a finance income amounting to \in 0.5 million for tranche B1

As of December 31, 2021 the Company held a term deposit with Unicredit Bank amounting to € 2.7 million which expired in February 2022.

In May 2022, the Company completely sold the bond fund, which was held as of December 2021, resulted in proceeds of \in 9.9 million.

The lease related to the Sale-Leaseback commenced on November 1, 2022 and the Company was required to provide a bank guarantee as security deposit to the landlord. In connection with the issuing of the bank guarantee voxeljet pledged an amount of \in 0.9 million with Sparkasse presented as non-current financial asset as of December 31, 2022.

The Group's policy is to recognize transfers into and transfers out of fair value hierarchy levels as at the end of each quarter. As of December 31, 2022 and 2021, there were no transfers of financial instruments measured at fair value between level 1 and level 2.

There were no changes in level 3 instruments for the twelve months ended December 31, 2022.

The following table presents the changes in level 3 instruments for the twelve months ended December 31, 2021:

	Non-current assets
(€ in thousands)	Equity securities
Balance at December 31, 2020	5
Transfer from level 3 into level 1	(5)
Income (expense) recognised in other comprehensive income	_
Balance at December 31, 2021	-

The investment in equity securities has been listed on a stock exchange during 2021. As it is now possible to determine the fair value of this investment using quoted prices or observable market data, it has been reclassified from level 3 into level 1 on June 30, 2021.

The following table provides an overview of the net gains and losses for financial assets and liabilities measured at AC and FVTPL:

	Year Ended December 31,		
	2022	2021	
_	(€ in thous	ands)	
Financial assets measured at amortized cost	(354)	347	
Total interest expense	(2)	(9)	
Other operating income from change of impairment	135	62	
Other operating income from unrealized foreign currency translation	239	511	
Other operating expense from change of impairment	(251)	(120)	
Other operating expense from unrealized foreign currency translation	(475)	(97)	
Financial assets measured at fair value through profit or loss	(3,472)	265	
Income from revaluation of derivative financial instruments		460	
Fair value valuation of financial assets	(773)	(291)	
Payout of bond funds	81	96	
Expense from revaluation of derivative financial instruments	(2,827)		
Other operating income from unrealized foreign currency translation	47		
Other operating expense from unrealized foreign currency translation			
Financial liabilities measured at amortized cost	(3,142)	(2,305)	
Total interest expense	(3,141)	(2,299)	
Other operating income from unrealized foreign currency translation			
Other operating expense from unrealized foreign currency translation	(1)	(6)	
Financial liabilities measured at fair value through profit or loss	516	292	
Income from revaluation of derivative financial instruments	516	292	
Expense from revaluation of derivative financial instruments			
Total	(6,452)	(1,401)	

The following table provides an overview of all outstanding loans voxeljet entered into:

			December 31, 2022		December 31, 2021		
		Nominal	•				_
		interest	Year of				
	Currency	rate	maturity	Face value	Carrying amount	Face value	Carrying amount
				(€ in thousands)			
Secured bank loan	EUR	2.47%	2038			2,000	1,616
Secured bank loan	EUR	2.72%	2038			1,000	809
Secured bank loan	EUR	2.42%	2038			500	409
Secured bank loan	EUR	2.73%	2037			500	411
Secured bank loan	EUR	1.75%	2040			1,000	823
Secured bank loan	EUR	2.48%	2022			675	96
Secured bank loan	EUR	2.49%	2024	500	131	500	233
Unsecured bank loan	EUR	3.92%	2022			29	19
Unsecured bank loan	USD	2.90%	2022			40	2
Secured bank loan	EUR	0.00%	2022			10,000	13,528
Secured bank loan	EUR	12.00%	2025			5,000	6,124
Unsecured bank loan	EUR	2.95%	2026	25	23	29	19
Total interest-bearing liabilities				525	154	21,244	24,070

In the course of the Sale-Leaseback, voxeljet early terminated several loans granted by Sparkasse in August 2022 amouting to \in 0.8 million and in October 2022 amounting to \in 3.1 million. Further in October 2022, the Finance Contract with EIB has been fully settled including the repayment of tranche A and tranche B1 thereunder, including all interest for an amount of \in 22.0 million. Consequently, the bifurcated embedded financial derivatives related to the performance participation interest related to tranche A and tranche B1 were derecognized which resulted in a finance expense amounting to \in 2.8 million for tranche A and a finance income amounting to \in 0.5 million for tranche B1. Due to the successful closing of the Sale-Leaseback on October 31, 2022, the revised expected future cash flows of tranches A and B1 related to the EIB loan after September 30, 2022, changed and the final settlement amount was determined. Consequently, the Company has written down the bifurcated embedded derivative financial instruments relating to the performance participation interest for tranche A and tranche B1 and adjusted the carrying amount of EIB loan tranches A and B1, what resulted in a finance expense of \in 4.7 million and \in 0.9 million, respectively in the third quarter of 2022.

As of December 31, 2022, the remaining secured bank loan was secured over machinery and equipment and restricted cash with a carrying amount of kEUR 310 and kEUR 2,047, respectively. As of December 31, 2021, the secured bank loans were secured over land and buildings with land charges amounting to kEUR 15,000, machinery and equipment, restricted cash and pledged bond funds with a carrying amount of kEUR 569, kEUR 2,342 and kEUR 0, respectively.

In April 2019, voxeljet entered into a loan agreement with Kreissparkasse Augsburg, Germany, to finance self-manufactured 3D printers which are operated in the German service center amounting to kEUR 500. The maturity date is five years after draw down and the drawn down occurred at the end of March 2019. The fixed interest rate amounts to 2.49%. voxeljet pledged two 3D printers from property plant and equipment as collateral.

As of December 31, 2022 we had one available line of credit with one German bank totaling \in 0.1 million. The interest rate for the credit line was 5.15% as of December 31, 2022.

12. Cost of sales

Cost of sales includes personnel expenses, cost of material, purchased services, cost for finished goods and allocated indirect costs related to production.

COST OF SALES

	Year Ended December 31,				
	2022	2021	2020		
	(€ in thousands)				
Personnel expenses	(5,219)	(4,563)	(4,594)		
Material costs	(9,269)	(7,744)	(6,559)		
Depreciation	(1,934)	(1,983)	(2,158)		
Other expenses	(2,279)	(1,735)	(1,502)		
Allowance for slow-moving inventory	(945)	(851)	1		
Total	(19,646)	(16,876)	(14,812)		

In 2022, other expenses primarily consisted of expenses related to cost of maintenance (kEUR 472), insurances (kEUR 383), travel expenses (kEUR 322) and rental and building expenses (kEUR 80).

In 2021, other expenses primarily consisted of expenses related to insurances (kEUR 306), cost of maintenance (kEUR 283), travel expenses (kEUR 177), rental and building expenses (kEUR 38) and license fees (kEUR 30).

In 2020, other expenses primarily consisted of expenses related to insurances (kEUR 283), cost of maintenance (kEUR 208), travel expenses (kEUR 171), rental and building expenses (kEUR 104) and license fees (kEUR 53).

The cost of sales increased to kEUR 19,646 in 2022 compared to kEUR 16,876 in 2021. This was mainly due to higher material expenses and personnel expenses.

13. Other operating income and expense

The details of other operating income and expenses are presented for the years reported in the tables below:

OTHER OPERATING INCOME

	Year Ended December 3		
	2022	2021	2020
	(€ in t	housands	s)
Gain from sale and leaseback transaction	4,335		
Government grant income	877	617	321
Reclassification of foreign currency translation reserve to profit or loss on deconsolidation of subsidiary	1,475		
Reimbursement of research and development costs	597	110	
Reimbursement of transaction costs	70	63	68
Gains from foreign exchange transactions	2,634	1,812	849
Other	459	368	365
Total	10,447	2,970	1,603

Other operating income includes an amount of kEUR 135 (2021: kEUR 46, 2020: kEUR 75) for the movement of impairment on trade receivables.

Other operating income includes government grants for expenses incurred in the previous year amounting to kEUR 277.

Reimbursement of transaction costs is related to a joint research and development project, where the voxeljet AG supports a company in the development of innovative technologies for renewable energy. In this course, voxeljet is allowed to receive reimbursements for certain costs incurred.

OTHER OPERATING EXPENSE

	Year Ended December 31,			
	2022	2021	2020	
		(€ in thousands)		
Impairment loss on trade receivables	252	120	120	
Losses from foreign exchange transactions	2,339	460	2,545	
Impairment loss on inventory			100	
Other		38	34	
Total	2,591	618	2,799	

14. Financial result

The details of financial result are presented for the years reported in the table below:

	Year Ended December 31,				
	2022	2021	2020		
		€ in thousands)			
Finance expense	(6,749)	(2,601)	(2,589)		
Interest expense on lease liability	(311)	(149)	(167)		
Interest expense from revaluation of long-term debt	(2,830)	(2,150)	(1,602)		
Expense from revaluation of derivative financial instruments	(2,827)		(808)		
Fair value valuation of financial assets	(773)	(291)	(10)		
Other	(8)	(11)	(2)		
Finance income	620	924	184		
Payout of bond funds	81	96	78		
Income from revaluation of derivative financial instruments	516	752	93		
Fair value valuation of financial assets					
Other	23	76	13		
Financial result	(6,129)	(1,677)	(2,405)		

15. Income taxes

Income taxes consist of the following for the years reported:

Income tax (expense) income

	Year Ended December 31,			
	2022 2021 2020			
		(€ in thousands)		
Current tax (expense) income				
Deferred tax (expense) income	102	(65)	88	
Total	102	(65)	88	

Deferred tax assets and liabilities

The components of net deferred income taxes at the end of the respective reporting periods were as follows:

SOURCES OF DEFERRED TAX ASSETS AND LIABILITIES

	December 31,					
	203	22	2021			
		(€ in tho	usands)			
	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities		
Trade receivables	9			(7)		
Other receivables and current assets	108	(136)	722	(7)		
Inventories	4		8	(4)		
Property, Plant & Equipment	3	(3,100)	5	(309)		
Non-current other assets	57	(8)		(79)		
Current financial assets	272			(838)		
Non-current financial assets		(263)				
Trade liabilities	226		320			
Contract liabilities	1,302	(1,381)	543	(607)		
Contract liabilities non current	79		65			
Other current liabilities and provisions	475	(711)	19	(2,109)		
Current financial liabilities	217		90	(1,406)		
Non-current financial liabilities	5,110		3,405			
Tax losses carried forward			467			
Valuation allowance	(19)	(2,244)	(203)	(162)		
Tax assets (liabilities)	7,843	(7,843)	5,441	(5,528)		
Set off of tax	(7,843)	7,843	(5,441)	5,441		
Net tax				(87)		

At December 31, 2022 voxeljet AG had gross loss carry-forwards for corporation tax and trade tax losses of kEUR 69,365 and kEUR 67,280, respectively (2021: kEUR 65,983 / kEUR 64,632). These tax losses can be carried forward without restriction for future offset against taxable profits. Due to the Company's continuing loss situation, deferred tax assets regarding the loss-carryforward are recognized only to the extent that deferred tax liabilities exist, taking into account the minimum taxation in accordance with section 10d EStG. For voxeljet this means that deferred tax assets resulting from the loss carry-forward (kEUR 19,172) cannot be recognized (valuation allowance kEUR 19,172) because no deferred tax liabilities are existing in correspondent amounts and the DTA are not recoverable. A tax rate of 28 % (2021: 28 %) was applied.

In addition, there are foreign tax loss carry-forwards from voxeljet America amounting to kEUR 4,864 (2021: kEUR 3,025). Since 2018 tax loss carry-forwards can be offset against 80% of taxable profits (tax loss carry-forwards which arose before 2018 (kEUR 2,781) can be fully offset with taxable profits). Deferred tax assets resulting from the loss carry-forward (kEUR 1,021) can only be recognized to the extent that deferred tax liabilities are existing in correspondent amounts. Therefore, only kEUR 33 deferred tax assets on loss carry-forwards could be recognised (valuation allowance: kEUR 988). A tax rate of 21 % (2021: 21 %) was applied.

Foreign tax loss carry-forwards from voxeljet China and voxeljet India amounting to kEUR 2,124 (2021: kEUR 3,592) and kEUR 339 (2021: kEUR 241), which can be carried forward for five and eight years, respectively for future offset against taxable profits. Deferred tax assets resulting from the loss carry-forward in China could not be recognized (valuation allowance kEUR 319). For China, a tax rate of 15 % (2021: 15%) was applied. Deferred tax assets resulting from the loss carry forward in India cannot be recognised because no deferred tax liabilities are existing in correspondent amounts and the DTA are not recoverable (valuation allowance kEUR 85). For India, a tax rate of 25 % (2021: 25 %) was applied.

Deferred taxes on outside basis differences are not recognised because the parent company can control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

Reconciliation of profit before income taxes to income tax

The reconciliation between profit before income taxes and income tax benefit (expense) for the reporting periods presented was as follows:

RECONCILIATION OF INCOME TAX BENEFIT (EXPENSE)

	Year Ended December 31,				
	2022	2021	2020		
	(€ in t	housands)			
Loss before tax	(11,511)	(10,521)	(15,569)		
Tax expense at prevailing statutory rate (28%)	3,223	2,946	4,359		
Non-deductible expenses	(170)	(124)	(198)		
Non-taxable income	167	180	22		
Tax-rate related differences	(135)	(45)	(69)		
Permanent differences	219	804	(180)		
Unrecognized temporary differences and tax losses	(3,331)	(3,965)	(3,916)		
Other	129	139	70		
Income tax (expense) income	102	(65)	88		

16. Personnel expenses

Personnel expenses included in cost of sales, research and development, and selling and administrative expenses are comprised of the following:

PERSONNEL EXPENSES

	Year Ended December 31,			
	2022	2020		
		(€ in thousands)		
Wages and salaries	12,888	11,490	11,568	
Employee stock option plan	65	304	671	
Social security contributions	2,684	2,391	2,289	
Total	15,637	14,185	14,528	

voxeljet AG offers to its employees a defined contribution plan called "MetallRente". The contributions paid by the Company amounted to kEUR 56, kEUR 59 and kEUR 65 for the years ended December 31, 2022, 2021 and 2020, respectively and is presented within social security contributions. The employer's contribution into the mandatory defined contribution plan (publicly administered contribution plan) amounted to kEUR 781, kEUR 719 and kEUR 754 for the years ended December 31, 2022, 2021, and 2020, respectively.

17. Segment reporting

voxeljet operates in two reportable segments—Systems and Services—which reflect the internal organizational and management structure according to the distinct nature of the two businesses. The components of the Systems operating segment have been aggregated into this segment as they have the same economic characteristics. The Systems business derives its revenues from the manufacture and sale of 3D printers, from the sale of consumables, as well as from lease, maintenance and extended warranty agreements with customers, while the Services business provides customized printed products to customers.

The Management Board of voxeljet is the chief operating decision maker. The chief operating decision maker mainly monitors the Company's revenues and gross profit as the performance indicators.

The following table summarizes segment reporting for each of the reporting periods ended December 31. As management's controlling instruments are mainly revenue-based, the reporting information does not include a detailed breakdown of all assets and liabilities by category. The sum of the amounts for the two segments equals the total for the Company for each of the years presented.

SEGMENT REPORTING

					•	Year Ended I						
		202	22			202	21			202	20	
				(€ in the	ousands)							
			CONSO				CONSO				CONSO	
		SERVICES					LIDATION			SERVICES		GROUP
Revenues	16,576	12,004	(748)	27,832	17,700	9,098	(1,972)	24,826	13,159	9,011	(603)	21,567
third party .	15,828	12,004	_	27,832	15,728	9,098	_	24,826	12,556	9,011	_	21,567
inter-	7.40		(7.10)		1.052		(1.050)		602		(602)	
segment.	748	(7.750)	(748)	(10.646)	1,972	(6.200)	(1,972)	(16.056)	603	(((05)	(603)	(14.012)
Cost of sales.	(11,896)	(7,750)		(19,646) 8,186	(10,477)	(6,399)		(16,876)	(8,115)	(6,697)		(14,812)
Gross profit. Gross profit	3,932	4,254		0,100	5,251	2,699		7,950	4,441	2,314		6,755
in %	24.8%	35.4%		29.4%	33.4%	29.7%		32.0%	35.4%	25.7%		31.3%
Operating	24.0 /0	33.4 /0		27.4 /0	33.4 /0	27.770		32.0 /0	33.4 /0	23.7 70		31.3 /0
Expenses .				(21,424)				(19,146)				(18,723)
Other				(==, := :)				(17,110)				(10,720)
operating												
expenses .				(2,591)				(618)				(2,799)
Other												
operating												
income				10,447				2,970				1,603
Operating												
loss				(5,382)				(8,844)				(13,164)
Finance				(6.7.40)				(2 (01)				(2.500)
expense				(6,749)				(2,601)				(2,589)
Finance income				620				924				184
Financial				020				924				104
result				(6,129)				(1,677)				(2,405)
Loss before				(0,12)				(1,077)				(2,403)
income												
taxes				(11,511)				(10,521)				(15,569)
Income tax				· //				· · /- ·-/				· - / /
income												
(expense) .				102				(65)				88
Net loss				(11,409)				(10,586)				(15,481)

Systems revenues include revenues from the sales of used 3D printers of kEUR 1,009, kEUR 2,601, and kEUR 2,328 for the years ended December 31, 2022, 2021, and 2020, respectively.

The contract liabilities primarily relate to (1) the advance consideration received from customers before satisfying a performance obligation, or an unconditional right to payment under a non-cancellable contract before it

transfers the related goods or services to the customer under maintenance contracts, for which revenue is recognized over time; and (2) the advance consideration received from customers for the sale of new or refurbished 3D printers, for which revenue is recognized when the customer has accepted the assets. The total amount of unfulfilled performance obligations for 3D printer sales is \in 10.0 million. The Company expects to realize an amount of \in 9.2 million in 2023 and the remaining portion of \in 0.8 million in 2024. The amount of kEUR 1,963 included in contract liabilities at December 31, 2021 has been recognized as revenue in 2022 (2021: kEUR 2,742), and the remaining amount of kEUR 400 will be recognized as revenue in 2023. Management expects that 95% (kEUR 4,877) of the transaction price allocated to unsatisfied performance obligations as of December 31, 2022 will be recognized as revenue during the next reporting period. The remaining 5% (kEUR 281) will be recognized in the 2024 fiscal year.

In the following table, revenue from contracts with customers is disaggregated by primary geographical market, and timing of revenue recognition. The table also includes a reconciliation of the disaggregated revenue with the Group's reportable segments.

	Year ended December 31,						
		SYSTEMS		;	SERVICES		
-	2022	2021	2020	2022	2021	2020	
Primary geographical markets							
EMEA	5,608	6,646	5,926	7,331	5,582	5,540	
Asia Pacific	5,629	6,099	3,612	1,135	1,008	909	
Americas	4,591	2,983	3,018	3,538	2,508	2,562	
- -	15,828	15,728	12,556	12,004	9,098	9,011	
Timing of revenue recognition							
Products transferred at a point in time	15,166	14,634	11,366	12,004	9,098	9,011	
Products and services transferred over time	662	1,094	1,190				
Revenue from contracts with customers	15,828	15,728	12,556	12,004	9,098	9,011	

In 2022, voxeljet leased zero 3D printers (2021: zero 3D printers and 2020: one 3D printer) to customers under operating leases. Rental income is recognized on a straight-line basis over the term of the lease as revenue and is reported within the Systems segment.

Geographic information

REVENUES BY GEOGRAPHICAL REGION

voxeljet's revenues and non-current assets are presented below by geographic region. For purposes of this presentation, revenues are based on the geographic location of customers and assets are based on their geographic location.

voxeljet's revenues were generated in the following geographical regions for the years reported:

	Year Ended December 31,			
	2022	2021	2020	
		(€ in thousands)		
EMEA	12,939	12,228	11,466	
Germany	5,552	4,269	4,647	
Great Britain	2,761	1,413	963	
Spain	1,094	1,931	644	
France	942	1,391	841	
Russia	1	22	1,322	
Others	2,589	3,202	3,049	
Asia Pacific	6,764	7,107	4,521	
China	3,433	3,004	1,101	
Indonesia	1,767		93	
South Korea	598	623	1,787	
Japan	587	31	1,406	
India	99	2,563	93	
Others	280	886	41	
Americas	8,129	5,491	5,580	
United States	8,054	5,389	5,453	
Others	75	102	127	
Total	27,832	24,826	21,567	

NON-CURRENT ASSETS BY GEOGRAPHICAL REGION

	December 31,		
	2022	2021	
	(€ in thousands)		
EMEA	14,659	19,279	
Germany	14,659	19,279	
Asia Pacific	684	1,343	
Americas	4,296	4,089	
United States	4,296	4,089	
Total	19,639	24,711	

18. Financial risk management

The Company's Management Board is responsible for implementing the finance policy and for ongoing financial risk management. Therefore, the Management Board has established a Risk Management Committee, which is responsible for developing and monitoring of the Group's risk management policies, especially regarding financial risks. Generally, the committee provides an overview of financial risks on a quarterly basis to the Management Board as part of the Company's quarterly management reporting procedures.

The Company's principal financial instruments are comprised of cash, short-term bank deposits at commercial institutions, bond funds, lease obligations and long-term debt. The main purpose of the financial investments is to provide a return on investments with minimal risk. The Company has other financial assets and liabilities including trade receivables and trade payables, which arise directly from its operations.

The main purpose of the financial liabilities is to fund the Company's operations and research and development activities. Portions of the long-term debt included two embedded derivative financial instruments, related to future interest payments which were linked to the Company's stock price (Performance Participation Interest) for tranche A and tranche B1 of the loan received from the EIB under the Finance Contract. On October 31, 2022, the Company early settled the Finance Contract including the repayment of tranche A and B1 thereunder, including all interest for a fixed amount of € 22.0 million. Through the settlement, the two embedded derivative financial instruments were derecognized.

The main risks arising from the Group's financial instruments are liquidity risk, foreign exchange risk, credit risk and interest rate risk. The measures taken by management to manage each of these risks are summarized below.

Material transactions related to activities in the area of financial instruments like entering into loan agreements or investments in bond funds require the prior approval of the Chief Financial Officer. The Company did not enter into any derivative financial instruments in 2022.

Management has assessed the risks of climate change on the business and expects that the impacts from the climate change are low.

Foreign exchange risk

The Company is exposed to foreign exchange risk to the extent that there is a difference between the currencies in which sales, purchases and borrowings are denominated and the respective functional currencies of subsidiaries of the Group. The functional currencies of the parent company voxeljet AG and its subsidiaries are the Euro, U.S. Dollar, Indian rupee and Chinese yuan renminbi. The majority of the sale, purchase and borrowing transactions are denominated in the functional currency of the parent company or its subsidiaries. The Company's most significant foreign exchange risk relates to intercompany loans made from voxeljet AG to subsidiaries, as described below. Further, the bank accounts in foreign currency amounted to USD 4.4 million (ϵ 4.2 million) and GBP 0.9 million (ϵ 1.0 million) as of December 31, 2022. An increase/decrease in the value of the Euro against the U.S. Dollar of 10% would lead to a loss of ϵ 0.4 million/gain of ϵ 0.5 million. An increase/decrease in the value of the Euro against the British Pound Sterling of 10% would lead to a loss of ϵ 0.1 million/gain of ϵ 0.1 million. An increase/decrease in the value of the Euro against the U.S. Dollar of 10% would lead to a minor loss /gain.

The Company invoiced 54% in 2022, 61% in 2021 and 68% in 2020 of total revenues in Euros. As revenues in foreign currency usually correspond to costs which are incurred in the same currency, the Company considers the foreign exchange risk as minor in connection with revenues.

For the year ended December 31, 2022, voxeljet generated 30% of its revenues in the eurozone. Additionally, the majority of the Company's sourcing transactions are also transacted in Euros in that zone.

voxeljet AG has provided intercompany loans to its subsidiaries to finance their operations. The loans were granted in the local currency of the subsidiaries. Gains and losses from movements in exchange rates are recorded within other operating income or expense in the consolidated statements of comprehensive loss. The amount loaned to voxeljet America totaled to USD 8.7 million (\in 8.2 million) as of December 31, 2022. An increase/decrease in the value of the Euro against the U.S. Dollar of 10% would lead to a loss of \in 0.7 million/gain of \in 0.9 million. As of December 31, 2021, the amount loaned to voxeljet America totaled to USD 9.0 million (\in 7.9 million). An increase/decrease in the value of the Euro against the U.S. Dollar of 10% would have led to a loss of \in 0.7 million/gain of \in 0.9 million.

The significant exchange rates which have been applied during the years presented are disclosed in Note 3.

Interest rate risk

voxeljet's principal interest-bearing positions are liabilities for bank borrowings and lease liabilities. These liabilities are entirely at a fixed interest rate, without any exception. As such, changes in market interest rates for these instruments have no material effect on future interest expenses.

The Company assessed the exposure to market risk for changes in interest rates as low, as its loans have entirely fixed interest rates, without any exception, as the loan with variable interest rate has been early terminated in August 2022. Therefore, an immediate 10% change in interest rates would not have a material effect on the Company's financial condition or results of operations. Further, on October 31, 2022, through the closing of the Sale-Leaseback, the Company fully settled the Finance Contract with EIB including the repayment of tranche A and B1 thereunder, including all interest for an amount of € 22.0 million. Both tranches included cash-settled warrants at the maturity date (5 years after draw down), after the occurrence of a trigger event, or on the expiration date (10 years after draw down of the first tranche). Both warrants were entirely compensated by the settlement. As of December 31, 2021 all liabilities were entirely at a fixed interest rate, with one exception. As such, an immediate 10% change in interest rates would not have a material effect on the Company's financial condition or results of operations.

Equity price risk

The Company is no longer exposed to equity price risks which arise from the bifurcated embedded derivative financial instruments relating to the performance participation interest for tranche A and tranche B1 loan with EIB as voxeljet has written down and derecognized the bifurcated embedded derivative financial instruments relating to the performance participation interest (warrants) for tranche A and tranche B1 as of September 30, 2022. The write-down and derecognition resulted from the early repayment of the Finance Contract with EIB in October 2022. The write down and derecognition of the bifurcated embedded derivative financial asset relating to the performance participation interest for tranche A, resulted in finance expense amounting to kEUR 2,827 and the bifurcated embedded derivative financial liability for the performance participation interest for tranche B1, resulted in finance income of kEUR 516. As the embedded derivative financial instruments related to the performance participation interest have been derecognized, changes in the Company's share price will not lead to any further impacts in the future. In 2021, changes in the Company's share price would have affected the value of the equity forward derivative instruments (increasing share prices as compared to the share price at disbursement date will lead to decrease in fair value of derivatives, decreasing share prices will lead to an increase in fair value of derivatives). An increase/decrease of the price per share by USD 1.00 would have led to a decrease/increase of the derivative asset (tranche A) by approximately kEUR 326. An increase/decrease of the price per share by USD 1.00 would have led to an increase/decrease of the derivative liability (tranche B1) by approximately kEUR 519.

Credit risk

Credit risk is the risk of the Company suffering a financial loss as the result of its counterparties being unable to perform their obligations. The Company is exposed to credit risk from its operating activities (mainly trade receivables) and from its financing activities, including deposits and investments with financial institutions. Therefore, the carrying amount of cash and cash equivalents, other current and non-current financial assets, and trade receivables represents the maximum credit exposure of $\in 21.3$ million (2021: $\in 31.7$ million).

The Company's exposure to credit risk is influenced by the individual characteristics of each counterparty. However, management also considers factors that influence the credit risk of its counterparty base, including the default risk of the industry and the country in which the counterparty operates. voxeljet seeks to minimize such risk by entering into transactions with counterparties that are believed to be creditworthy business partners or with financial institutions which meet high credit rating requirements. In addition, the portfolio of receivables and customer advances is monitored on a continuous basis. There were no customer loans outstanding as of December 31, 2022 and 2021. The Company calculates an ECL for trade receivables based on the risk scoring of its customers according to an external rating agency. Following the risk score of each customer, the trade receivables are clustered into different grades. For each grade, the ECL is calculated after deducting from trade receivables a loss allowance based on actual credit loss experience.

December	31,	2022

Grades	Equivalent to external credit rating (Standard & Poor's)	Weighted-average loss rate	Gross carrying amount	Impairment loss allowance from ECL	Net carrying amount
				(€ in thousands)	
Grades 1-4: Low risk	BBB+ to AAA	0.2%	3,061	5	3,056
Grades 5-7: Fair risk	B+ to BBB	1.3%	2,674	40	2,634
Grades 8-9: Substandar	rd CCC- to B	7.0%	508	36	472
Grade 10: Doubtful	C to CC	25.0%	4	1	3
Grade 11: Loss	D	100.0%	7	7	
			6,254	89	6,165

In addition to the amounts listed above, there were credit-impaired trade receivables in place with a gross carrying amount of kEUR 173.

December 31, 2021

G	rades	Equivalent to external credit rating (Standard & Poor's)	Weighted-average loss rate	Gross carrying amount	Impairment loss allowance from ECL	Net carrying amount
					(€ in thousands)	
Grades 1-4:	Low risk	BBB+ to AAA	0.2%	3,103	5	3,098
Grades 5-7:	Fair risk	B+ to BBB	1.3%	2,787	37	2,750
Grades 8-9:	Substandard	CCC- to B	7.0%	130	9	121
Grade 10:	Doubtful	C to CC	25.0%	184	46	138
Grade 11:	Loss	D	100.0%	21	21	
				6,225	118	6,107

In addition to the amounts listed above, there were credit-impaired trade receivables in place with a gross carrying amount of kEUR 145.

The Group limits its exposure to credit risk by investing only in bond funds which are fully guaranteed by the financial institutions and therefore represents short term credit rating of A-3 based on Standard & Poor's or P-2 based on Moody's.

The bank deposit, cash and cash equivalents, term deposits and restricted cash are held with financial institutions, which are rated BBB+ to AAA based on Standard & Poor's and Moody's which is equivalent to low risk.

Liquidity risk

Management receives a weekly reporting of the current liquidity of the Group by entity. Furthermore, a monthly cash flow plan meeting has been established, where management reviews the cash forecasts and the future development of flows of funds on an ongoing basis.

Liquidity risk is the risk that voxeljet might not have sufficient cash to meet its payment obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Company's approach to managing liquidity is to ensure, as far as possible, that it will have sufficient liquidity to meet its liabilities when they are due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the reputation of the Company. Liquidity risk is countered by systematic, day-by-day liquidity management whose fundamental requirement is that solvency must be guaranteed at all times. A major responsibility of management is to monitor the cash balances and to set up and update cash planning on a monthly basis to ensure liquidity. At all times cash and cash equivalents are projected on the basis of a regular financial and liquidity planning. The monitoring includes the expected cash inflows on trade and other receivables together with expected cash outflows from trade and other payables and financial liabilities. For further discussion see Note 2.

The following are the contractual cash flows of financial liabilities and trade payables at the reporting date. The amounts are gross and undiscounted and include contractual interest payments.

December 31, 2022 (€ in thousands)

		Contractual cash flow					
	carrying amount	Total	2 months or less	2-12 months	1-3 years	3-5 years	More than 5 years
Long-term debt	154	(158)	(18)	(91)	(31)	(18)	
Lease liability	19,734	(36,445)	(419)	(1,791)	(3,494)	(3,374)	(27,367)
Trade payables	2,683	(2,683)	(2,683)				
Total	22,571	(39,286)	(3,120)	(1,882)	(3,525)	(3,392)	(27,367)

December 31, 2021 (€ in thousands)

		Contractual cash flow					
	carrying amount	Total	2 months or less	2-12 months	1-3 years	3-5 years	More than 5 years
Long-term debt	24,078	(31,042)	(109)	(15,363)	(1,528)	(10,595)	(3,447)
Lease liability	3,210	(3,704)	(76)	(659)	(1,472)	(678)	(819)
Trade payables	2,594	(2,594)	(2,594)				
Total	29,882	(37,340)	(2,779)	(16,022)	(3,000)	(11,273)	(4,266)

19. Reconciliation of movements of liabilities to cash flows arising from financing activities

Only financial liabilities are presented in the below table which have cash and non-cash movement, other liabilities are not presented.

	Liabilities			
(€ in thousands)	Other loans and borrowings	Lease liabilities		
Balance at January 1, 2022	24,078	3,210		
Changes from financing cash flows				
Proceeds from loans and borrowings				
Repayment of borrowings	(19,667)			
Payment of lease liabilities		(637)		
Total changes from financing cash flows	(19,667)	(637		
Other changes Liability-related				
Acquisitions	25	17,354		
Remeasurements		(305		
Terminations		`		
Adjustment	(5)			
Foreign currency effects		102		
Interest expense	2,830	311		
Interest paid	(7,107)	(300		
Total liability-related other changes	(4,257)	17,162		
Total equity-related other changes	_	_		
Balance at December 31, 2022.	154	19,734		

	Liabilities		
	Other loans and		
(€ in thousands)	borrowings	Lease liabilities	
Balance at January 1, 2021	23,152	3,124	
Changes from financing cash flows			
Proceeds from loans and borrowings		_	
Repayment of borrowings	(1,004)	_	
Payment of lease liabilities		(334)	
Total changes from financing cash flows	(1,004)	(334)	
Other changes Liability-related			
New leases	_	133	
Remeasurements	_	(6)	
Terminations	_	(9)	
Adjustment	(70)		
Foreign currency effects		256	
Interest expense	2,150	149	
Interest paid	(150)	(103)	
Total liability-related other changes	1,930	420	
Total equity-related other changes	_		
Balance at December 31, 2021.	24,078	3,210	

20. Capital management

Management's aim is to maintain a sufficient capital base so as to maintain investor, creditor and market confidence and to sustain future development of the business.

Equity is monitored by the Company using financial ratios. The equity used as a basis for determining the equity ratio corresponds to the equity disclosed in the Consolidated Statement of Financial Position.

voxeljet's capital structure as of the end of the reporting periods 2022 and 2021 was as follows:

CAPITAL STRUCTURE

_	December 31,		
	2022	2021	
	(€ in thous	ands)	
Equity	24,722	32,487	
Share of total equity and liabilities	44.9%	48.2%	
Current financial liabilities	1,161	14,882	
Non-current financial liabilities	18,743	12,938	
Total financial liabilities	19,904	27,820	
Share of total equity and liabilities	36.1%	41.2%	
Total equity and liabilities	55,120	67,459	

LOAN COVENANTS

Under the terms of the major borrowing facilities, voxeljet is required to comply with the following financial covenants:

- Pledge of a certain security deposit

As a result of the early settlement of the Finance Contract with EIB, the Company was released from all the covenants in the Finance Contract, including the covenants to:

- maintain a minimum amount of cash and cash equivalents; and

- maintain a minimum total net financial debt ratio to total equity

As of December 31, 2022, the Company was in compliance with all covenants.

21. Leases

Please also refer to Note 3. "Summary of significant accounting policies – Leases."

Leases as lessee

The Company leases assets, including properties, production equipment and vehicles. The Company recognizes a right-of-use asset and a lease liability at the lease commencement date.

However, the Company has elected not to recognize right-of-use assets and lease liabilities for some leases of low-value assets (e.g. tools) as well as short-term leases (leases with less than 12 months of lease term). The Company recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term. Regarding the year 2022, the Company did not enter in any short-term leases.

On August 11, 2022, management initiated the Sale-Leaseback of voxeljet AG's properties located in Friedberg, Free State of Bavaria, Germany with IntReal International Real Estate Kapitalverwaltungsgesellschaft mbH. The transaction closed on October 31, 2022 and the lease term commenced on November 1, 2022. As a result, the Company received proceeds from the sale amounting to \in 26.5 million. As a result of completion of the Sale-Leaseback, the Company derecognized a carrying amount of \in 14.1 million relating to land and buildings and recognized a right of use asset and lease liability at an amount of \in 9.2 million and \in 17.3 million, respectively. The gain from the Sale-Leaseback amounted to \in 4.3 million.

The rent is fixed for the first year of the lease term and is subject to adjustment on a monthly basis if the monthly values change by at least 5 percent (in accordance with the consumer price index for Germany published by the Federal Statistical Office) during the lease term. The lease contract includes a fixed lease term as well as two lease extension options. Management considers, that it is reasonably certain, that those options will be exercised. The purpose of the Sale-Leaseback was to generate proceeds to fund the early termination of certain loans including the Finance Contract with EIB and further loans granted by Sparkasse. Please refer to the consolidated statements of cash flow for the effects of cashflow from the Sale-Leaseback.

Right-of-use assets:

	Property, plant and equipment				
	Property	Production equipment	Others	Total	
	(€ in thousands)				
Balance at January 1, 2022	2,648	19	239	2,906	
Depreciation charge of the year	(592)	(18)	(120)	(730)	
Additions to the right-of-use assets	9,161		80	9,241	
Revaluations to the right-of-use assets	(305)			(305)	
Derecognition of the right-of-use assets					
Foreign currency effects	101			101	
Balance at December 31, 2022.	11,013	1	199	11,213	

Amounts recognized in profit or loss:

_	2022	2022 2021		
	_	(€ in thousands)		
Leases under IFRS 16				
Interest on lease liabilities	311	149	167	
Gain from sale and leaseback	4,335			
Depreciation charge of the year	730	651	682	

The Company had an immaterial amount of low value leases in years 2022 and 2021.

Amounts recognized in statements of cash flows:

	2022	2021	2020
		(€ in thousands)	
Total cash outflow for leases	(637)	(334)	(412)

Some property leases contain extension options exercisable by the Group up to one year before the end of the non-cancellable contract period. Additionally, the Sale-Leaseback of voxeljet's properties that closed on October 31, 2022 includes two extension option periods exercisable by the Group before the end of the non-cancellable contract period. Where practicable, voxeljet seeks to include extension options in new leases to provide operational flexibility. The extension options held are exercisable only by the Group and not by the lessors. The Group assesses at lease commencement date whether it is reasonably certain to exercise the extension options. The Group reassesses whether it is reasonably certain to exercise the options, if there is a significant event or significant changes in circumstances within its control.

For all existing extension options, voxeljet assessed that the exercise of those is reasonably certain. Therefore, the impact is already included within the lease liabilities.

Leases as lessor

The Company leases out a small number of 3D printers. Those leases have been classified as operating leases. In 2022, voxeljet leased out zero 3D printers (2021: zero 3D printer) to customers under operating leases.

Beginning December 2021, the Company has leased out office space to a third party in Friedberg, Germany. This lease has been classified as an operating lease. After the Sale-Leaseback, this lease has become a sublease of right of use asset. Further voxeljet has leased out production space to third parties in Canton, Michigan, USA, also as sublease of right of use asset. Those leases also have been classified as operating leases. The office space and production space has been leased out under operating leases with rentals payable monthly. Lease income from operating leases where the group is a lessor is recognized in other operating income on a straightline basis over the lease term. Lease payments from the contracts do not include any variable lease payments. During the year ended December 31, 2022, lease income from subleasing of right of use assets amounting to kEUR 128 was recorded in other operating income (2021: kEUR 9).

Lease income from operating lease:

	2022	2021	2020
	(€ in thousands)		
Operating lease under IFRS 16			
Less than one year	126	106	
1-3 years	212	212	
3-5 years	106	203	

22. Commitments, contingent assets and liabilities

In connection with the enforcement of voxeljet's intellectual property rights, the acquisition of third-party intellectual property rights, or disputes related to the validity or alleged infringement of the Company's or a third party's intellectual property rights, including patent rights, voxeljet has been and may in the future be subject or party to claims, negotiations or complex, protracted litigation.

In March 2018, ExOne GmbH, a subsidiary of The ExOne Company, notified voxeljet of its intent not to pay its annual license fees under an existing intellectual property-related agreement and asserted its rights to claim damages pursuant to an alleged material breach of the agreement. At this time, the Company cannot reasonably estimate a contingency, if any, related to this matter. On November 12, 2021, The ExOne Company and its affiliates were acquired by DESKTOP METAL, INC.

Management expects that the cash outflow towards settlement of claims is very unlikely.

voxeljet AG issued a letter of support to voxeljet India on July 12, 2022 to provide financial support to enable the subsidiary to meet its obligation or liabilities as and when they fall due. The guarantee is irrevocable for at least 12 months from the date of issue of this letter.

Further, voxeljet AG issued letters of support to voxeljet's subsidiaries voxeljet China and voxeljet America to provide financial support to enable the companies to meet its obligation or liabilities as and when they fall due. The guarantee is irrevocable for at least 12 months from the date on which financial statements for the financial year ended December 31, 2022 are issued.

Management assessed that it is unlikely that the subsidiaries would exercise these letters of support.

23. Related party transactions

Related party transactions at voxeljet mainly consist of transactions with individuals on the Management Board and Supervisory Board.

Key management is defined as those individuals having authority and responsibility for planning, directing and controlling the activities of the Company within their function and within the interest of the Company.

The following table presents the amount and components of Management Board compensation:

MANAGEMENT COMPENSATION

	Year Ended December 31,			
	2022	2021	2020	
	_	(€ in thousands)	_	
Fixed compensation	627	709	761	
Variable compensation	359	83		
Compensation from stock option plan	30	160	353	
Total	1,016	952	1,114	

Management Board remuneration currently consists of a fixed monetary remuneration, other fixed benefits (including Company car allowances and contributions to a defined contribution plan) as well as the participation in two stock options plans, which were established on April 7, 2017 and November 23, 2022, respectively. There were no variable compensations for the year 2020. Current portion of variable compensation for 2022 and 2021 included kEUR 167 and kEUR 83, respectively. Non-current portion of variable compensation for 2022 and 2021 included kEUR 192 and kEUR 0, respectively.

Ordinary members of the Supervisory Board receive a fixed remuneration in the amount of kEUR 40 *per annum*. The chairman and vice chairman of the Supervisory Board receive a higher fixed remuneration in the amount of kEUR 80 *per annum* and kEUR 60 *per annum*, respectively. If a member of the Supervisory Board does not serve for a full year term, the remuneration is paid pro rata temporis. In 2022, the total remuneration for the Supervisory Board amounted to kEUR 180.

Transactions with related parties

A related party relationship could have an effect on the profit and loss and financial position of the Company. Defined as related parties are individuals or other third parties with whom voxeljet has common control relationships.

OTHER RELATED PARTIES

Name	Nature of relationship	Duration of relationship	
Franz Industriebeteiligungen AG, Augsburg	Lessor	10/01/2003 - Current	
Schlosserei und Metallbau Ederer, Dießen	Supplier	05/01/1999 - Current	
Andreas Schmid Logistik AG, Gersthofen	Supplier	05/01/2017 - 12/31/2020	
Suzhou Meimai Fast Manufacturing Technology Co., Ltd., Minority shareholder of voxeljet China,		04/11/2016 - 09/01/2021	
Suzhou	Customer	04/11/2010 - 09/01/2021	
DSCS Digital Supply Chain Solutions GmbH, Gersthofen	Customer	05/11/2017 - Current	
Michele Neuber	Employee	07/01/2019 - 03/31/2022	
Susanne Ederer-Pausewang	Customer	03/17/2021 - Current	
Lisa Franz	Employee	10/01/2021 - 02/18/2022	

Transactions with Franz Industriebeteiligungen AG comprise the rental of office space in Augsburg, Germany. Rental expenses amounted to kEUR 3, kEUR 3, and kEUR 3 in 2022, 2021 and 2020, respectively. The rental of office space is ongoing and will continue in 2023. Franz Industriebeteiligungen AG is owned by Rudof Franz (40%), his wife Bärbel Franz (40%), his son Simon Franz (10%) and his daughter Lisa Franz (10%). Rudolf Franz and Bärbel Franz are the Managing Directors of Franz Industriebeteiligungen AG and have shared power to vote, hold and dispose of the shares held by it.

In addition, voxeljet received logistics services amounting to kEUR 0, kEUR 0 and kEUR 25 in 2022, 2021 and 2020, respectively from "Andreas Schmid Logistik", where voxeljet's Supervisory Board member Dr. Stefan Söhn served as the Chief Financial Officer until December 2020. Dr. Stefan Söhn resigned from his office as vice chairperson and member of the Supervisory Board of the Company for professional reasons with effect from the end of the general shareholders' meeting on May 26, 2021.

Moreover, voxeljet received orders amounting to kEUR 204, kEUR 146 and kEUR 25 in 2022, 2021 and 2020, respectively from 'Suzhou Meimai Fast Manufacturing Technology Co., Ltd., which was our minority shareholder for voxeljet China until September 1, 2021. On this date, Meimai transferred half of its equity interest in voxeljet China, or 15% of voxeljet China's equity, to its shareholder MK Holding GmbH and the remaining half of its equity interest, or 15% of voxeljet China's equity, to its shareholder Mr. Jin Tianshi, the managing director of voxeljet China. As a result, as of September 1, 2021, Meimai is no longer a related party. After the capital increase for voxeljet China by voxeljet AG, effective on June 28, 2022, voxeljet AG's shareholding in voxeljet China increased from 70.00% to 88.52%, while each of MK Holding GmbH's and Mr. Jin Tianshi's shareholding decreased from 15.00% to 5.74%.

Further, voxeljet received orders amounting to kEUR 0, kEUR 0 and kEUR 0 in 2022, 2021 and 2020, respectively from DSCS Digital Supply Chain Solutions GmbH ("DSCS"), which was a joint venture of which voxeljet owns 33.3%. Shareholders of DSCS have initiated the wind-up of DSCS, which will be finalized by DSCS's removal from the commercial register, expected to take place in the first half of 2023.

In addition, voxeljet employed Michele Neuber as an intern between July 2019 and March 2022. Michele Neuber is the son of Volker Neuber, who has been a member of voxeljet's Supervisory Board since July 2020. Michele Neuber received a salary of kEUR 1, kEUR 2 and kEUR 2 in 2022, 2021 and 2020, respectively.

Moreover, voxeljet sold a used car in the first quarter of 2021 to Susanne Ederer-Pausewang, who is the wife of Dr. Ingo Ederer, the Chief Executive Officer of voxeljet, amounting to kEUR 27.

In addition, voxeljet employed Lisa Franz, who is the daughter of Rudolf Franz, the Chief Operating Officer and Chief Financial Officer of voxeljet, as an intern between October 2021 and February 2022. She received a salary of kEUR 1 and kEUR 2 in 2022 and 2021, respectively.

All related party transactions that voxeljet entered into were made on an arm's length basis.

24. Equity

At December 31, 2022, 9,134,724 no-par value ordinary shares were issued and outstanding. There is only a single class of ordinary shares with the same rights, preferences and restrictions (with the exception of certain privately placed ordinary shares subject to U.S. securities law transfer restrictions due to not being registered for sale in the U.S.). Each share entitles the holder to one vote at the shareholders' meeting. Shareholders participate in the profits according to their share in the share capital, based on their number of shares held. The general shareholders' meeting resolves the appropriation of the balance sheet profit established in the annual financial statements and the dividends.

Capital reserves includes premiums arising on the issue of shares, additions related to equity-settled share-based payment and changes of non-controlling interests due to capital increase.

On July 31, 2020, the Company announced that it would change the ratio of its ADSs to ordinary shares from each ADS representing one-fifth (1/5) of one ordinary share (5:1) to each ADS representing one ordinary share (1:1). For ADS holders, the ratio change had the same effect as a 1 for 5 reverse ADS split. The ratio change became effective on August 14, 2020 (the "Effective Date"). On the Effective Date, each ADS holder was required to exchange every five (5) ADSs then held for one (1) new ADS (e.g., if a holder of ADSs previously held 50 ADSs, following the ratio change on

the Effective Date, such holder helds 10 ADSs). Citibank, N.A., as depositary bank, has arranged for the exchange of the current ADSs for the new ones. There was no change to voxeljet's underlying ordinary shares.

On August 18, 2020, the Company announced that it would voluntarily transfer the listing of the ADSs from the New York Stock Exchange (the "NYSE") to the NASDAQ, effective August 28, 2020, after market close. voxeljet's ADSs began trading as a NASDAQ-listed security at market open on August 31, 2020, and have continued to be listed under the ticker symbol "VJET." Due to the transfer of the listing to the NASDAQ, the Company is no longer subject to the listing requirements of the NYSE. As of December 31, 2022, voxeljet was in compliance with the NASDAQ Listing Rules.

During 2021, in January, February and July, the Company completed three registered direct offerings and sales of a total of 2,190,711 ADSs, which provided voxeljet with total gross proceeds of approximately USD 32.0 million (€ 26.6 million) before deducting fees and expenses.

The general shareholders' meeting on June 2, 2022 resolved upon a new authorized share capital that authorized the Management Board, with the consent of Supervisory Board, to increase the authorized capital in one or more tranches initially by up to to € 3,513,355 by issuing up to 3,513,355 new no-par value ordinary shares against contribution in cash and/or in kind until June 1, 2027.

On October 13, 2022, the Company completed another registered direct offering and sale of 1,279,070 ordinary shares in the form of ADSs at a purchase price of USD 3.44 (EUR 3.60) per share. The gross proceeds of the offering amounted to approximately USD 4.4 million (EUR 4.6 million).

In December 2022, the Group privately placed 828,943 ADSs, each representing one ordinary share, at a purchase price of USD 2.16 (\in 2.04), with the institutional investor Anzu Ventures II LLC. The capital increase was registered on December 22, 2022 and the private placement was completed when voxeljet received the remaining portion of the related funds in January 2023. This capital increase provided voxeljet with gross proceeds of USD 1.8 million (\in 1.7 million) before deducting fees and expenses.

After the capital increases in October and December of 2022, the remaining amount of ordinary shares that can be issued is 1,405,342. The Articles of Association authorize the Management Board, with the consent of the Supervisory Board, to increase the Company's registered share capital in one or more tranches by up to € 1,405,342 by issuing up to 1,405,342 new no-par value ordinary shares against contribution in cash and/or in kind until June 1, 2027.

25. Subsequent events

Cash receipt related to capital increase from private placement with Anzu Ventures II LLC

In January 2023 voxeljet received the remaining portion amounting to USD 0.9 million (EUR 0.9 million) from the institutional investor ("Anzu") related to the capital increase that has been registered on December 22, 2022 related to the private placement. As a result of this transaction, the Company placed 828,943 ADSs in 2022, each representing one ordinary share, at a purchase price of USD 2.16 (€ 2.04), with Anzu.

Issuance of promissory note to Anzu Ventures II LLC

In January 2023, the Company issued the Anzu Note in a principal amount of USD 3.2 million (\in 3.0 million). The Anzu Note matures on January 3, 2028, and includes interest payable monthly at a rate of 3% per annum. In addition, the Anzu Note includes a voluntary prepayment right for voxeljet, and, in the case of fundamental changes including a change of control in voxeljet, a right by voxeljet to repay the Anzu Note and a right by Anzu to require that voxeljet repurchases the Anzu Note. The aforementioned rights are considered to be embedded derivatives that have to be bifurcated. A one-time interest payment equal to the above principal amount of USD 3.2 million (\in 3.0 million) is required to be paid upon maturity or at time of prepayment. The terms of the Anzu Note include certain covenants and events of default.

EXHIBIT 8.1

Subsidiaries of voxeljet AG

Business-Entity	First consolidation date	Shares
voxeljet America Inc	February 5, 2014	100.00%
voxeljet India Pvt. Ltd.	January 21, 2016	100.00%
voxeljet China Pvt. Ltd	April 11, 2016	88.52%

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Dr. Ingo Ederer, certify that:

- 1. I have reviewed this Annual Report on Form 20-F of voxeljet AG;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or cause such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
- 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or other persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ DR. INGO EDERER

Dr. Ingo Ederer
Chief Executive Officer
(Principal Executive Officer)

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Rudolf Franz, certify that:

- 1. I have reviewed this Annual Report on Form 20-F of voxeljet AG;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or cause such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
- 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or other persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ RUDOLF FRANZ

Rudolf Franz Chief Financial Officer (Principal Financial Officer)

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 20-F of voxeljet AG (the "Company") for the year ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Dr. Ingo Ederer, Chief Executive Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ DR. INGO EDERER

Dr. Ingo Ederer Chief Executive Officer (Principal Executive Officer)

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 20-F of voxeljet AG (the "Company") for the year ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Rudolf Franz, Chief Financial Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ RUDOLF FRANZ

Rudolf Franz Chief Financial Officer (Principal Financial Officer)

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-217450) and Form F-3 (No. 333-255911) of voxeljet AG of our report dated March 30, 2023 relating to the financial statements, which appears in this Form 20-F.

Munich, Germany March 30, 2023

PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft

/s/ Sebastian Stroner /s/ ppa. Martin Veit

Wirtschaftsprüfer Wirtschaftsprüfer

(German Public Auditor) (German Public Auditor)