ENGINEERING
TOMORROW'S
PRODUCTION

2021 Annual Report

Growth Industries in Focus

manz

Manz AG
at a glance

2022 Financial Calendar

May 5, 2022	Publication of the 1st quarter 2022 quarterly report
July 5, 2022	Annual General Meeting 2022
August 4, 2022	Publication of the 2022 semi-annual report
November 8, 2022	Publication of the 3rd quarter 2022 quarterly report

Overview of Consolidated Net Profits

(in EUR million)	2021	2020	Change in %
Revenues	227.1	236.8	–4.1 %
Total operating revenues	237.8	241.7	–1.6 %
EBITDA	18.3	19.4	–5.5 %
EBITDA margin (in %)	7.7	8.0	–0.3 pp
EBIT	–16.1	7.2	–322.3 %
EBIT margin (in %)	–6.8	3.0	–9.8 pp
EBT	–17.6	5.0	–453.6 %
Consolidated net profit	–22.4	3.4	–754.9 %
Earnings per share, undiluted (in EUR)	–2.89	0.44	–756.8 %
Cash flow from operating activities	–25.8	20.6	–225.1 %
Cash flow from investing activities	9.7	–9.4	+203.8 %
Cash flow from financing activities	–18.9	14.7	–228.9 %

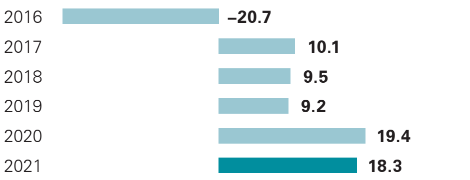
	Dec. 31, 2021	Dec. 31, 2020	Change in %
Total assets	308.4	357.9	–13.9 %
Shareholders' equity	109.2	131.4	–16.9 %
Equity ratio (in %)	35.4	36.7	–1.3 pp
Financial liabilities	49.3	77.0	–36.0 %
Liquid funds	36.1	69.7	–48.3 %
Net debt	13.2	7.2	+82.5 %

Revenues

(in EUR million)

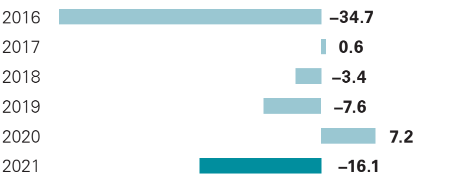
EBITDA

(in EUR million)



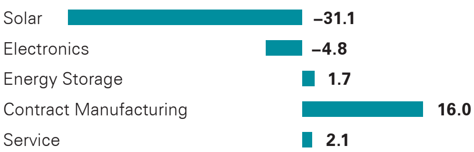
EBIT

(in EUR million)

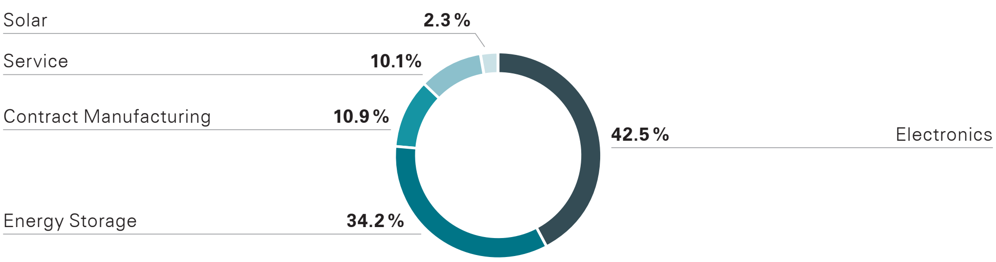


EBIT by Business Segments 2021

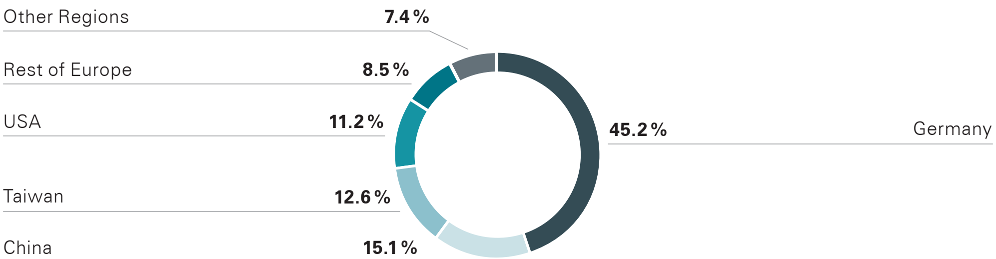
(in EUR million)



Revenues by Business Segment January 1 to December 31, 2021



Revenue Distribution by Region January 1 to December 31, 2021



2021
The year at a glance

Manz AG receives order from US manufacturer of electric vehicles for an assembly line for lithium-ion battery modules.

January 12

Manz opens up access to the growth market of "functional printing" with minority interest in CADIS Engineering GmbH.

February 4

Manz and GROB-WERKE GmbH & Co.KG agree on strategic cooperation in the field of lithium-ion battery systems.

April 8

Manz receives official notification of funding from the German Federal Ministry for Economic Affairs and Energy (BMWi) and the Baden-Württemberg Ministry of Economics as part of the European Commission's "EuBatIn" IPCEI project worth around 70 million euros.

April 27

Manz wins contract from BMW Group to build a battery production line in Germany.

Order from Ravensburger, one of Germany's leading toy manufacturers, for digital printing on products and packaging.

November 4

Manz wins major order from Britishvolt for lithium-ion cell assembly equipment for pioneering gigawatt production line.

December 21

Manz AG Mission Statement

With many years of expertise in automation, laser processing, wet chemistry, and in inspection systems, we are a globally active high-tech engineering company that offers manufacturers and their suppliers innovative production equipment in the segments Industry Solutions and Mobility & Battery Solutions.

Our product portfolio includes customer-specific developments as well as individual machines and modules that can be linked together to form complete, individual systems. Above all, by being involved in customer projects at an early stage, we make a significant contribution to our customers' success with high-quality, demand-oriented solutions.

We pay particular attention to the automotive industry and electromobility. For example, we support economic and competitive plants for the manufacture of lithium-ion batteries –from cell to finished pack – and highly integrated assembly lines for cell contacting systems to support the industry in the transformation from the classic to the electric powertrain.

We are focused on five future industries. For new growth opportunities. And a stronger market position.

Automobile and electromobility. Battery manufacturing. Electronics. Energy. Medical Technology.

Systematically taking advantage of the opportunities that arise from dynamic growth markets – that is what Manz stands for. Therefore our technology and product portfolio is strongly aligned to the needs and challenges of selected industries in all segments, and it will continue to be enhanced with an industry focus. Therefore, this year's annual report concentrates on our five target industries and their potential.

The entire annual report and additional information about our industry focus can be found on our website, which has been redesigned and relaunched as part of our new alignment on growth industries.

For the sake of better readability, we consistently avoid gender-differentiating formulations (e.g. "his/her" or "he/she"). The corresponding terms apply to all genders for the purposes of equal rights. This is done solely for editorial purposes and does not imply a judgment of any kind.

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History
of Manz AG

Manz further expands strong market position in Energy Storage segment

2021

Shanghai Electric becomes strategic anchor investor of Manz AG

2016

Acquisition of mechanical engineering division of Kemet Electronics Italy (formerly Arcotronics) for enlargement of technology portfolio in Battery division

2014

Acquired the CIGS innovation line from Würth Solar
Opened facility for solar and display production systems in Suzhou, China

2012

Entered the market for lithium-ion batteries

2009

IPO on the Entry Standard market of the Frankfurt Stock Exchange

2006

Entered the thin-film market with equipment for mechanically scribing solar panels

2005

Shipped the first automation system for a completely automated production line for crystalline solar cells

2000

Shipped the first automation solution for the FPD industry to Asia

1994

Company founded by Dieter Manz

1987

To Our
Shareholders

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020 Report from the Supervisory Board

Letter from the Managing Board

Dear Shareholders,

In 2021, we achieved many important milestones and continued to sharpen our growth strategy with a focus on the automotive & electromobility, battery production, electronics, energy and medical technology sectors. In particular, we significantly strengthened our positioning as a high-tech machine manufacturer in the e-mobility market. The strategic partnership with GROB-WERKE GmbH & Co. KG or the funding promised by the German Federal Ministry for Economic Affairs and Energy (BMWi) and the Baden-Württemberg State Ministry of Economics as part of the important projects of common European interest ("IPCEI") to promote research and innovation in the battery value chain are, for example, strategically significant for Manz AG in this context. We, therefore, see ourselves in a strong position to continue to benefit from the immense market potential in this area going forward. Another solid indication to underscore this point is also the dynamic development of orders in fiscal year 2021. We were able to convince numerous well-known international customers of our many years of experience in the development of innovative production concepts and solutions. Points worthy of mention here include, for example, the major order from Britishvolt for equipment to assemble lithium-ion cells for a pioneering gigawatt production line in England, or the order from the BMW Group for the construction of a highly integrated pilot production line for lithium-ion cells in Germany.

While we were thus able to achieve important strategic and operational successes, our operating performance in 2021 was, at the same time, significantly impacted by sales shortfalls, as well as an impairment in connection with the CIGS solar project in China. Now we are able to focus fully on implementing our strategy of achieving sustainable and profitable growth in the future. The fact that we have already taken the right measures to achieve this in recent years is demonstrated by our EBITDA margin, which remains stable at around 8 percent on sales of EUR 227 million.

In order to align our technology and product portfolio even more effectively with our customers and to make our organization more efficient, we have adjusted our organizational structure accordingly as of January 1, 2022. In the newly created Mobility & Battery Solutions reporting segment, we will henceforth combine our expertise from the former Energy Storage segment. In the Industry Solutions reporting segment, we combine the activities of the two business areas Electronics (semiconductor back-end production, fan-out panel level packaging and display technologies) and Industrial Automation (industrial assembly solutions for the manufacture of consumer electronics, power electronics and other electric powertrain components). This realignment of the Group's organization will enable us to take much better advantage of the opportunities offered by our growth markets.

Based on the positive industry outlook and a high order backlog of almost EUR 230 million, we remain very confident about 2022, expecting a significant increase in sales in the mid

double-digit percentage range compared to 2021, an EBITDA margin in the mid to upper positive single-digit percentage range, and an EBIT margin in the low to mid positive single-digit percentage range.

Without the dedication and commitment of our employees, the enormous achievements of the past year – which have optimally positioned us for the future – would not have been possible. We would like to express our sincere thanks to our employees for this!

We hope that you, dear shareholders, will continue to accompany us on the exciting road ahead – stay healthy!

The Managing Board

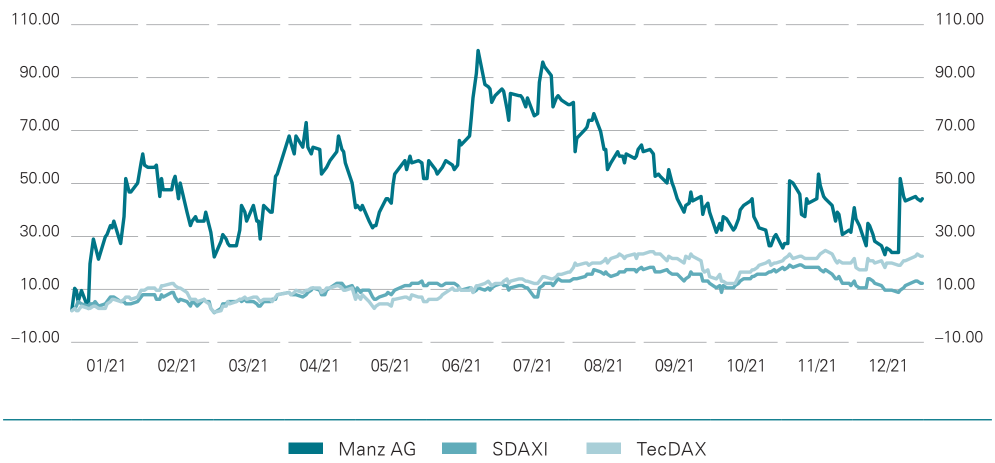
Jürgen Knie   Martin Drasch   Manfred Hochleitner

Manz AG Stock

Change in share price

The Manz AG share started the 2021 fiscal year at a price of EUR 34.90 on January 4, 2021, which was also the low for the entire year. In the following months, the share price trend was characterized by an overall upward movement and reached its annual high of EUR 70.00 on June 25, 2021. On December 30, 2021, the share closed at EUR 50.00, corresponding to a market capitalization of EUR 379.3 million and a price increase of around 43 % since the beginning of the year. At the beginning of 2022, the share was in a volatile sideways trend.

Chart Showing Manz AG Stock (XETRA, in %)



Stock Key Data and Performance Indicators

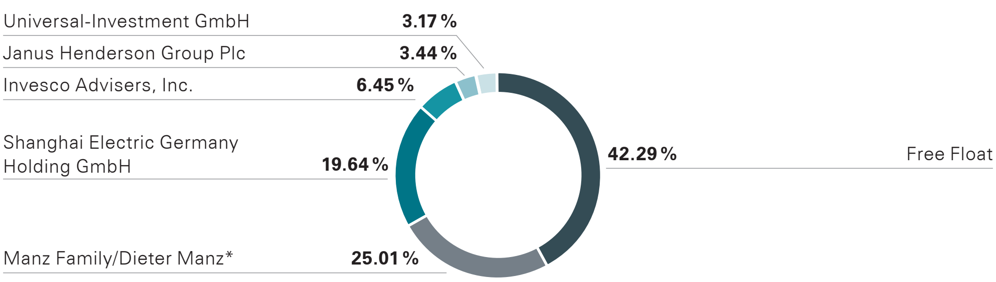
German Securities Identification Number	A0JQ5U
Ticker symbol	M5Z
Trading segment	Regulated market (Prime Standard)
Share types	Registered, common, no-par value bearer shares, each with a proportionate value of EUR 1.00 of capital stock
Capital Stock	**7,756,804 EUR**
IPO	September 22, 2006
Opening Price	EUR 19.00
Share price at the beginning of the reporting period*	EUR 34.90
Share price as at December 31, 2021*	EUR 50.00
Percentage change in the reporting period	**+43.27 %**
Period high	EUR 70.00
Period low	EUR 34.90

* Respectively the closing prices of the XETRA trading system of Deutsche Börse AG

Shareholder structure

As of December 31, 2021, Manz AG has a free float of 42.29 % and a broad shareholder base. Dieter Manz, founder and Supervisory Board member of Manz AG, holds a total of 25.01 % of the shares in the company together with his family, and Shanghai Electric Germany Holding GmbH holds a total of 19.64 % of the shares as of December 31, 2021. The investment company Invesco Advisers, Inc. holds 6.56 % of the shares. In addition, Janus Henderson Group Plc holds 3.44 % and Universal Investment holds 3.17 % of the shares.

Shareholder Structure



* thereof direct (§ 33 WpHG) 10,0 %, thereof attributed (§ 34 WpHG) 15,01 %

Investor relations

Manz AG attaches great importance to active dialogue with shareholders, institutional investors, analysts and financial journalists, and has maintained a continuous, proactive exchange of information in the financial year 2021. The regular and prompt publication of reports relevant to the company underscores its goal of providing comprehensive information on the company's developments. In doing so, Manz AG, with its listing in the Prime Standard Segment of the Frankfurt Stock Exchange, fully complies with the highest transparency requirements. Manz AG strives to exceed this standard.

Further to its statutory obligations, Manz AG 2021 participated in nine capital market conferences and two roadshows in Germany and abroad. Manz published 30 corporate news and press releases as well as one ad-hoc release. Furthermore, Manz AG held a hybrid Capital Markets Day on November 09. In addition to the presentation by management, visitors had the opportunity to get an impression of the competitive production of battery cells on Manz machines at the location of the partner CUSTOMCELLS in Tübingen. Manz AG contributes to the greatest possible transparency in its capital market communications by regularly offering conference calls with a web cast for the publication of financial reports and audio displays as an online offer on the company website.

In the course of financial year 2021, Manz AG was covered by the following institutions:

- Pareto Securities
- Stifel Europe
- Bankhaus Lampe

Annual General Meeting

The Annual General Meeting 2021 took place on July 07, 2021 as a purely virtual event due to Corona. The Managing Board took advantage of the opportunities to report in detail to shareholders on the operational and strategic development of Manz AG in the 2020 fiscal year, for which the Managing Board and Supervisory Board were discharged by a large majority at the Annual General Meeting. A total of 57.2 % of capital stock with voting rights was represented (previous year: 61.0 %).

Detailed voting results can be found at any time on the company's website www.manz.com under Investor Relations/annual general meeting. .

2022 Financial calendar

May 5, 2022	Publication of the 1st quarter 2022 quarterly report
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November 8, 2022	Publication of the 3rd quarter 2022 quarterly report

16 million
electric vehicles were registered globally in 2021 – nearly 50 % more than in the previous year.*

*Source: IEA – www.iea.org

The car of the future is digital and electric

Advancing digitization and rapid innovations in e-mobility create a number of challenges for the automotive industry. Our mission is to actively contribute to this progress as a development partner and pioneer.

Intelligent, integrated and highly innovative

We focus particularly on intelligent and integrated production solutions for various components in the segments automotive electronics as well as conventional and electric power trains.

As a technology and process experts for the automotive industry, we bundle our expertise - e.g. in the vision, metrology and laser applications segments - into tailor-made and customer-specific production solutions for::

- Battery cells and battery modules (Li-Ion battery manufacturing)
- Cell contacting systems
- Battery management systems and inverters
- Displays
- Electronic components and controllers
- Sensors and cameras for assistance system

In our modular production lines, we integrate and combine a variety of technologies: from assembly, ultrasound welding, bonding and soldering to laser welding and automated function tests. In this way, we support OEMs and their suppliers with optimizing their production processes and making them more efficient using our machines and equipment.

Using creative and innovative engineering, we are working hard on new production solutions that contribute to raising the performance parameters of end products and ultimately to reducing costs for the automotive industry.

Our expertise and experience...

...in technology fields such as automation, assembly, laser and integrated testing systems are bundled into ground-breaking production solutions for the automotive industry.

Our task: To enable the e-mobility breakthrough.

Report from the Supervisory Board

Dear Shareholders,

In the reporting year 2021, the company was able to benefit from the major growth potential in the e-mobility market and further expand its position as one of the leading suppliers of equipment for the production of lithium-ion battery cells and modules. In the process, the impact and effects of the COVID-19 pandemic, for example, on supply chains, were kept very low thanks to the tremendous commitment of our employees.

During the reporting year 2021, the Supervisory Board also advised the Managing Board on a regular basis with regard to the company's management and continuously monitored its business activities. In doing so, we meticulously carried out the duties incumbent upon us by law, the company's Articles of Incorporation, and our rules of procedure, satisfying ourselves that the Managing Board's work was legally compliant, orderly, and appropriate. The Supervisory Board discussed the organization of the company with the Managing Board. The Managing and Supervisory Boards have also continuously agreed on the strategic alignment of the company. The Supervisory Board was involved in all significant decisions regarding the company and the Group.

The Managing and Supervisory Boards remained in close and intensive contact throughout the 2021 financial year. In this context, the Managing Board complied with its duty to provide information as set out by law and the rules of procedure, notifying us in a regular, detailed and timely manner in both written and oral form about all measures and events relevant to the company. The Managing Board also discussed deviations in the business performance from the plans and goals that had been set up and gave reasons for the deviations. As a result, the Supervisory Board was always kept informed with respect to the company's business situation and performance, the company's intended business policy, the short-term, medium-term, and long-term planning including investment, financial, and human resources planning, as well as the company's profitability and organizational measures, and the Group's overall situation. In addition, information regarding the company's risks and risk management activities was regularly provided.

The members of the Supervisory Board always had sufficient opportunity to critically discuss the reports presented and the resolutions proposed by the Managing Board and to present their own suggestions. In particular, we intensively discussed all business transactions significant to the company based on the Managing Board reports, and carefully examined them for plausibility. The Supervisory Board approved individual transactions to the extent necessary for the Managing Board under the law, the Articles of Incorporation or the rules of procedure.

In addition to the Supervisory Board meetings, the chairman of the Supervisory Board was also in regular contact with the Managing Board and obtained information concerning the current development of the business situation and significant business transactions.

Focus of deliberations in the Supervisory Board

The 2021 financial year for Manz AG was once again characterized by the strategic further development of the company in its various business segments to achieve the objective of a sustained profitable business model. The business situation, financial performance and cash flows, the capacity utilization and the measures to improve profitability, as well as risk management, in addition to these and other strategic and operational issues, were regularly the focus of the Managing Board's reporting and the monitoring and advisory support provided by the Supervisory Board. Developments in the individual business areas and major projects were the focus of the Supervisory Board's discussions.

A total of four meetings and one constituent meeting were held in the reporting year, all of which were attended by all members of the Supervisory Board, in some cases via video conference system due to the COVID-19 pandemic. The Supervisory Board meetings were also attended by the members of the Managing Board.

The following topics were the focus of deliberations at the Supervisory Board meetings and resolutions:

The meeting on March 25, 2021 focused on the annual financial statements and consolidated financial statements as of December 31, 2020, the management reports for the company and the Group, the planning for fiscal year 2021, and the auditor's report. Following a discussion with the auditor, we approved the annual and consolidated financial statements for the financial year 2020. The Managing Board discussed the main risks at the Manz Group on the basis of the annual risk report. The Managing Board also reported on current business developments, including the order backlog and prospects in the individual business areas in the current fiscal year 2021. In this context, the Managing Board addressed, in particular, the existing challenges to achieving the planning targets. The Supervisory Board also discussed and adopted the Supervisory Board's report to the Annual General Meeting, as well as the Corporate Governance Statement and Corporate Governance Report for the fiscal year 2020.

At the meeting on May 6, 2021, the focus was on the Managing Board's reporting on the current liquidity and financial situation, business performance and order intake, and the target figures. In connection herewith, we again discussed, in particular, the development in the individual business areas and their profitability, as well as the status of major projects. The Supervisory Board also discussed and implemented the new compensation system for the Managing Board. In addition, the Supervisory Board approved the holding of the 2021 Annual General Meeting as a virtual meeting and adopted the proposed resolutions.

In a meeting held after the Annual General Meeting on July 7, 2021, the Supervisory Board re-elected member Prof. Dr. Heiko Aurenz as Chairman of the Supervisory Board and member Dieter Manz as his Deputy. Furthermore, the Supervisory Board adjusted the Managing Board contracts to the compensation system approved by the Annual General Meeting.

At the meeting on July 22, 2021, the Managing Board reported on the interim financial statements for the first half of 2021, the financial position and performance, as well as business developments. The Managing Board also reported on the current status of major projects, as well as sales activities and order intake in the individual business areas. In this context, the Committee dealt, in particular, with the CIGS orders in the Solar business unit.

At the last meeting of the reporting year on November 24, 2021, the Managing Board again reported on the current financial and earnings situation, as well as the business development and order backlog in the individual business areas. In this context, the Managing Board also addressed the effects of the supply bottlenecks of precursors and the COVID-19 pandemic on sales, as well as the measures taken to mitigate them. The Managing Board also reported on the current status of major projects, particularly in the Energy Storage business area. The Supervisory Board verified Manz AG's compliance with the recommendations of the German Corporate Governance Code, and, together with the Managing Board, adopted the statement of compliance pursuant to Section 161 of the German Stock Corporation Act (AktG). The Managing Board also presented the changes to the Manz Group's organizational structure and the realignment of the Group's "Mobility & Battery Solutions" and "Industry Solutions" reporting segments. Finally, he addressed the new brand claim "engineering tomorrow's production".

Work in the Economic Committee of the Supervisory Board

The Economic Committee, made up of two members of the Supervisory Board, continued to perform certain monitoring duties in the fiscal year 2021 and prepared the deliberations and resolutions of the Supervisory Board, in particular, in the areas of accounting, auditing, finance including planning, Managing Board matters, corporate governance and compliance. Prof. Dr. med. Heiko Aurenz and Dieter Manz are members of the committee.

The Economic Committee met five times in the reporting year. Regular discussion topics included the current business situation, liquidity and earnings situation, including orders on hand, the status of major projects as well as strategic measures for the further structural development of the Manz Group. In addition, it also discussed the annual and consolidated financial statements for December 31, 2020, the Corporate Governance Statement and the Corporate Governance Report for the financial year 2020, the proposed resolutions for the regular 2021 Manz AG Annual General Meeting and the annual risk report. It prepared the decisions of the Supervisory Board, including with regard to Managing Board compensation and Managing Board contracts. Together with the Managing Board, the Economic Committee also discussed, in particular, R&D projects and subsidies, measures to reduce costs, financing, cooperation with cooperation partners, planning for the fiscal years 2021 and 2022, the organizational structure of the Manz Group, and appointments to management positions in the company.

Conflicts of interest

There are no conflicts of interest on the part of members of the Managing or Supervisory Boards that must be disclosed to the Supervisory Board, nor does the handling thereof have to be disclosed at the Annual General Meeting.

German Corporate Governance Code

In the financial year 2021, the Managing and Supervisory Boards once again dealt in detail with the further development of corporate governance and the recommendations of the German Corporate Governance Code. The Managing Board and Supervisory Board have issued a joint declaration of compliance in accordance with Section 161 of the German Stock Corporation Act (AktG), according to which the company complies (and will comply with) the recommendations of the Code with a few exceptions. The statement of compliance from December 2021 is permanently available to the public on the Manz AG website.

Annual and Consolidated Financial Statements for the Financial Year 2021

The annual and consolidated financial statements as of December 31, 2021, prepared by the Managing Board, and the management report and consolidated management report for the financial year 2021 were audited by the company's and Group's auditor, Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, and given a qualified auditor's opinion.

The aforementioned documents relating to the annual and consolidated financial statements were made available to us by the Managing Board. The auditors also submitted their audit reports to us. The Supervisory Board examined the annual financial statements and the management report, the consolidated financial statements and the consolidated management report, as well as the non-financial consolidated statement including the auditor's reports submitted to the members of the Supervisory Board prior to the meeting. At the meeting of the Audit Committee and the annual accounts meeting of the Supervisory Board on March 24, 2022, the Managing Board explained the financial statements of Manz AG and the Group comprehensively in the presence of the auditor. The auditor reported on the scope, focus and significant findings in its audit, focusing in particular on the states of affairs particularly important to the audit and the audit procedures performed during the meeting of the Audit Committee and in the annual accounts meeting of the Supervisory Board. The auditor also provided information about its findings regarding the internal controlling and risk management systems in relation to the accounting process. The Audit Committee also reported to the Supervisory Board on its own audit of Manz AG's financial reporting and consolidated financial statements, its discussions with the Managing Board and the auditor, and its monitoring of the accounting process.

After examining and discussing the annual financial statements and management report, the consolidated financial statements and the consolidated management report as well as the non-financial consolidated statement along with the auditor’s reports, the Supervisory Board approved the result of the audit conducted by the auditor with the exception of the qualification of the auditor’s report. The qualification was made in view of the fact that, in the auditor’s opinion, there is insufficient evidence to determine the recoverability of a contract asset in the consolidated financial statements in the amount of EUR 23.2 million with regard to the economic performance of a customer based in the Peoples Republic of China. In Manz AG’s annual financial statements (HGB), the value amounts to EUR 7.3 million, is reported in inventories, and is accounted at manufacturing cost. However, in the opinion of the Managing Board, which the Supervisory Board concurs with after a thorough review, there are sufficient indications for the continued solvency of the customer. No objections are thus raised based on the definitive finding of the Supervisory Board review. In a resolution dated March 31, 2022, the Supervisory Board approved the annual financial statements and consolidated financial statements as of December 31, 2021. Manz AG’s annual financial statements as of December 31, 2021, are thereby adopted.

Changes in the Managing and Supervisory Boards

At the Annual General Meeting on July 7, 2021, the members of the Supervisory Board were elected for a new term of office. The composition of the Managing Board and the Supervisory Board remained unchanged in the financial year 2021.

Thanks and acknowledgment

The Supervisory Board wishes to thank the Managing Board for the constantly open and constructive collaboration in the past financial year. We would also like to express our gratitude to our employees for the commitment they have demonstrated during the 2021 fiscal year. Last but not least, we would like to thank you, our valued shareholders, for the trust you have placed in us and for your willingness to shape the future of Manz AG together with us.

Reutlingen, March 31, 2022

Prof. Dr. Heiko Aurenz
Chairman of the Supervisory Board

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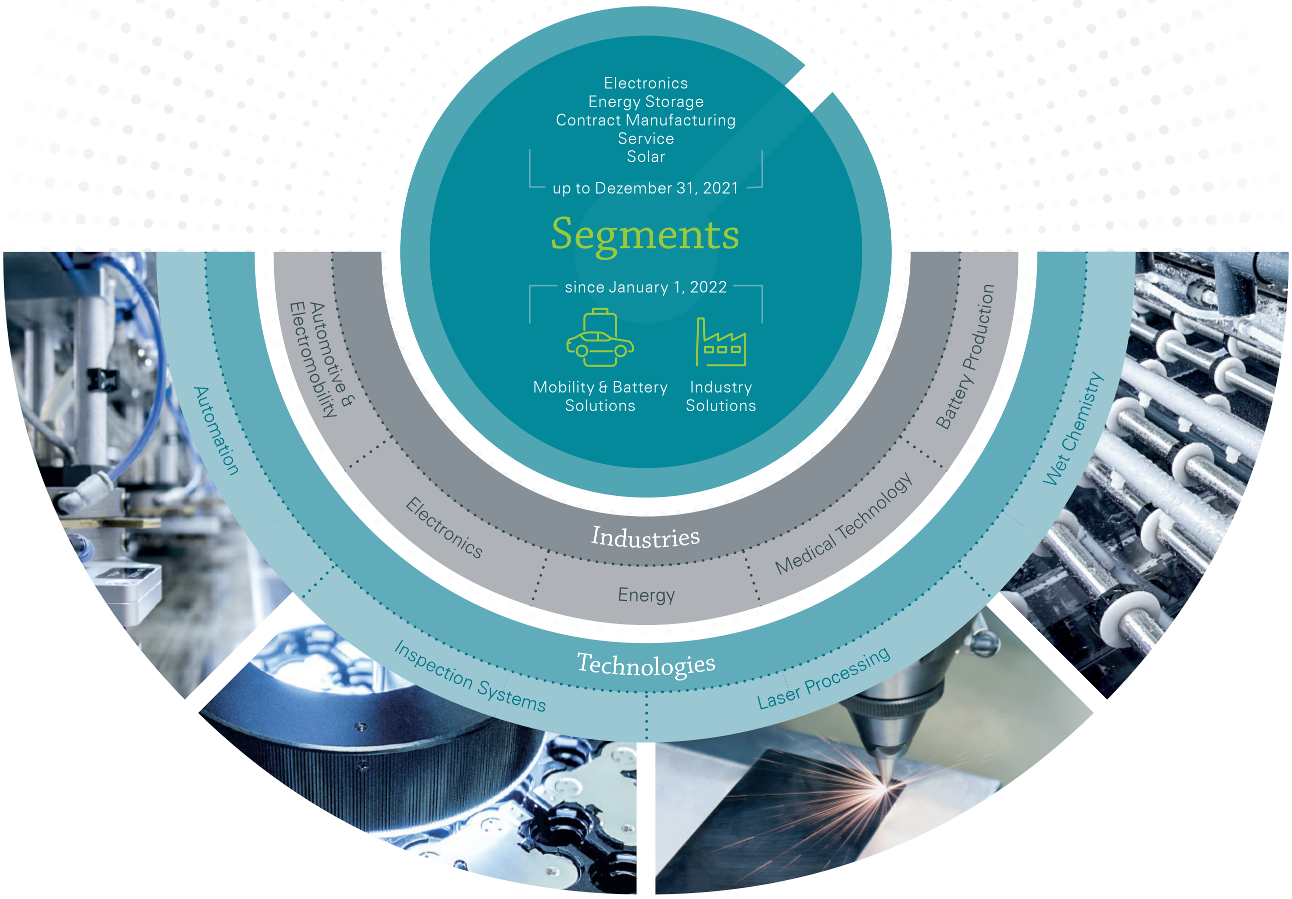
Basic Group Information

Business model

Founded in 1987, Manz AG is a global high-tech engineering company with a focus on five industries: automotive & electromobility, battery production, electronics, energy, and medical technology. With many years of expertise in automation, laser processing, inspection systems and wet chemistry, the company offers manufacturers and their suppliers in these future-oriented industries a broad portfolio of products and solutions. In addition to customized production solutions, this also includes individual machines and modules that can be linked together to form complete, individual system solutions. The company also offers a comprehensive range of services around Manz AG's core technological competencies: From simulation and factory planning to process and prototype development, customer training and after-sales service. Manz AG is a development partner for industrial companies, and in this role helps to support new technologies to market maturity. Manz operates internationally and has development and production facilities in Germany, Slovakia, Hungary, Italy, China, and Taiwan, as well as additional sales and service offices in India and the USA.



Strategy

Manz AG's corporate strategy is based on four pillars.

With a clear industry focus, executive management plans to develop Manz AG into one of the leading suppliers and integrators of machinery and equipment for battery production, as well as for other components of the electric drive train. With innovative engineering, Manz works on production solutions that contribute to increasing the performance parameters and reducing the costs of the end products. By addressing different growth industries at the same time, synergies can be created and opportunities fully exploited. Manz is also pursuing this goal for other industries with comparable technological requirements.

At the same time, Manz AG is dedicated to the topic of digital transformation in the industry. Using new methods, such as digital twins, a new generation of fully automated production lines is to be developed. In this context, the use of artificial intelligence (AI) enables an innovative type of machine control and production control, with the goal of self-optimizing manufacturing.

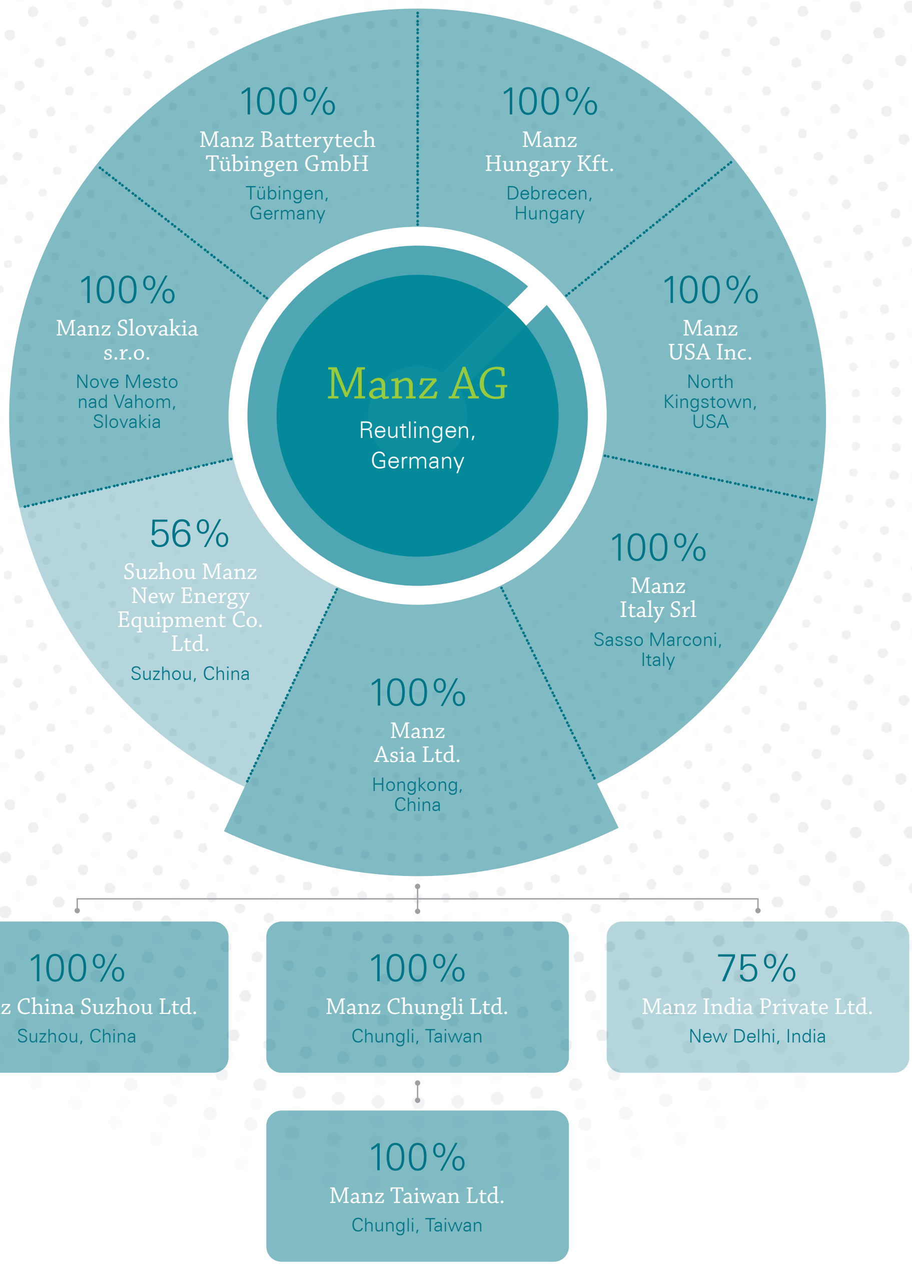
In line with the company's claim "engineering tomorrow's production," Manz AG attaches great importance to continuously developing new future technologies and growth fields. To this end, Manz pursues a targeted M&A strategy that includes both majority and minority interests in companies and technologies worldwide.

In addition, Manz AG's business activities are aimed at sustainably increasing its competitiveness and profitability by continuously expanding its modular machine concepts.

Business areas and reporting segments

In the 2021 financial year, Manz AG's operating activities comprised five reporting segments: Electronics, Energy Storage, Solar, Contract Manufacturing, and Service. At the same time, the company placed its strategic focus on the automotive & electromobility, battery production, electronics, energy and medical technology sectors. As part of this further development, the Group's organizational structures were optimized as of January 1, 2022, the business areas were reorganized and the reporting segments were adjusted accordingly. Starting in the 2022 financial year, Manz AG will report in the two reporting segments Mobility & Battery Solutions and Industry Solutions. The main features of the new reporting structure are explained in the opportunities report and the outlook report.

Group structure and holdings



Locations and Employees

31
Nations

Employees and managers from 31 different countries work in our Group's various subsidiaries.

Around a third of employees work in research and development worldwide.

1,384
Employees

Locations

1 **Germany**
Reutlingen, Tübingen
Production, Sales & Service

2 **Hungary**
Debrecen
Production & Service

3 **Slovakia**
Nove Mesto nad Vahom
Production, Sales & Service

4 **Italy**
Sasso Marconi
Production, Sales & Service

5 **USA**
North Kingstown, Cupertino
Sales & Service

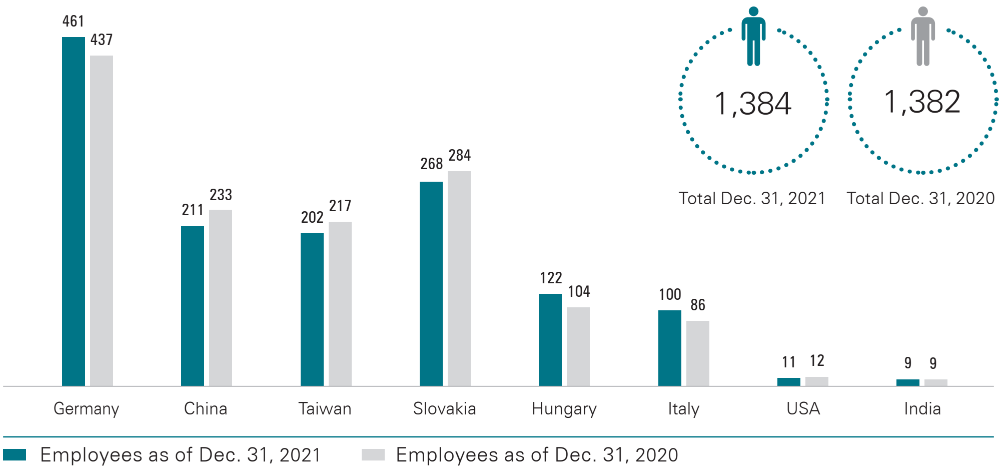
6 **Taiwan**
Chungli
Production, Sales & Service

7 **China**
Shanghai, Suzhou, Hongkong
Production, Sales & Service

8 **India**
New Delhi
Sales & Service

Locations and employees

Employees by country



Control system and performance indicators

At Group level, Manz AG was organized by product and service segments in financial year 2021 for the purpose of corporate management and reported its business activities in the Electronics, Energy Storage, Solar, Contract Manufacturing, and Service segments. In order to decide on the allocation of resources and to control the profitability of the divisions, they were monitored separately by management. The entire Managing Board was kept informed of the business performance in detail by means of regular reports and management meetings. As a result, forward-looking management by the respective Managing Board was possible in a timely manner in financial year 2021. As of January 1, 2022, this control system will be applied to the new reporting structure. Details on the reporting structure applicable from the financial year 2022 are presented in the forecast report.

Principles and objectives of financial management

Manz AG's key figures for corporate development are revenues, earnings before interest, taxes, depreciation and amortization (EBITDA), earnings before interest and taxes (EBIT), and the equity ratio.

The Managing Board has defined the following rolling target values for the long term (5 years):

- Sales: An average annual increase in sales of between 10 % and 20 % is envisaged.
- EBIT margin: A target value of 10 % is defined for the EBIT margin.
- EBITDA margin: A target value of more than 15% is defined for the EBITDA margin.

- Equity ratio: The target corridor for the ratio of equity to total assets is between 40 % and 60 %.

- Gearing: Manz AG has defined gearing as the ratio of net financial liabilities (current and non-current liabilities to banks less cash and cash equivalents) to equity before minority interests of less than 50 % as a target figure.

Performance indicators

in %	2021	2020	2019
Revenue (in EUR million)	227.1	236.8	264.4
EBITDA margin	7.7	8.0	3.6
EBIT margin	–6.8	3.0	–2.9
Equity ratio	35.4	36.7	38.8
Gearing	12.1	5.5	10.5

Manz AG's financial management system is centrally organized. To minimize risks and leverage Group-wide optimization potential, the company bundles decisions on financing, cash investments and currency hedges of subsidiaries within the Group. In this context, the company follows value-based financing principles in order to secure its liquidity at all times, limit financial risks and optimize the cost of capital. In addition, Manz strives for a well-balanced debt maturity profile. Further information on the management of the individual financial risks can be found in the notes to the consolidated financial statements under "Reporting on financial instruments".

Research and development

For Manz as a high-tech equipment manufacturer, research and development continued to play an important role in the financial year 2021. With over 500 engineers, technicians and scientists at its various development sites, Manz AG focuses on the development of manufacturing, assembly and handling technologies, integrated into modularized individual machines, tools and linked system solutions. The Manz AG interdisciplinary "R & D Council" is intended to enable the internal, cross-segment integration of competencies.

Manz maintains numerous cooperative arrangements with research institutions, universities and colleges. The company is active, for example, in the Lithium-Ion Battery Competence Network (KLiB) and as a committee member of the European Technology and Innovation Platform (ETIP). The goal in each case is to create the conditions within the European Union for the development of European battery production.

In addition, Manz AG has a consulting function in the European project LIPLANET under the umbrella of the "Horizon Europe Project" of the European Commission. This project aims to coordinate the European research and pilot lines for the production of lithium-ion battery cells and to ensure better efficiency of European battery research.

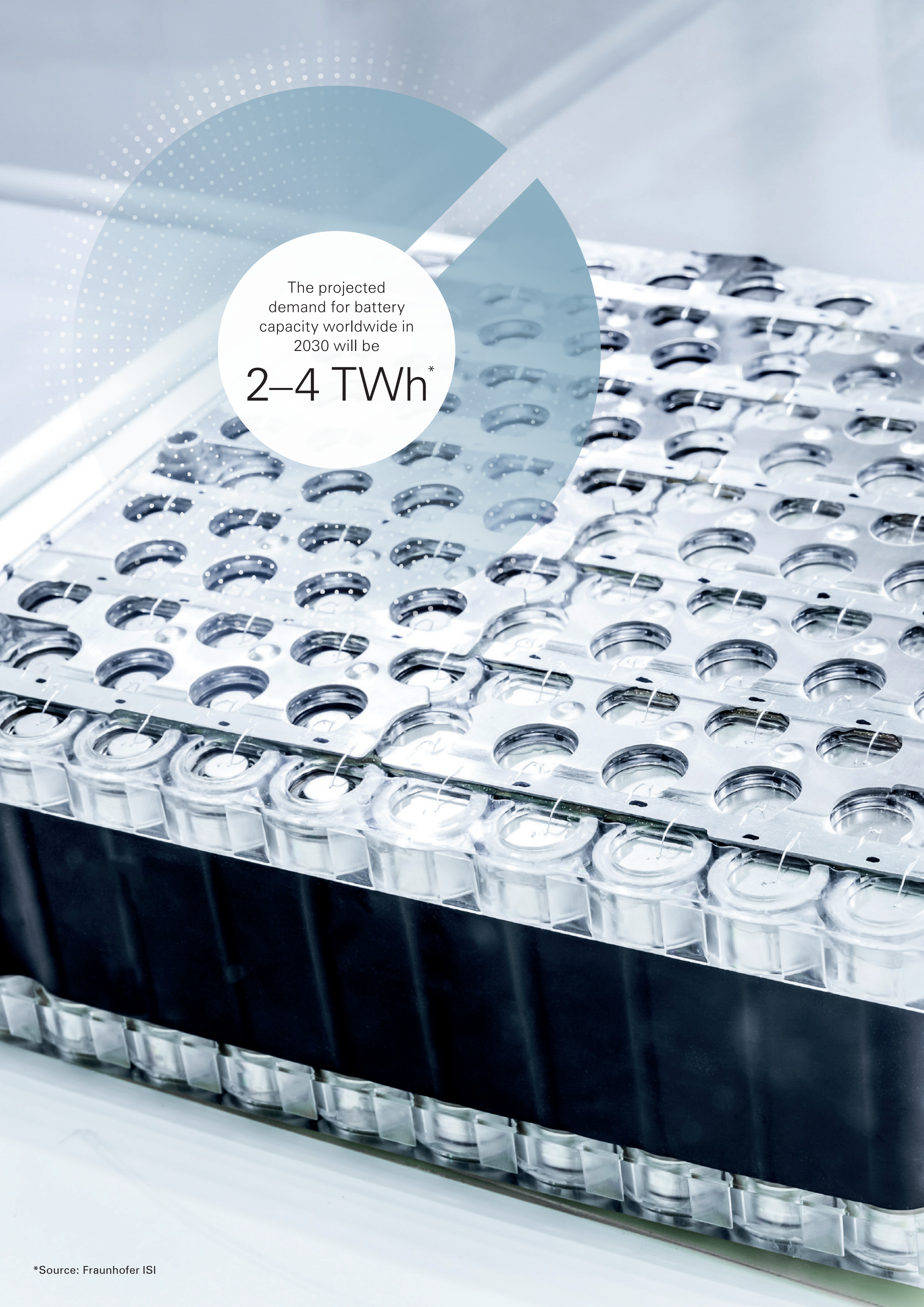
At the end of April 2021, Manz received official notification from the BMWi and the Baden-Württemberg State Ministry of Economics for funding of around EUR 70 million over the next six years. This funding is subject to the financing of Manz AG's own share and is provided as part of the Important Projects of Common European Interest ("IPCEI") to promote research and innovation in the battery value chain. The aim of the project, known as "European Battery Innovation (EuBatIn)", is to develop new technologies and processes that go far beyond the current cutting edge of technology and that will enable major improvements in terms of performance, safety and environmental protection. To this end, twelve EU member states will provide a total of up to EUR 2.9 billion in funding for companies in their respective countries in the coming years. Manz Italy Srl is also being funded with a mid-double-digit million EUR amount. With its "Lithium Battery Factory of the Future" project, Manz AG intends to develop efficient machines and processes for the fully automated production of next-generation lithium-ion batteries.

In total, Manz AG recorded a ratio for research and capitalized development costs of 6.7 % (previous year: 7.5 %), with investments in R&D increasing significantly in the second half of the year compared to the first half of 2021, as expected, due to the receipt of the funding commitment for the "Lithium Battery Factory of the Future" project. The capitalization ratio, i.e. the share of capitalized development costs in total R&D expenses, is 63.1 % (previous year: 25.5 %). Investments in R&D amount to EUR 16.0 million and are below the previous year's level of EUR 18.1 million.

In fiscal year 2021, research and development costs charged to income amounted to EUR 11.4 million (previous year: EUR 18.4 million). The company will also continue to place a clear emphasis on R&D activities in future. In order to consolidate its technological positioning in the relevant target markets and its innovative strength in a sustainable way and over the long term, Manz AG aims to achieve an annual R&D ratio of 5 % on average in its two segments. Including Manz AG's own share of development costs as part of the IPCEI project, this figure will average around 15 % over the next few years.

Sustainability report and non-financial statement

Manz AG is required to prepare a sustainability report or to submit a non-financial statement in accordance with the European Corporate Social Responsibility Directive and the provisions of sections 315b and 315c in conjunction with section 289c HGB (German Commercial Code). The non-financial consolidated statement is published separately from the consolidated management report in a separate sustainability report. In this context, the Managing Board of Manz AG has decided to use the German Sustainability Code (DNK) as a framework. The sustainability report and the non-financial group statement can be viewed on our website www.manz.com in the "Investor Relations" section under "Publications" and in the "Company" section under the heading "Sustainability."



The projected demand for battery capacity worldwide in 2030 will be

2–4 TWh*

*Source: Fraunhofer ISI

Energy transformation, e-mobility, electronic products – nothing moves without batteries

Energy storage is one of the main growth fields for the future. With its novel technology portfolio for the production of lithium-ion battery cells, modules and systems, as well as capacitors, Manz is setting new standards worldwide.

The production of battery cells places high demands on precision and productivity. Every single process step, e.g. coating, cutting, stacking or winding, affects the battery's performance parameters.

With its highly-efficient and fully-integrated production solutions, Manz covers the entire value chain for the production of battery cells -–from wound button cells and prismatic cells to stacked pouch cells – and ensures that they can be produced in an efficient manner.

Our mission: Maximum precision with maximum production speed

From individual cells to entire battery systems

The energy transformation and e-mobility require powerful all-in-one battery systems. In addition to our extensive know-how in process control, automation and laser technology, we offer our customers mature production solutions for all processes that are required for the assembly of battery modules.

With our solutions, we support our customers from the initial idea to the finished production process:

- Individual machines for e.g. laboratory production
- Equipment for pilot and small series production
- Turnkey production solutions for battery cell and module production.

From
coating
to
module assembly...

... we cover all process steps for the production of Li-Ion batteries together with strong partners.

Business Report

Macroeconomic environment and sector-specific conditions

Economic market environment

Global economic activity in 2021 was again dominated by the COVID-19 pandemic and multi-layered supply bottlenecks. According to the Kiel Institute for the World Economy (IfW), the recovery of the global economy from the corona-induced slump lost momentum in the second half of the year. While increasing corona infections again slowed down the economy in many parts of the world, supply bottlenecks hampered the recovery of industrial production. Overall, the IfW experts expected global production to grow by 5.7 % in December 2021 compared with 2020 (previous year: –3.1 %). According to the IfW, economic output in the USA increased by 5.6 % in 2021 compared with 2020 (previous year: –3.4 %). According to the IfW, gross domestic product in China could grow by 7.8 % in 2021 (2020: +2.3 %). Economic output in the European Union is expected to increase by 5.0 % in 2021 (2020: –6.0 %). The recovery of the German economy was also slowed down once again. According to the Federal Statistical Office, gross domestic product (GDP) in 2021 increased by only 2.9 % compared with 2020, contrary to original assumptions (previous year: –4.9 %). Thus, GDP in 2021 was still 1.1 % lower than in 2019, the year before the Corona pandemic began.

Engineering industry

According to VDMA data from December 2021, production expectations in the machinery and plant engineering sector for 2021 will not be met in full despite well-filled order books. While new orders increased by 34 % in real terms in the first ten months, production rose by a weaker than expected 7.2 % in real terms in the same period. The industry association sees the main reason for this gap between order intake and production in supply chain impairments, with companies lacking electronic components and metals, in particular. VDMA economists estimate that production growth for 2021 as a whole will be 7% in price-adjusted terms compared with 2020 (previous year: –11.8 %). This corresponds to a total production value in the mechanical engineering sector of EUR 219 billion.

Core segment sectors

Energy Storage

The automotive industry’s shift toward electromobility is omnipresent and is being accelerated, in particular, by strict emission requirements in key sales markets. The move away from the combustion engine poses major challenges for automotive manufacturers and suppliers. The dominant issue in the automotive sector at present is the shortage of semiconductors, which is causing significant production losses and will continue to affect the industry for some time to come, according to experts. According to IHS Markit, around 4.6 million pure electric vehicles were produced worldwide in 2021, an increase of 88 % compared to 2020. The battery capacity needed for this, according to IHS Markit, is around 240 gigawatt hours. Pure electric vehicles currently account for around six percent of total automotive production worldwide.

According to the German Association of the Automotive Industry (VDA), the total number of passenger cars produced in Germany in 2021, at 3.1 million units, remained well below the previous year's figure, which was already low due to corona, at –12 % and thus reached the lowest production volume since 1975.

According to the Federal Motor Transport Authority (KBA), new passenger car registrations in Germany fell by 10 % year-on-year to around 2.6 million in 2021. This is the lowest value since 1985. Over the course of the year, around 355,000 battery electric vehicles (BEVs) were newly registered (+83 percent year-on-year), resulting in a BEV share of around 14 %.

Electromobility is the biggest growth driver for lithium-ion battery (LIB) demand in the coming years. According to IHS Markit, the total battery capacity required for electric passenger vehicles (BEVs) will increase from around 380 gigawatt hours today to around 1,840 gigawatt hours in 2027. Currently, Europe is still dependent on importing batteries from Asia. For example, according to IHS Markit, around one-third of electric passenger cars (BEVs) manufactured in Europe are still equipped with battery cells produced in Asia. In the next few years, the demand for lithium-ion batteries is to be met locally by setting up numerous battery factories in Europe. By 2027, IHS Markit forecasts that 87 % of electric passenger cars manufactured in Europe will be equipped with battery cells produced in Europe.

Electronics

Cell contacting systems are a central component of the electric drive train of electric cars and plug-in hybrids: Depending on their size and capacity, several battery cells or modules are integrated in each battery-powered e-car and interconnected by cell contacting systems. With its high-tech production systems, Manz covers all essential manufacturing steps for the production of cell contacting systems. According to estimates by Manz based on IHS Markit, a total of around 106 million cell contacting systems were produced worldwide in 2021 (+37 % compared to the previous year).

In the field of display manufacturing, Manz offers highly efficient production processes with machines and equipment in the areas of wet chemistry, automation, and laser process technology, which are used in the production of TFT-LCDs and OLEDs. In the display sector, according to DSCC, capacities for LCD and OLED displays were increased by 11 % year-on-year in 2021. However, manufacturers are trying to expand the increase in required production capacity through process simplification and bottleneck elimination to meet demand. With a market share of over 70 %, LCD TVs clearly account for the largest share.

For the production of printed circuit boards and chip carriers, Manz offers wet-chemical process technology, for example, for exposure or surface processing. The focus is on so-called IC substrates, which allow microprocessors to be packaged in a very small space. Such packages are used in high-performance computers, for example, and other fields of application include smartphones, cars and industry. The market for these substrates grew to around USD 14 billion in 2021 as a whole (up 38 % year-on-year), according to Prismark data from December 2021.

In the field of semiconductor manufacturing, the chip packaging process fan-out panel level packaging (FOPLP) is playing an important role due to further miniaturization in the electronics industry. For the realization of the FOPLP with simultaneous coating of the microchips with an additional metal layer, in order to further optimize the performance parameters of the chips (redistribution layer), Manz is the world's only supplier of turnkey production lines. The market for FOPLP grew to USD 73 million in 2021 (+49 % compared to 2020), according to Yole Développement.

Solar

Despite various unfavorable market conditions, such as the COVID-19 pandemic, bottlenecks in the supply chains for photovoltaic products and consequently rising prices for solar modules, the photovoltaic market continued on its growth path last year, according to SolarPower Europe. New installed capacity in the EU in 2021 was 25.9 GW. This corresponds to an increase of 34 % compared to 2020 (previous year: 19.3 GW). The EU solar market thus achieved its highest ever level of newly installed capacity, exactly a decade after the previous record of 21.4 GW set in 2011. As in previous years, Germany is once again the largest solar market in Europe with 5.3 GW (20 % market share) of newly installed capacity, followed by Spain (3.8 GW), the Netherlands (3.3 GW), Poland (3.2 GW) and France (2.5 GW). Overall, 25 of the 27 EU member states installed more solar energy in 2021 than the year before.

The total capacity of solar power plants in the EU in 2021 was 164.9 GW, 19 % higher than the previous year's level of 139 GW. Germany (59.9 GW) and Italy (22 GW), the two countries with the highest installed capacity, account for nearly 50 % of the installed capacity of all solar power plants in the EU.

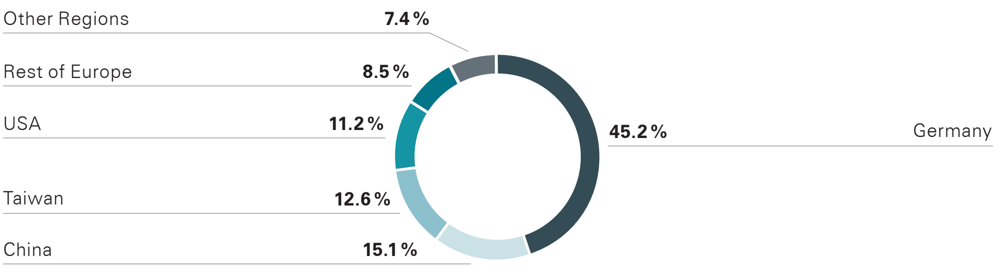
The ambitious plans of the new German government to double installed capacity to 200 GW by 2030 will further increase the central importance of Europe's leading market for the solar industry. SolarPower Europe expects 47.7 GW of new capacity to be installed in Germany by 2025. This is roughly equivalent to the output expected for the following three solar markets (Spain, Netherlands, France) combined. As before, a large part of the solar products needed are imported into the EU, and local production is very small compared to China and other Asian countries. Due to the strong growth in recent years, which was still well above the forecasts of many analysts, there are also new opportunities for European solar production.

Analysis of the net assets, financial position and results of operations of the group

Earnings position

Based on consolidated revenues of EUR 236.8 million in the 2020 fiscal year, the Managing Board of Manz AG had forecast a small to moderate increase in revenues for 2021 compared to 2020. Since the CIGS*fab* project was not completed in the Solar business area during the financial year 2021, contrary to expectations, a fact which would have had a correspondingly positive effect on revenue development in the Solar segment, the revenue forecast was not achieved. Therefore, revenues for the financial year 2021 were EUR 227.1 million (previous year: EUR 236.8 million).

Revenue Distribution by Region January 1 to December 31, 2021



Changes in inventories of finished goods and work in progress amounted to EUR 0.1 million (previous year: EUR –0.9 million). Own work capitalized was significantly higher than the previous year at EUR 10.6 million (previous year: EUR 5.8 million), mainly due to intensified development activities in connection with Manz AG's "Lithium Battery Factory of the Future" funding project as part of the important Projects of Common European Interest ("IPCEI") in the Energy Storage segment. This resulted in a total operating performance of EUR 237.8 million (previous year: EUR 241.7 million).

At EUR 21.4 million, other operating income was up on the previous year's figure of EUR 7.2 million. With a contribution of EUR 15.2 million, the increase is mainly attributable to the sale of the shares in Talus Manufacturing Ltd. in the Contract Manufacturing segment.

The cost of materials in fiscal year 2021 amounted to EUR 131.8 million (previous year: EUR 130.3 million), and the cost of materials ratio increased slightly to 55.4 % (previous year: 53.9 %) due to base factors. At EUR 75.5 million, personnel expenses were slightly up on the previous year's figure of EUR 71.9 million as a result of salary increases and the expansion of the workforce in connection with the "Lithium Battery Factory of the Future" funding project; the personnel expense ratio increased to 31.7 % (previous year: 29.8 %).

Other operating expenses amounted to EUR 33.4 million and included advertising and travel expenses of EUR 5.3 million (previous year: EUR 5.0 million) and exchange rate losses of EUR 3.8 million (previous year: EUR 2.8 million). In the previous year, other operating expenses of EUR 36.6 million were dominated by the recognition of impairment losses on financial assets and contract assets amounting to EUR 6.5 million.

The share of profit of associates decreased from EUR 9.4 million to EUR –0.2 million due to the sale of the shares in Talus Manufacturing Ltd. and the resulting lower contribution to earnings. The value includes the negative earnings contributions of CADIS Engineering GmbH and Q.big 3D GmbH since the acquisition in the fiscal year.

Earnings before interest, taxes, depreciation and amortization (EBITDA) amounted to EUR 18.3 million, a similar level to the previous year's figure of EUR 19.4 million. The EBITDA margin also remained almost constant at 7.7 % (previous year: 8.0 %). The forecast of an EBITDA margin in the upper positive single-digit percentage range for the 2021 fiscal year was thus achieved.

Since it was uncertain whether business relationships with Chongqing Shenhua Thin Film Solar Technology Co., Ltd. would be continued at the time the 2021 consolidated financial statement was prepared, and since new customer relationships were only in development in the course of the realignment of the segment, impairment of EUR 21.6 million were taken in this context on goodwill, as well as for a brand name thereafter for the financial year 2021. Due to this non-cash one-off effect, amortization/depreciation and impairment increased to EUR 34.4 million (previous year: EUR 12.1 million). Earnings before interest and taxes (EBIT) of EUR –16.1 million reflect this one-time effect (previous year: EUR 7.2 million). This resulted in an EBIT margin of –6.8 % (previous year 3.0 %). Originally, the Managing Board had expected an EBIT margin in the low to mid positive single-digit percentage range for fiscal 2021. Adjusted for the special write-downs, the operating result amounts to EUR 5.5 million. This corresponds to an adjusted EBIT margin of 2.3 %.

Finance income amounted to EUR 0.5 million in 2021 (previous year: EUR 0.1 million), finance expenses to EUR 2.0 million and were thus roughly on a par with the previous year (previous year: EUR 2.3 million). Earnings before taxes (EBT) amounted to EUR –17.6 million (previous year: EUR 5.0 million), also influenced by the special impairment. After deduction of income taxes of EUR 4.9 million (previous year: EUR 1.5 million), the consolidated result was EUR –22.4 million (previous year: EUR 3.4 million). Based on a weighted average of 7,750,144 shares, this resulted in basic earnings per share of EUR –2.89 (previous year: basic earnings per share of EUR 0.44 based on 7,744,088 shares).

Asset position of the Group

Total assets as of December 31, 2021 decreased from EUR 357.9 million to EUR 308.4 million compared to the previous year's reporting date.

On the assets side, non-current assets totaled EUR 101.5 million as of December 31, 2021, down on the level at the 2020 balance sheet date (EUR 120.4 million). This development also reflects, in particular, the drop in intangible assets to EUR 44.1 million (December 31, 2020: EUR 59.1 million) in the course of impairment in the Solar segment of EUR 21.6 million. The holdings entered into in the financial year 2021 in CADIS Engineering GmbH as well as Q.big 3D GmbH are recognized in the line item "Shares in associated companies." Financial assets amounted to EUR 1.8 million as of December 31, 2021, and include Manz AG's investment in MetOx Technologies, Inc. The previous year's figure of EUR 7.3 million still included the investment in NICE PV Research Ltd. as of December 31, 2020. This was written off in full during the fiscal year.

As of December 31, 2021, current assets of EUR 206.9 million were lower than the figure of EUR 237.5 million at the 2020 balance sheet date. Inventories and receivables increased slightly as of the reporting date to EUR 32.1 million (December 31, 2020: EUR 29.9 million) and EUR 33.7 million (December 31, 2020: EUR 27.2 million), respectively. In addition, an increased value of EUR 86.1 million was recognized for contract assets as of the reporting date compared to the previous year (December 31, 2020: EUR 68.9 million). There were no assets held for sale as of December 31, 2021, following the scheduled sale of the investment in Talus Manufacturing Ltd. in fiscal year 2021 (December 31, 2020: EUR 30.0 million). Cash and cash equivalents amounted to EUR 36.1 million as of December 31, 2021 (December 31, 2020: EUR 69.7 million). As of December 31, 2021, unrestricted cash and cash equivalents of EUR 6.9 million (previous year: EUR 7.1 million) were reported under other current assets.

On the liabilities side, equity was down year-on-year at EUR 109.2 million escpecially due to the negative consolidated net profit and the associated decline in retained earnings to EUR 76.4 million (December 31, 2020: EUR 83.8 million). The equity ratio was 35.4 % as of December 31, 2021 (December 31, 2020: 36.7 %).

Non-current liabilities were EUR 34.3 million as of December 31, 2021 (December 31, 2020: EUR 35.6 million). Current liabilities decreased significantly to EUR 164.8 million as of December 31, 2021 (December 31, 2020: EUR 191.0 million). As a result of the repayment of loans by the Asian companies, current financial liabilities amounted to EUR 41.0 million (December 31, 2020: EUR 71.3 million). Trade payables increased to EUR 66.4 million as of the reporting date (December 31, 2020: EUR 47.0 million). The Company has contract liabilities of EUR 30.9 million as of December 31, 2021 (December 31, 2020: EUR 43.9 million).

Liquidity position of the Group

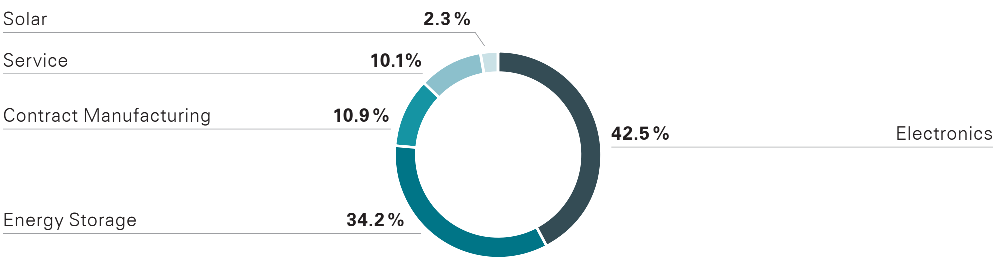
The starting point for the cash flow from operating activities is the consolidated net profit of EUR –22.4 million. This includes non-cash depreciations in the solar business of EUR 21.6 million. In the course of the increase in inventories, trade receivables, assets, and other assets, Manz recorded a cash outflow of EUR –34.6 million, compared to EUR 12.0 million in the same period of the previous year. Consequently, cash flow from operating activities decreased by around EUR 46.4 million compared to the previous year and amounts to a total of EUR –25.8 million for fiscal year 2021.

Cash flow from investment activities amounted to EUR 9.7 million in the 2021 reporting period (previous year: EUR –9.4 million). The strong cash inflow resulted from the sale of the shares in Talus Manufacturing Ltd. in the Contract Manufacturing segment. In contrast, there were higher expenses in particular for investment in intangible assets and property, plant, and equipment, as well as payments from the purchase of companies entered into the balance sheet at equity.

Cash flow from financing activities in fiscal year 2021 amounted to EUR –18.9 million and resulted primarily from the repayment of current financial liabilities. Taking exchange rate changes into account, Manz AG thus had cash and cash equivalents of EUR 36.1 million as of December 31, 2021 (December 31, 2020: EUR 69.7 million). Unused credit lines at banks on the balance sheet date of record for 2021 were EUR 17.8 million (December 31 2020: EUR 16.9 million). The company intends to conclude a syndicated loan agreement within the first six months of 2022. With bank credit amounting to EUR 36.1 million, the increased net liabilities amounted to EUR 13.2 million (December 31 2020: EUR 7.2 million).

Segment report

Revenues by Business Segment January 1 to December 31, 2021



Order intake

(in million EUR)

	2021	2020	Change in %
Solar	0.7	0.7	0.0
Electronics	102.8	85.4	+20.4
Energy Storage	148.9	129.5	+15.0
Contract Manufacturing	26.2	34.9	–25.0
Service	23.0	21.2	+8.4
Group total	**301.5**	**271.7**	**+11.0**

Order backlog

(in million EUR)	2021	2020	Change in %
Solar	0.0	30.5	–100.0
Electronics	52.6	46.3	+13.8
Energy Storage	170.0	120.7	+40.9
Contract Manufacturing	6.4	4.8	+32.9
Service	–	–	–
Group total	**229.1**	**202.3**	**+13,2**

Electronics

In the Electronics segment, business for assembly automation equipment, particularly in the area of cell contacting systems, showed a positive development. In this context alone, Manz was able to record several follow-up orders from TE Connectivity, which will have an impact on revenue and income in the financial years 2021 and 2022. Manz also received a follow-up order for several million euros for systems to implement a novel packaging process for microchips, fan-out panel level packaging (FOPLP) from one of the world's leading providers in microchip manufacturing, which will also impact revenues and earnings in the financial years 2021 and 2022.

Despite challenging conditions in the market for equipment used to manufacture displays for LCD, OLED, and AMOLED flat-panel displays, Manz AG recorded an increase in revenues to EUR 96.5 million in 2021 (previous year: EUR 90.7 million) as part of the general expansion of its business. The target of sales at the level of the previous year was thus exceeded. Segment EBIT amounted to EUR –4.8 million compared to EUR –5.4 million in the previous year. The earnings situation was significantly impacted by project-related additional expenses for the final acceptance of equipment for the production of cell contacting systems and losses from exchange rate fluctuations. As a result, the earnings forecast of an EBIT margin in the low single-digit negative percentage range was narrowly missed.

Energy Storage

The Energy Storage segment developed positively in fiscal 2021, although there were still delays in customers' investment decisions in the first half of the year. For example, Manz AG was able to report an order from a US-American manufacturer for an assembly line for highly efficient battery modules. Through the cooperation with GROB-WERKE GmbH & Co. KG, the business prospects for the production solutions for lithium-ion battery cells and modules for e-mobility were further improved. The success of Manz AG's consistent focus in the Energy Storage segment is also underscored by the funding received in April from the European Commission for the further development of lithium-ion battery technology as part of the important Projects of Common European Interest ("IPCEI"). In the second half of the year, Manz recorded increasing order momentum. Among others, a major order from Britishvolt Ltd. for equipment to assemble lithium-ion cells for a pioneering gigawatt production line, which will impact the earnings situation of the company from the financial year 2022, and an order from the BMW Group for the construction of a highly integrated pilot production line for lithium-ion battery cells at the Parsdorf site near Munich were won.

The Energy Storage segment recorded sales growth of 20.0 % to EUR 77.6 million in fiscal 2021, which is within the forecast range of sales growth of 20 % to 40 % (previous year: EUR 64.7 million). Segment EBIT amounted to EUR 1.7 million in the year under review, compared with EUR 6.9 million in the same period of the previous year. This corresponds to an EBIT margin of 2.1 %. The goal of an EBIT margin in a moderately positive single-digit percentage range was not achieved, due to challenges related to commissioning a customer project.

Solar

In fiscal year 2021, business activities in the Solar segment continued to focus on the implementation of the major CIGS orders from Chongqing Shenhua Thin Film Solar Technology Co., Ltd. As a continuation of the business relationship with the customer was uncertain at the time the financial statements for 2021 were prepared and new customer relationships were only being established in the course of the segment's realignment, the Managing Board decided in this context to recognize impairment losses of EUR 21.6 million on goodwill and a brand name for the fiscal year 2021. Since the CIGS*fab* project was not completed in the Solar business area during the financial year 2021, contrary to expectations, a fact which would have had a correspondingly positive effect on revenue development in the Solar segment, the revenue forecast was not achieved.

As a result, sales in the Solar segment of EUR 5.3 million (previous year: EUR 23.2 million) fell significantly short of the original expectations of a year-on-year increase in sales of up to 60 %. The EBIT segment amounted to –31.1 million euros, compared to –7.8 million euros in the previous year. The earnings forecast of an EBIT margin in the low single-digit negative percentage range was, therefore, also clearly missed.

Contract Manufacturing

Sales in the Contract Manufacturing segment amounted to EUR 24.6 million in fiscal 2021 (previous year: EUR 37.0 million), falling slightly short of expectations of a year-on-year decline in sales of between 20 % and 30 %. At EUR 16.1 million (previous year: EUR 12.3 million), corresponding to an EBIT margin of 65.2 %, the EBIT target of a margin in the mid-positive double-digit percentage range was slightly exceeded. This includes earnings of EUR 14.8 million from the disposal of the investment in Talus Manufacturing Ltd.

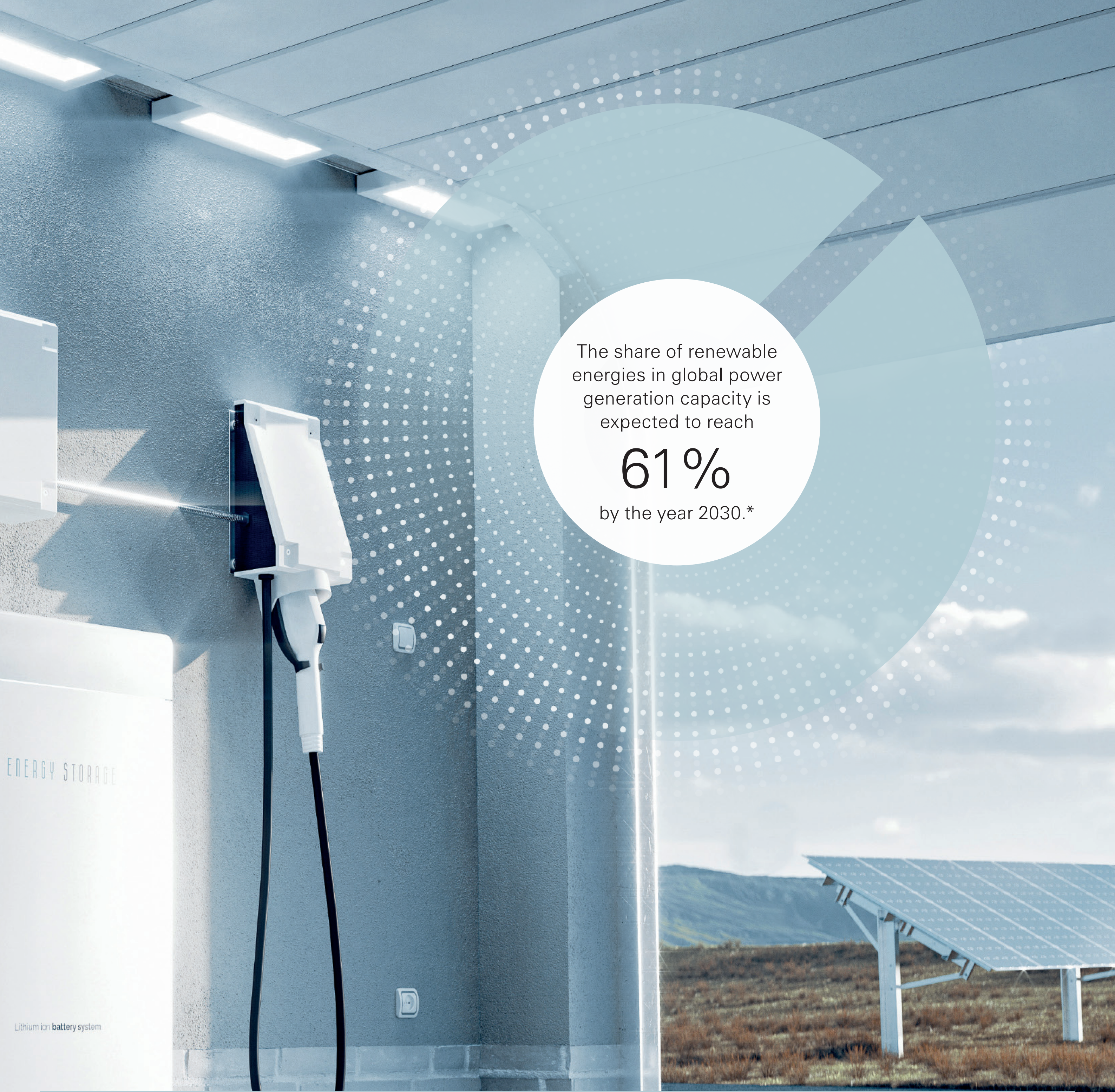
Service

In the Service segment, Manz AG combines all of its after-sales services, such as repairs and maintenance or the conversion and upgrade of machines and assemblies. The Service segment generated sales of EUR 23.0 million in 2021 (previous year: EUR 21.2 million) due to a higher machine base in the market. With the year-on-year increase in revenues, Manz AG was able to slightly exceed its forecast of revenues at the previous year's level. Segment EBIT in 2021 was EUR 2.1 million, up on the previous year's level of EUR 1.3 million. As a result, the forecast margin in the low positive single-digit percentage range was also significantly exceeded.

Overall statement on corporate development 2021

The overall unsatisfactory development of revenue and earnings in 2021 was significantly burdened by the loss of revenue and the special write-downs in the Solar segment. At the same time, Manz AG recorded increasing momentum in the e-mobility market in the past fiscal year and was able to convince numerous well-known, international customers with its many years of experience in the development of innovative production concepts and solutions for the manufacture of lithium-ion batteries. In Manz's view, the cooperation with Britishvolt Ltd. and the contract awarded by the BMW Group to set up a pilot line for battery production in Parsdorf are outstanding examples of this.

With an order backlog of EUR 229.1 million as of December 31, 2021 (previous year: EUR 202.3 million) and incoming orders of EUR 301.5 million as of December 31, 2021 (previous year: EUR 271.7 million), developments in the e-mobility market, in particular, underscore the potential for Manz AG. Further information on the achievement of targets can be found in the corresponding section of the forecast report.



The share of renewable energies in global power generation capacity is expected to reach

61 %

by the year 2030.*

The share of renewable energies is growing worldwide.

The renewable energies sector will have to expand much more rapidly to ensure that growing global demand for energy and storage can be met and that the Paris climate targets can be achieved. That is what we are committed to.

*Source: IEA – World Energy Outlook 2021

Using natural energy efficiently

Storage technologies are the foundation for a successful energy transition and a guarantee for an independent power supply. Manz is one of the industry's leading development partners in this area.

Our drive: Electricity should be reliable available

Of the

17

global sustainability goals of the United Nations...

... Manz addresses three with its solutions: affordable and clean energy; industry, innovation and infrastructure; climate protection measures

Energy must be available when it is needed. To achieve this, the high volatility of the power grids must be balanced by the increasing share of renewable energy. This creates an increasing demand for load balancing technologies and thus also for intelligent and powerful battery storage systems, which hold surplus energy that is not immediately needed or fed into the power grid.

The demand for energy storage is increasing

With our production solutions for battery storage systems, we ensure that renewably generated energy is available around the clock. The energy industry benefits from stationary energy storage systems for decentralized storage of energy from renewable sources - for a secure power supply.

Three market segments are in the foreground for us here

- Large storage
- Commercial storage
- Home storage

Our production solutions ensure that the required energy storage systems are more powerful and less expensive to produce. In this way, we make an important contribution to ensuring the necessary high security and quality of supply in the long term.

Corporate Governance

Declaration on corporate governance

The corporate governance declaration pursuant to sections 289f and 315d German Commercial Code (HGB) was prepared jointly for Manz AG and the Manz Group and made publicly available under the title "Corporate Governance – Declaration of Manz AG for the 2021 financial year" on the company's website at www.manz.com in the "Investor Relations" section under the heading "Corporate Governance – Declaration on Corporate Governance".

Takover-relevant disclosures

(pursuant to section 289a and section 315a German Commercial Code [HGB] and explanatory report)

Composition of subscribed capital

The subscribed capital of Manz AG amounts to EUR 7,756,804.00 and is divided into 7,756,804 no-par value bearer shares with a proportional amount of the share capital of EUR 1.00. All shares are associated with the same rights and duties. Each share grants its holder one vote at the Annual General Meeting. Each share offers the same share of profits. This would exclude treasury shares held by Manz AG, which do not entitle the company to any rights. At the present time, the company does not hold any treasury shares. The rights and obligations of shareholders are, otherwise, governed by the provisions of the German Stock Corporation Act (AktG), in particular, sections 12, 53a et seqq., 118 et seqq. and 186 German Stock Corporation Act (AktG).

Restrictions that apply to voting rights or the transfer of shares

The Managing Board of Manz AG does not know of any agreements pertaining to restrictions on the use of voting rights or the transfer of shares.

Shareholdings that exceed 10 % of voting rights

Based on the notifications received regarding significant voting rights pursuant to sections 33 and 34 German Securities Trading Act (WpHG) and regarding transactions by executives on their own behalf pursuant to Article 19 of the Market Abuse Regulation, the Managing Board is aware of the existence of the following direct or indirect shareholdings in the capital of the company exceeding 10 % of the voting rights:

	Number of voting rights	Percentage of voting rights
Dieter Manz, Schlaitdorf	1,939,899	25.01 %
directly thereof (33 WpHG)	775,942	10.00 %
of which attributable (34 WpHG)	1,163,957	15.01 %
People's Republic of China, acting through the State-owned Asset Supervision Commission (SASAC) of the People's Government of Shanghai, People's Republic of China	1,523,480	19.64 %
Full chain of subsidiaries:		
Shanghai Electric (Group) Corporation		
Shanghai Electric Group Company Limited		
Shanghai Electric Hongkong Co. Limited		
Shanghai Electric Germany Holding GmbH (shareholder)		

Shares with special rights that confer authority to exercise control

The company does not have shares with special rights that confer authority to exercise control.

Type of voting rights control if employees have an interest in the capital and do not exercise their control rights directly

Employees with a stake in Manz AG's capital can exercise the control rights to which they are entitled from the shares directly in accordance with the provisions of the Articles of Incorporation and prevailing laws.

Legal requirements and provisions of the Articles of Incorporation regarding the appointment and dismissal of members of the Managing Board and regarding amendments to the Articles of Incorporation

The appointment and dismissal of members of the Managing Board are governed by sections 84 and 85 German Stock Corporation Act (AktG). Accordingly, members of the Managing Board are appointed by the Supervisory Board for a maximum of five years. Members may be repeatedly appointed or have their term extended, in either case for another period lasting a maximum of five years. Pursuant to section 5 of the company's Articles of Incorporation, the Managing Board may consist of one or more persons. The Supervisory Board appoints the members of the Managing Board pursuant to the provisions of the German

Stock Corporation Act and determines their number. The Supervisory Board may appoint a member as chairperson of the Managing Board. In accordance with section 84 German Stock Corporation Act (AktG), the Supervisory Board may revoke the appointment of a member of the Managing Board and the appointment of the Chairman of the Managing Board for good cause.

Amendments to the Articles of Incorporation are governed by sections 133 et seqq. and 179 et seqq. of the German Stock Corporation Act (AktG). In general, amendments require a resolution passed at the Annual General Meeting. A resolution passed at the annual general meeting requires a majority of at least three-quarters of the capital stock represented at the time the resolution is adopted. The Articles of Incorporation may determine a different, but only greater capital majority, for any amendment to the corporate purpose of the company.

Pursuant to section 16 (1) of the company's Articles of Incorporation, resolutions are passed at the Annual General Meeting by a simple majority of the votes cast, unless mandatory provisions of the German Stock Corporation Act stipulate otherwise. Where the German Stock Corporation Act also stipulates that a majority of the represented capital stock is required to pass a resolution, a simple majority of the represented capital fulfills this requirement, as permitted by law.

Authority of the Managing Board to issue or repurchase company shares

The Managing Board may issue new shares only on the basis of resolutions passed at the annual general meeting in respect of an increase in capital stock or in respect of authorized and conditional capital. Purchasing treasury shares is governed by section 71 et seqq. of the German Stock Corporation Act (AktG) and, in certain cases, is permitted by operation of law or as a result of authorization given at the Annual General Meeting.

Authorized capital

Based on the resolution of the Annual General Meeting of July 7, 2021, the Managing Board of the company is authorized, pursuant to section 3 (3) Articles of Incorporation, to increase the share capital of the company in the period up to July 6, 2026, with the approval of the Supervisory Board, on a one-off basis or in partial amounts, by a total of up to EUR 3,872,044.00 by issuing a total of up to 3,872,044 new bearer shares (no-par value shares) against cash or non-cash contributions (Authorized Capital 2021).

In principle, the new shares must be offered to shareholders for subscription. However, the Managing Board was authorized, with the approval of the Supervisory Board, to exclude shareholders' subscription rights.

- in the event of a capital increase for cash consideration, if the issue amount of the new shares is not significantly less, within the meaning of section 203 (1) and (2) and section 186 (3) sentence 4 of the German Stock Corporation Act (AktG), than the stock exchange price of shares of the company of the same type at the time of establishment of the issue price, which is to be as close in time as possible to the time of issue of new shares. This authorization to exclude subscription rights shall only apply to the extent that the shares to be issued as part of the capital increase do not account for more than EUR 774,408.00 of the share capital and do not account for more than 10 % of the share capital at the time the authorization is exercised. The proportionate amount of capital stock of shares which are issued or sold during the period of this authorization based on other authorizations in direct or corresponding application of section 186 (3), sentence 4 of the German Stock Corporation Act (AktG), with exclusion of subscription rights, is to be credited toward this maximum amount for the exclusion of subscription rights;

- in the case of capital increases against contribution in kind for the acquisition of companies, parts of companies or participations in companies or other assets or for the purpose of business combinations;

- to the extent that it is necessary to give owners of warrant or convertible bonds, profit-sharing rights, or profit-sharing bonds (or combinations of these instruments) issued by the company or direct or indirect affiliates of the company a subscription right to new shares to the same extent as they would have upon exercising their option or conversion right or after fulfilling their conversion obligation;

- in order to exclude fractional amounts from subscription rights.

Authorization to issue partial debentures with options or conversion rights or conversion obligations, profit-sharing rights, and profit-sharing bonds (or combinations of these instruments), as well as Conditional Capital I

At the Annual General Meeting on July 2, 2019, a resolution was passed authorizing the Managing Board, with Supervisory Board approval, to issue bearer warrant or convertible bonds, profit-sharing rights and/or profit-sharing bonds, or a combination of these instruments (collectively referred to as “bonds”), up to a total nominal value of EUR 150 million, on one or more occasions until July 1, 2024. In addition, the Managing Board was also authorized to grant owners of warrant bonds option rights and owners of convertible bonds conversion rights for bearer shares of the company with a proportionate amount of capital stock totaling up to EUR 3,100,000.00, in accordance with the detailed terms and conditions of the warrant/convertible bonds.

The statutory subscription right is granted to the shareholders in the way that the bonds are underwritten by a bank or a syndicate of banks with the obligation to offer them for subscription to shareholders. If bonds are issued by one of Manz AG’s subsidiaries pursuant to section 18 of the German Stock Corporation Act, the company must ensure that the statutory subscription right is granted accordingly to shareholders of Manz AG.

However, the Managing Board is authorized, with the consent of the Supervisory Board, to exclude subscription rights to the extent necessary to grant the holders of previously issued bonds with option or conversion rights, or conversion obligations, respectively, subscription rights to the extent to which they would be entitled as shareholders after exercising their option or conversion rights or upon fulfillment of their conversion obligations.

Furthermore, the Managing Board is authorized, with Supervisory Board approval, to completely exclude shareholders' subscription rights to bonds issued with an option and/or conversion right or conversion obligation, provided the Managing Board, after dutiful examination, arrives at the view that the issue price of the bonds is not significantly below their hypothetical market value as calculated according to accepted and, in particular, actuarial methods. This authorization to exclude subscription rights applies to bonds issued with option and/or conversion rights or conversion obligations, with option and/or conversion rights or conversion obligations for shares with a pro rata amount of the capital stock which, in total, may not exceed 10 % of the capital stock, either at the time it takes effect or – if this value is lower – at the time this authorization is exercised. On the aforementioned ten percent limit new shares from authorized capital and treasury shares sold are counted in certain cases.

Where profit-sharing rights or profit-sharing bonds without an option right or conversion right/obligation are issued, the Managing Board is authorized, with Supervisory Board approval, to completely disapply shareholders' subscription rights if these profit-sharing rights or profit-sharing bonds have the characteristics of a debenture, i.e. do not give rise to any membership rights in the company, do not grant a share in the liquidation proceeds and the interest payable is not calculated on the basis of net income for the year, net retained profit or the dividend. Moreover, in such a case, the interest payment and the issue price of the profit-sharing rights or profit-sharing bonds must reflect current market conditions at the time of issue.

Pursuant to section 3 (4) of the Articles of Incorporation, the capital stock of the company has been conditionally increased by up to EUR 3,100,000.00 through the issue of up to 3,100,000 no-par value bearer shares (Conditional Capital I).

Authorization to issue share subscription rights within the scope of the 2015 Manz Performance Share Plan as well as Conditional Capital II

At the annual general meeting held on July 7, 2015, a resolution was passed authorizing the Managing Board, with Supervisory Board approval, to issue a total of up to 59,000 subscription rights ("Performance Shares") for a total of up to 118,000 shares in the company to executives of affiliated companies as well as Manz's own managers below the executive level and managers of affiliated companies, both domestic and foreign, below the executive level on one or more occasions through June 30, 2020. The Supervisory Board was given authorization to issue a total of up to 56,000 subscription rights ("Performance Shares") for a total of up to 112,000 shares in the company to members of Manz's Managing Board, on one or more occasions, through June 30, 2020.

Subscription rights are to be granted, structured and exercised in accordance with the provisions in the resolution of the Annual General Meeting on July 7, 2015.

The authorization of July 7, 2015 was revoked by resolution passed at the annual general meeting of July 2, 2019, insofar as no subscription rights had yet been issued on the basis of the authorization.

In accordance with section 3 (5) of the Articles of Incorporation, the share capital of the company is conditionally increased by up to EUR 217,284.00 through the issue of up to 217,284 no-par value bearer shares (Conditional Capital II).

Authorization to issue share subscription rights within the scope of the Manz Performance Share Plan 2019 as well as Conditional Capital III

At the Annual General Meeting held on July 2, 2019, a resolution was passed authorizing the Managing Board, with Supervisory Board approval, to issue a total of up to 95,000 subscription rights for subscription of a total of up to 190,000 shares in the company to executives of affiliated companies of the company, as well as Manz's own managers below the executive level and managers of affiliated companies, both domestic and foreign, below the executive level on one or more occasions through June 30, 2024. The Supervisory Board was authorized to grant one or several times a total of up to 85,000 subscription rights for the purchase of up to 170,000 shares in the company to members of the company's Managing Board until June 30, 2024.

The subscription rights shall be granted, structured and exercised in accordance with the provisions set out in the resolution of the Annual General Meeting of July 2, 2019.

Pursuant to section 3 (6) of the Articles of Incorporation, the company's capital stock has been conditionally increased by up to EUR 360,000.00 through the issue of up to 360,000 no-par value bearer shares (Conditional Capital III).

Authorization to purchase and dispose of treasury shares

The Annual General Meeting on June 30, 2020 authorized the Managing Board of the company to acquire treasury shares until June 29, 2025 in accordance with section 71 (1) No. 8 German Stock Corporation Act (AktG) up to a total of 10 % of the company's capital stock existing at the time this authorization takes effect or – if this amount is lower – at the time this authorization is exercised. The shares acquired on the basis of this authorization, together with other shares in the company, which the company has already acquired and still holds or which are attributable to the company pursuant to sections 71d and 71e German Stock Corporation Act (AktG), may at no time account for more than 10 % of the company's capital stock. The provisions in section 71 (2), sentences 2 and 3 German Stock Corporation Act (AktG) must be observed.

The acquisition may only be affected via the stock exchange or by means of a public purchase offer addressed to all shareholders and must comply with the principle of equal treatment of shareholders (section 53a German Stock Corporation Act [AktG]).

The Managing Board was authorized to sell the treasury shares acquired on the basis of the above authorization also in manners other than through the stock exchange or through an offer to other shareholders, under the condition that the sale is for cash and is at a price that is not significantly below the stock-exchange price, at the time of the sale, of company shares with the same features. This authorization to use shares is limited to shares representing a proportionate amount of the capital stock which in total may not exceed 10% of the capital stock of the company, either at the time this authorization becomes effective or – if this amount is lower – at the time this authorization is exercised. The maximum limit of 10% of the capital stock shall be reduced by the pro rata amount of the capital stock attributable to those shares which are issued or sold during the term of this authorization subject to the exclusion of subscription rights, in accordance with (or pursuant to) section 186 (3) sentence 4 German Stock Corporation Act (AktG). The maximum limit of 10% of the capital stock shall also be reduced by the pro rata amount of capital stock represented by those shares to be issued to service bonds with option or conversion rights, or option or conversion obligations, respectively, insofar as these bonds are issued during the term of this authorization to the exclusion of subscription rights in analogous application of section 186 (3) sentence 4 German Stock Corporation Act (AktG).

The Managing Board was further authorized to transfer treasury shares acquired on the basis of the above authorization to third parties insofar as this is for the purpose of acquiring companies, parts of companies or interests in companies or other assets, or to carry out business combinations.

The Managing Board and – to the extent there is an obligation with respect to members of the Managing Board – the Supervisory Board were further authorized to use the treasury shares acquired on the basis of the above authorization for the purpose of fulfilling the subscription rights that were or are issued in the framework of the Manz Performance Share Plan 2015 resolved at the Annual General Meeting of July 7, 2015, under item 6 of the agenda or in the framework of the Performance Share Plan 2019 adopted at the Annual General Meeting of July 2, 2019, under item 6 of the agenda.

The Managing Board was also authorized to use the treasury shares acquired on the basis of the above authorization for the purpose of fulfillment of the subscription and conversion rights that result from exercising option or conversion rights or fulfilling option or conversion obligations that have been granted or imposed within the framework of issuing convertible or warrant bonds, profit-sharing rights, or profit-sharing bonds (or combinations of these instruments) of the company or its subsidiaries.

The Managing Board was further authorized to transfer own shares acquired on the basis of the above authorization to employees of the company or employees or members of governing bodies of subordinate affiliates of the company within the meaning of sections 15 et seqq. AktG.

Significant company agreements that are conditional on a change of control as a result of a takeover bid

Patent and expertise license agreement with ZSW

There is a patent and know-how license agreement from the year 2017 between Manz AG and the Center for Solar Energy and Hydrogen Research Baden-Württemberg (Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg, ZSW), which is a foundation under German civil law and a research institution of the state of Baden-Württemberg, under which the ZSW grants Manz AG certain licenses to its patents and know-how with regard to CIS and/or CIGS technology for the manufacture of thin-film solar cells. The patent and know-how license agreement can be terminated by ZSW for good cause if the shareholding of a competitor of ZSW in Manz AG reaches or exceeds 30.0 % of the voting rights within the meaning of sections 33 et seq. German Securities Trading Act (WpHG).

Patent and expertise license agreement with NICE Solar Energy GmbH

Furthermore, between Manz AG and NICE Solar Energy GmbH, now in insolvency (formerly Manz CIGS Technology GmbH), a subsidiary of NICE PV Research Ltd, in which China Energy Investment Corporation Limited (formerly Shenhua Group), Shanghai Electric Group Co. Ltd. and Manz AG hold shares, a patent and know-how license agreement exists from 2017, according to which NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH) grants Manz AG certain licenses to patents and know-how regarding CIS and CIGS technology for the production of thin-film solar cells. The patent and know-how license agreement can be terminated by NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH) for cause if a third party directly or indirectly acquires at least 30.0 % of the shares in Manz AG, whereby a direct or indirect acquisition of shares by Shanghai Electric Group Co. Ltd., China Energy Investment Corporation Limited (formerly Shenhua Group) which exceeds the 30.0 % threshold, or such an acquisition by Dieter Manz, does not trigger the right of termination.

Contracts with banks for guarantee credits

The agreements between Manz AG [or its subsidiaries] and a number of domestic and foreign banks regarding the granting of guarantee credits include extraordinary termination rights for the banks in the event of a change of control at Manz AG.

Apart from the agreements mentioned above and in the section below, there are no significant company agreements that are conditional on a change of control as a result of a takeover bid.

Compensation agreements of the company entered into with members of the Managing Board or with employees in the event of a takeover bid

In the event of a change of control, the employment contract of Managing Board member Martin Drasch stipulates that the Managing Board member is entitled to terminate the employment contract with a notice period of three months to the end of a calendar month and to resign from his office as member of the Managing Board with the same deadline. These rights may be exercised only within six months after the change of control has occurred.

A change of control occurs when the company receives a notification from a party subject to a reporting obligation pursuant to section 33 (1) sentence 1 German Securities Trading Act (WpHG) that said party, including the voting rights attributable to it pursuant to section 34 German Securities Trading Act (WpHG), has reached or exceeded 25 % or a higher proportion of the voting rights in the company.

In the event of a termination of the employment contract, pursuant to the above provisions, the member of the Managing Board shall receive a severance payment. This consists of the total amount of the fixed salary owed for the remaining term of the employment relationship and the total amount of the cash bonus owed for the remaining term of the employment relationship, whereby the calculation of the amount is to be based as the EBT return on the average of the EBT return in the last financial year preceding the termination and the EBT return expected to be achieved in the current financial year according to the company's planning. The severance payment is limited to the amount corresponding to 150 % of the severance payment cap. The value of two years' annual compensation is deemed to be the severance cap. If the remaining term of the employment relationship at the time the termination takes effect is more than two years, the severance payment, insofar as it is granted for the exceeding period, shall be reduced by 75 % for the purpose of offsetting, on a lump-sum basis, the other income of the Managing Board member to be expected for the period after termination of the employment relationship. In addition, the amounts to be taken into account for the severance payment shall be discounted at a rate of 3 % p.a. to the date on which the severance payment falls due.

Apart from that, the company has no agreements with members of the Managing Board or employees that provide for compensation in the event of a takeover bid.


Displays of a
size of up to
2,940 mm by
3,370 mm
can be produced
with our euipment.

Electronics: A necessity for daily life and industry

Electronics have become a fixture of daily life. With our machines and equipment for producing electronic components, as well as performance and consumer electronics devices, we create the conditions for the continuous optimization of end products while also reducing production costs. This makes Manz a sought-after development and technology partner.

The electronics industry is a very dynamic sector. With its integrated and automated production solutions, Manz creates the conditions for rapid time-to-market while also improving the performance characteristics of end products and reducing production costs. Our customers profit from these advantages for the production of

- electronic components such as displays and touch screens, printed circuit boards and semiconductors
- consumer electronics such as smart watches, wearables, laptops, digital cameras or navigation equipment
- performance electronics e.g. inverter modules for solar power equipment, DC or frequency converters

Ever smaller, lighter – and more powerful

The main requirement for rapid digitization in many areas of our daily life is increased miniaturization, that is, ever smaller and ever more high-performance components. The mega trends of electromobility and autonomous driving, in addition to the driver assistance systems already installed in vehicles today, will cause major leaps in installed chips in the automotive industry.

Our equipment for implementing the innovative packaging method for microchips, fan-out panel level packaging, plays a major role in the realization of this trend. In addition to a significant reduction in volume, thickness, weight and manufacturing cost of the packaging while doubling the number of pins, the process also has significant positive effects on the thermal conductivity and speed of the components.

Electromobility and autonomous driving are responsible for the sudden jump from 60–100 sensors per car in the year 2016 to …

… over

200

sensors per car in the year 2021.

Our claim: Innovation and quality – from microchip to display

Report on Opportunities and Risks

Risk management and internal control system

The goal of Manz AG's risk management system is to identify possible risks early on and to initiate appropriate measures to avert any threat of damage. The risk management system records both risks and opportunities. The application of a risk management system integrated into corporate management is aimed at identifying and assessing potential risks throughout the Group in good time and countering them with appropriate measures. Risks cannot be avoided in principle within the scope of business activities, but are minimized or transferred as far as possible.

The company's risk management activities are managed centrally by the risk management officer, are regularly evaluated with regard to their effectiveness and appropriateness and they are the complete responsibility of the CFO. Responsibility for risk monitoring, on the other hand, is organized on a decentralized basis and is the responsibility of both the Division Heads and the Managing Directors of the subsidiaries, depending on the risk category and scope. Regular written and oral inquiries are used to detect potential risks in all business segments and, at the same time, they also provide the opportunity to take prompt countermeasures to prevent any negative developments. The Managing Board and the Supervisory Board are presented with an overall report at regular intervals for a comprehensive assessment of the risk situation.

Risks are analyzed and assessed on the basis of a risk management system that is essentially unchanged from the previous year, consisting of a defined group of risk owners, specified risk categories and a risk classification that reflects the risk potential and the urgency of the need for action. Particular attention is paid to risks whose probability of occurrence is high and whose potential damage in the event of occurrence is high. The identification and handling of risks is anchored in the corporate principles and defined as the task of all Manz AG employees. By involving the entire workforce, risks are identified and communicated to the respective risk manager, who must take appropriate action in line with the principles for action defined throughout the Group.

The risks are attributed to the following categories:

- Operational risks
- Strategic risks
- Market risks
- Environmental risks

In addition to this risk management system, as part of the planning process based on continuous technology and market observation, further activities are taking place both for risk identification and mitigation and for identifying opportunities.

The effectiveness and appropriateness of our risk early warning system were assessed by the auditor. He noted that the Managing Board has taken the measures required under section 91 (2) of the Stock Corporation Act (AktG), in particular with regard to the establishment of a monitoring system, in an appropriate manner, and that the monitoring system is capable of identifying developments that endanger the continued existence of the company at an early stage.

Risk management system for the financial reporting process (Section 289 [4] and Section 315 [4] German Commercial Code [HGB])

The goal of Manz AG's risk management system as it pertains to the accounting process is to identify and assess risks that might conflict with the compliance of the consolidated financial statements with the rules. Risk management encompasses the entirety of the organizational regulations and measures for detecting risks and for dealing with the risks associated with entrepreneurial activity. With regard to the accounting process, Manz has implemented the following structures and processes:

The CFO has total responsibility for the company's internal monitoring and risk management system as it pertains to the accounting process. All of the companies included in the consolidated financial statements are integrated via a defined management and reporting organizational structure. The separate financial statements of Manz AG and its subsidiaries are prepared in accordance with the corresponding national legislation and reconciled in financial statements in accordance with IFRS.

The purpose of the Group' s accounting policies and group accounting, which are regularly adapted to current external and internal developments, is to ensure uniform accounting and valuation on the basis of the regulations applicable to the parent company. Furthermore, companies in the Group are prescribed report packages that they are required to prepare. The SAP SEM-BCS tool is used for the monthly consolidation process. Automatic plausibility checks are already carried out during data collection in order to test the consistency of the data.

Consolidation measures and monitoring of adherence to chronological and process-related requirements are carried out by members of the consolidation department at Group level. Additional monitoring activities at Group level include analyzing, and if necessary, adjusting the separate financial statements submitted by the Group's subsidiaries, in accordance with the reports submitted by the auditors. Key elements of the company's strategy for monitoring risks in the accounting process also include the functional separation between entry, verification, and approval, as well as a clear allocation of responsibilities in the departments in question. The use of SAP as an IT financial system is another important means of systematically preventing errors. Furthermore, the company should use a dual control system at all process levels. If there are special issues of a technical or complex nature, the company also involves external experts. Further monitoring activities include analyzing and conducting plausibility checks on transactions as well as continuously monitoring project calculations.

The illustrated structures, processes and features of the internal control and risk management system ensure that Manz AG's financial reporting is consistent and in accordance with legal requirements, generally accepted accounting principles, international accounting standards and consolidated internal guidelines. The Managing Board considers the established systems, which are reviewed annually for their ability to optimize and develop, to be appropriate. Any potential improvements identified are implemented by the Managing Board in conjunction with Manz AG's employees.

All risks are classified according to the matrix below, which includes both the probability of occurrence, as well as possible effects are quantified.

Impact				
High damage (> 5,000 TEUR)				
Medium damage (500 TEUR to 5,000 TEUR)				
Low damage (50 TEUR to 500 TEUR)				
Probability	**Low** (0 % to 20 %)	**Medium** (20 % to 40 %)	**High** (40 % to 70 %)	**Very high** (70 % to 99 %)

Risk report

The following overview shows the assessment of risks arising in the financial year 2022 (forecast period) and could lead to deviations in the development of sales and/or earnings.

Risks		Impact	Probability of occurrence	Change to previous year
Operating risks	Project risks	medium	medium	↘
	Personnel risks	medium	low	→
	Liquidity and financing risks	high	low	→
	Currency risks	medium	high	→
	Risks from IT	medium	low	→
Strategic risks	Risks from the strategic focus on dynamic growth markets	high	medium	→
	Dependence on major customers and industries	high	medium	→
Market risks	Risks in connection with international business activities	high	medium	→
	Risks due to increasing competition	low	medium	→
	Risks arising from rapid technological change and the market launch of new products	high	low	→
Environmental risks	Risks related to pandemics	medium	low	↘
	Risks from the environment and nature	medium	low	→

Operating risks

Project risks

Project risks relate primarily to non-standardized major contracts. Here, risks from the possible failure to meet planned costs and schedule, the non-fulfillment of acceptance criteria, from order cancellations and associated non-acceptance of orders and resulting contractual risks, as well as from the possible default of individual key suppliers. By expanding the share of standardized machine components in the product portfolio, which can be modularly customized to modules or entire production equipment according to the customer's requirements, Manz AG intends to reduce the aforementioned project risks overall. In order to keep projects under control, costs, time and quality are coordinated in a gate process between business unit and operations. Design changes to non-standard machines that are necessary and unforeseeable at the beginning of an order could lead to higher costs than expected and thus erode project margins. In order to avoid additional work and associated additional costs for project completion, project and product specifications are to be already clearly and precisely defined in the contract offers through interdepartmental cooperation.

Specific project risks exist primarily with regard to a contract for the delivery of a production line for the manufacture of solar modules with the Chinese customer Chongquin Shenhua Thin Film Solar for the delivery of a CIGS production line. The major CIGS*fab* project has a total order volume of EUR 217.5 million. The installation of the equipment was interrupted at the customer's request in December 2020 and has not been resumed since then. Only minor work was carried out in the first quarter of 2021. In letters dated June 10, 2021, November 11, 2021, and February 18, 2022, Manz terminated the contract for the supply of the equipment and simultaneously asserted claims of approximately EUR 64 million. These claims relate to outstanding payments under the contract (EUR 43 million, contractual payments at FAT and 12 months after FAT) and additional expenses of EUR 21 million. The customer has objected to these claims and refuses payment or asserts claims on his part. Manz has reduced the total receivable to approximately EUR 30 million in a draft settlement agreement dated February 25, 2022. As of December 31, 2021, contract assets from the agreement amounting to EUR 23.2 million (previous year: EUR 21.5 million) are recognized in Manz AG's consolidated financial statements. Due to the still open agreement with the customer there is considerable uncertainty with regard to the claims asserted. Based on the contractual agreements, legal assessments, and the current status of discussions with the customer, Manz AG continues to assume the recoverability of these contractual assets.

Personnel risks

For the corporate success of a high-tech equipment manufacturer, qualified and motivated managers and employees are of decisive importance. The departure of executives or key employees could have a negative impact on the company's business performance, thereby affecting its net assets, financial position and operational results. At the same time, there is also a risk that the company will not be able to hire a sufficient number of new, suitable executives or additional employees. Manz creates a positive working environment with measures such as various working time models or employee financial participation in the company's success, and is thus able to retain employees and know-how in the company over the long term. As a listed company, Manz AG is more in the focus of potential employees than non-listed companies. This allows Manz AG to better present its offerings to employees, such as flat hierarchies, exciting activities, flexible working hours, and well-equipped workplaces. However, it also brings extra attention in economically challenging times, which can temporarily make it harder to recruit. Another positive aspect of stock market listing is the ability to bind employees more closely to the company through the issue of shares and a corresponding profit share.

Liquidity and financing risks

At present, parent company Manz AG, is financing itself via bank balances and a small cash credit line. The subsidiaries in Slovakia, Hungary, Italy, China and Taiwan are financed primarily through current overdrafts and, to a lesser extent, long-term loans. As of December 31, 2021, the Manz Group had cash and cash equivalents of EUR 36.1 million (previous year: EUR 69.7 million), as well as unused cash and guarantee credit lines of EUR 17.8 million (previous year: EUR 16.9 million). In general, in order to reduce liquidity and financing risks, the companies of the Manz Group are encouraged – where possible – to process orders "cash positive". Here, the deposits should exceed the payouts over the entire term of the respective project. As usual in project-based business, a delay on incoming orders or payments has significant effects on liquidity or the relevant company and possibly also on the Group.

In general, there is also a risk in the context of funded development projects that the funding agency may demand repayment due to non-achievement of the agreed project objectives, which may have a negative impact on liquidity.

In addition, funding commitments may be conditional on the existence of other funding beyond the project's own share of costs. This means that funding originally promised may not be forthcoming if the financing of the company's own share is not secured. Manz AG assumes that both the financing of its own share and the achievement of the funded project goals are secured.

In order to promptly identify risks from delayed incoming payments, the Manz Group works with a rolling liquidity forecast that is updated bi-weekly. Based on current corporate planning and an order backlog of EUR 229.1 million as of the reporting date December 31, 2021 (previous year: EUR 202.3 million), which will lead to future cash inflows, the Managing Board assumes that Manz AG will be able to meet its future payment obligations.

Currency risks

Manz AG's currency risks arise from operating activities. In financial year 2021, these mainly related to transactions of the Asian companies from the sale of machinery. The transaction-related exchange rate risk resulting from the appreciation or depreciation of the U.S. dollar against the New Taiwan dollar, the euro against the New Taiwan dollar, and the euro against the Chinese renminbi, hedging is generally implemented – where necessary and possible – by forward exchange transactions. Furthermore, economic currency risk is generally also reduced by distributing the production locations over several countries (natural hedging).

Information technology risks

A large part of the processes and communication in the Manz Group is IT-supported. Therefore, the security of corporate data and the avoidance of interruptions to IT-supported business processes have high priority. To this end, IT systems are protected against possible cyber attacks by unauthorized third parties or by malware, and alternative solutions are developed in the event of stability problems.

Strategic risks

Risks from the strategic focus on dynamic growth markets

As a high-tech equipment manufacturer, Manz AG focuses on rapidly growing future markets with short product life cycles. With its production solutions, Manz contributes to the development of numerous technologies. For instance, components for smartphones and tablet computers, batteries for electrical vehicles, consumer electronics and stationary energy storage systems as well as solar modules are produced on Manz machines. This market positioning in highly competitive and innovation-driven markets entails the risk of a competitive disadvantage due to insufficient flexibility of structures, insufficient know-how or too slow a pace of development. In order to avoid this, the respective segments therefore always endeavor to recognize customer requirements and future technological trends in the industries at an early stage. Based on this knowledge, the company derives innovations with unique selling points in order to stay one step ahead of the competitors. The innovation approaches are presented and discussed by the business units in a group-wide strategy meeting every six months and their implementation is approved after a detailed, positive review.

Dependence on major customers and industries

The development of production equipment for industrial companies entails the risk of a concentration in the order volume on individual projects, sectors and customers. For example, Manz AG generated around 34 % of its revenues with three customers in the 2021 financial year. If the loss of a major client cannot be compensated for, negative effects on the Manz Group's results are to be expected. For this reason, Manz pursues the goal of achieving a balanced order structure within its three strategic segments. In this regard, modularly combinable machines and machine components, as well as "small lines" and major projects (> EUR 10 million order volume) should be balanced. The risk of a decline in major customers is to be reduced in principle by broadening the customer base and diversifying project volumes and the business model. In addition, Manz accepts third-party business in the Contract Manufacturing segment, in order to achieve balanced capacity utilization despite the cyclical development of the strategic business segments.

Market risks

Risks in connection with international business activities

Negative macroeconomic and financial developments in the international sales markets may have negative effects on business development. As a result, refinancing for Manz as a listed company via the capital market could become significantly more difficult. With potential clients of Manz AG in general, there is a risk that the necessary capital for investments in new equipment may not be available based on the markets, some of which are still young. As a result, Manz constantly monitors and analyzes the market and the competition in order to recognize such developments at an early stage and to counteract them.

The flexibility of the entire corporate organization, the expansion of the product portfolio, the customer base and global sales capacities, and the focus on growth markets of the three core regions of Asia, Europe and the United States make it possible to react quickly to negative changes in individual markets. Increasing internationalization may also result in risks on the purchasing market side, for instance shortfalls due to trade wars, such as the one between China and the USA, as well as due to the current situation with the war in Ukraine. On the supplier side, Manz AG also strives to avoid becoming dependent on individual suppliers or procurement markets through flexibility, such as avoiding single-source suppliers.

Risks due to increasing competition

Existing and potential competitors, in particular Asian manufacturers, could attempt to gain market share in Manz AG's target industries – primarily through an aggressive pricing policy, an imbalance caused by local tax and subsidy policies of states and governments, or import restrictions to support national companies. A further risk is that there are too many new competitors, resulting in an oversupply on the market and, as a consequence, consolidation among companies. This could have a direct impact on the development of the company's market share and thus on Manz AG's sales, revenues and earnings. In order to counteract these risks effectively, the "Market Intelligence" division constantly conducts market and competitive surveys, which are discussed in detail in international sales meetings on a regular basis and serve as a basis for possible countermeasures. Furthermore, the CRM system (Customer Relationship Management System) provides leading indicators for assessing future market development. A detailed analysis of lost projects promptly provides clarity about the competitive situation. The process of "product invention, development and market launch" also aims to provide strategic innovations for the company's competitive edge in growth markets and to further strengthen Manz AG's positioning as a high-tech engineering company. With its local facilities in Taiwan and China, the associated production costs that are standard for the local area, and direct customer contacts, Manz counteracts any churn to domestic competitors. Strategic alliances, for example, in the Energy Storage segment with the Chinese company Shenzhen Yinghe Technology Co. Ltd., also aim to focus on streamlining the individual service portfolio, thereby reducing the cost base and increasing the company's competitiveness.

Risks from rapid technological change and from launching new products

Research and development as well as an innovative product portfolio are of crucial importance for the company to maintain its technological positioning in the market. The industries for which Manz AG develops and manufactures its machines and equipment are characterized by rapid technological change. Substitutive or disruptive technologies may occupy substantial parts of an existing market. As a result, Manz AG's competitors may be able to react faster or better to changes in customer requirements by developing corresponding technologies or software, thus gaining a competitive advantage over Manz AG. In these cases, the demand for the products of Manz AG could be significantly impaired. Furthermore, the Manz Group could develop machines and equipment for which there is little or no demand on the market. There is also a risk that the completion of new products currently under development may prove to be more complex than expected in the future. Problems with, e.g., technical feasibility, quality assurance, failure to meet deadlines, increased costs, etc., could at worst lead to the loss of customers in conjunction with financial losses. Manz AG endeavors to maintain close contact with its clients and thus to recognize new trends at an early stage. Furthermore, in the Business Development segment, we are also working on new application possibilities for the technologies developed by Manz. The proximity to the customer further enhances Manz AG through the constant expansion of the associated service business, in particular with after-sales service. On the basis of the risk analysis, Manz also aims to ensure that projects and products are realized in accordance with the contract. Manz AG also counters the fundamental risk associated with the development and introduction of new products for individual customers by expanding its product portfolio to include machine components that can be customized on a modular basis to form assemblies or complete production machines.

Environmental risks

Risks related to pandemics

As an internationally active high-tech engineering company, Manz AG has production facilities in Germany, China, Taiwan, Slovakia, Hungary, and Italy, as well as additional service subsidiaries in the USA and India. Activities in regions with less developed healthcare systems could have a negative impact on the company's business in the region in the event of pandemics and the resulting production stops, thus impacting the company's net assets, financial position and results of operations. In this context, pandemics could continue to have a negative impact on the execution of our customer projects in Asia, in particular.

Risk from the environment and nature

Natural disasters – such as earthquakes and floods or other events like fires – can lead to production stoppages, which could have a negative impact on the company's business development and thus impair its net assets, financial position and results of operations. In addition, there are risks of environmental pollution for which Manz AG could be held liable.

Opportunities report

Industry focus with competitive and customer-oriented, innovative technology portfolio

In recent years, the company has laid the foundations for its current growth potential by consistently focusing its technology and product portfolio on the needs and challenges of the automotive industry & electromobility, battery production, electronics, energy and medical technology. With the new brand claim "engineering tomorrow's production" to sharpen its positioning and the realignment of the Group's organization that took place on January 01, 2022, Manz aims to make even better use of the opportunities offered by these dynamic growth markets. In the course thereof, the Group's organizational structure was optimized, the business areas reorganized and the reporting segments adjusted accordingly.

With this realignment, a clear assignment of responsibilities, a significant reduction in interfaces, and a strengthening of both the Group functions and the respective locations, Manz AG will be able to respond more quickly and agilely to its customers' requirements and scale its business activities.

Sustainable competitiveness and profitability through profitable growth

Manz AG's diversified business model forms the basis for the sustained stability and long-term growth we are striving for. With the goal of significantly expanding its customer base and thus further stabilizing its business model, Manz AG is steadily expanding the share of modular machines in its product portfolio, in addition to customized solutions. These modular machines should be intelligently linked to complete, individual system solutions based on a modular system. This step should significantly reduce development risks, effort and duration and thus significantly shortens the amortization of development efforts. At the same time, this should create synergy effects for Manz AG which support the productivity of the entire Group.

In addition, Manz AG is driving forward the development of highly efficient machines and processes for the fully automated production of next-generation lithium-ion batteries with the "Lithium Battery Factory of the Future" project. Thanks to its proven project and development expertise, Manz can thus significantly improve the performance and cost efficiency of production and significantly reduce the time-to-market for customers. This Manz AG project is supported by the German Federal Ministry for Economic Affairs and Energy (BMWi) and the Baden-Württemberg State Ministry of Economics as part of the Important Projects of Common European Interest ("IPCEI") to promote research and innovation in the battery value chain. In addition, Manz Italy Srl also received a funding commitment from the Italian Ministry for Economic Development. As one of the few European engineering companies that already has extensive experience in the entire value chain of lithium-ion battery production, the IPCEI funding will enable Manz to further intensify its development activities and thus continuously expand its own competitiveness.

In addition, cost-conscious management is of central importance for the profitable development of a company. The diversified business model and ongoing measures to optimize costs are aimed at maintaining long-term competitiveness and profitability.

Cross-segment technology deployment offers possibilities for synergy effects and flexibility

In developing its production equipment, Manz AG carries out an active technology transfer between the relevant target industries. By applying its comprehensive technological know-how across all industries, the company creates synergies and thus strives to help minimize manufacturing costs for its customers and contribute to their economical production. At the same time, the synergy effects achieved between the segments should increase the Manz Group's productivity and profitability. By leveraging the synergy effects between the segments, Manz AG's business model is also flexibly positioned for new growth trends and sales markets with additional revenue and earnings potential.

Cooperation with strategic partners opens up growth potential

As early as 2020, Manz AG entered into a strategic cooperation with its Chinese partner Shenzhen Yinghe Technology Co. Ltd. The cooperation provides for Manz and Yinghe to jointly offer their customers the best equipment technology from their respective product portfolios as part of a licensing model in the future, in order to be able to better utilize market potential in this way.

Manz AG further developed this successful approach in 2021 and entered into another strategic cooperation in the field of lithium-ion battery systems with GROB-WERKE GmbH & Co. KG. GROB has been a pace-setting pioneer in the construction of production and automation systems for more than 90 years and score top marks with its implementation strength in the conception, planning and commissioning of highly complex and customer-specific plants for mass production, especially for the automotive industry, in the last five years with a strong focus on e-mobility. As part of the partnership, the companies will implement innovative machine standards "made in Europe," combine market and customer access for this purpose, and pool their technological expertise. Together with GROB, Manz is thus able to offer the complete production process for manufacturing lithium-ion battery cells and modules, from coating the electrode material to pack assembly, from a single source and fully integrated. This can offer customers significant competitive advantages in terms of the efficiency, performance and safety of their battery cells and modules.

Assessment and Summary of the Risk and Opportunity Situation

Manz AG's risk portfolio consists of both risks that can be influenced by the Group and risks that cannot be influenced, such as economic and industry developments. The company regularly monitors and analyses the situation in these areas. Risks that can be influenced are identified at an early stage by appropriate monitoring and control systems and should therefore be avoided. Significant risks, which are likely to have serious negative effects on the ecological or social aspects, cannot be deduced from the business model of Manz AG.

The identification of risks and opportunities has not given rise to any risks that could jeopardize the continued existence of the entire Group or its Group companies for the financial year 2021 or for the forecast period 2022. A going concern risk is derived from the risk-bearing capacity indicator, which takes into account the cumulative expected value of all risks with a probability of occurrence of more than 40 %. If this key figure exceeds half of the previous year's consolidated or individual financial statement equity, this is defined as a going concern risk.

In fiscal year 2021, the risk and opportunity situation regarding the impact of the COVID-19 pandemic improved further. The fact that the Solar business area did not conclude the CIGS*fab* project during the financial year 2021, contrary to expectations, had a negative impact. For the other risks, the situation has not changed materially compared to the previous year. However, the extent to which the war in Ukraine will affect the overall economic and sector-specific conditions in 2022 cannot be reliably estimated at present due to considerable uncertainties and the highly dynamic nature of the situation. It is true that Manz does not maintain any direct business relationships with partners in Russia or in Ukraine; however, the consequences of this war can indirectly impact Manz AG in a negative way, for instance through rising energy costs. Risks which do not have any or little relevance according to the risk management system in comparison with the preceding year have not been shown in the current risk report. The risks and their possible effects are known, as are the measures to be introduced. The resulting opportunities are analyzed and, if necessary, implementation is initiated.

Opportunities	Impact	Probability of occurrence
Industry focus with competitive and customer-oriented, innovative technology portfolio	high	high
Sustainable competitiveness and profitability through profitable growth	high	medium
Cross-segmental use of technology offers synergy effects and flexibility	high	high
Strategic cooperations open up growth potential	medium	high

The Managing Board of Manz AG thus fulfills its obligation to inform the Supervisory Board and shareholders about the opportunities and risks of the company. It regards this reporting as an important element of corporate governance in practice.

From today's perspective, there are no existential risks to the future development of Manz AG that could have a material adverse effect on the Group's assets, financial and earnings situation.

Our reliable equipment guarantees compliance with the

strictest quality requirements

across all production steps.

From fitness tracker to insulin pump

Self-monitoring as well as the remote monitoring and control of vital functions are important growth drivers in the medical industry. Our extensive experience in the production of electronic products makes us an ideal partner in the Digital Health segment.

When wearables monitor blood pressure and heart rate.

So-called "smart medical devices" provide the technical technology sector with new opportunities for improving medical care and the quality of life. Maximum process accuracy and a high degree of production automation are required to take advantage of these opportunities.That is exactly what Manz stands for.

Our mission: To improve health and quality of life

... with unique identification of implants using fully automated laser engraving.

We bundle decades of experience and our extensive process know-how from the production of electronic components. The result: modular and scalable production systems that guarantee tremendous cost efficiency and excellent product quality.

- **Smart Medical Devices** to monitor health data or for dosing medication, e.g. fitness trackers, digital injection and inhalation systems, sensor-based glucose measurements or patch-based infusion systems.
- **Cardiac rhythm management systems** such as pace makers and defibrillators, as well as systems for at-home health monitoring (e.g. heart monitoring).
- **Orthopedics,** including implants for knee, shoulder, elbow and hips, dental and surgical screws, bone saws or surgical instruments.

Maximum product and patient safety

Our equipment guarantees compliance with the strictest quality requirements across all production steps. It also ensures the seamless tracking of components and process parameters. And it does so with a high degree of efficiency and reliability using integrated testing systems. In this way, it is also possible to test products such as cardiac rhythm systems in-line during the manufacturing process, and to document all process steps and process results thanks to automated testing methods.

Forecast Report

Adjustment of reporting segments

In recent years, the Company has laid the foundations for its current growth potential by consistently focusing its technology and product portfolio on the needs and challenges of the automotive industry & electromobility, battery production, electronics, energy and medical technology. With the new brand claim “engineering tomorrow’s production” to sharpen its positioning and the realignment of the Group’s organization that has now taken place, Manz is aiming to make even better use of the opportunities offered by these dynamic growth markets. As part of this, the Group’s organizational structure was optimized effective January 1, 2022, the business units were reorganized and the reporting segments were adjusted accordingly. The company will be reporting in the future in the two reporting segments of “Mobility & Battery Solutions” and “Industry Solutions.” Mobility & Battery Solutions will primarily include the business activities of the former Energy Storage segment, with a clear focus on the growth market of e-mobility. In the Industry Solutions reporting segment, Manz AG combines the activities of the two business areas Electronics (semiconductor back end production, fan-out panel level packaging and display technologies) and Industrial Automation (industrial assembly solutions for manufacturing consumer electronics, power electronics and other electric drive train components).

With the realignment that has now been implemented, a clear assignment of responsibilities, a significant reduction in interfaces, and a strengthening of the Group functions and the respective locations, Manz AG will be able to make much better use of the opportunities offered by the growth markets, scale its business activities, and thus achieve the goals it has set itself.

The following forecasts and statements about Manz AG’s anticipated performance are made within the framework of these adjusted reporting structures.

Economic and sectoral outlook

The Kiel Institute for the World Economy (IfW) sees great uncertainty in the impact of the new omicron variant of the coronavirus on the economy. In December 2021, the IfW experts expected economic activity to be noticeably subdued in the coming months, but the global economic recovery to reassert itself in the further course of 2022. Overall, global economic growth of 4.5 % is expected for the current year 2022 (previous year: 5.7 %). The IfW’s economic researchers expect the US economy to grow by 4.4 % in 2022 (previous year: 5.6 %). Due to the real estate crisis, as well as measures to contain local Covid-19 outbreaks, the economy in China is expected to grow by 4.1 % in 2022 (previous year: 7.8 %). Growth of 3.5 % is expected for the European Union in 2022 (previous year: 5.0 %). In Germany, growth is expected to be slightly higher at 4.0 %, although at 2.6 % the increase here in 2021 was lower than the European average.

In its March 2022 forecast, the VDMA expects real growth of 4.0 % in machinery production in 2022 (previous year: 7.0 %). This would take the production value in the mechanical engineering sector to EUR 241 billion in 2022, exceeding the pre-Corona level (2019: EUR 226 billion). The actual development will largely depend on the further course of the material bottlenecks and the Corona pandemic, which are also among the major challenges facing the industry in 2022.

The following developments are expected in the markets addressed by the Mobility & Battery Solutions segment:

According to experts, the semiconductor shortage will continue to affect the global automotive industry in the current year and beyond. According to the consultancy Roland Berger, the main causes are a structural imbalance between supply and demand and fundamental problems in supply chains triggered and exacerbated by the Covid-19 pandemic and other external factors.

IHS Markit forecasts global production of around 6.4 million pure electric vehicles in 2022, a 39 % increase compared to 2021. Accordingly, the share of purely electric vehicles will increase to just under eight percent (previous year: around 6 %). In the following years, the share will continue to rise steadily. Based on data from IHS Markit, the share for 2027 is 25 %.

The battery is one of the central components of electric vehicles. In order to meet the growing demand for batteries in the coming years, production capacities are being significantly developed and expanded. For the current year, IHS Markit puts the battery capacity needed to produce the aforementioned 6.4 million electric vehicles at around 380 gigawatt hours, an increase of around 56 % compared to 2021.

In the Industry Solutions segment, Manz addresses various markets with its machines. These include systems equipment for the electronics and display industries, as well as assembly lines for other industries, including the manufacture of cell contacting systems (CCS) for electric vehicles.

For the global display market in 2022, DSCC expects capacity to grow by 7 % year-on-year (previous year: 11 %). DSCC sees capacity expansion by LCD manufacturers and OLED manufacturers, which are aligning themselves more closely with the IT market, as key growth drivers. While LCD TVs will continue to dominate the market in the coming years with a market share of over 70 %, DSCC expects OLED TVs to experience the highest growth rates, averaging 18 % between 2020 and 2026.

In the area of printed circuit board production, Prismark expects the highest growth rates of all segments for packaged substrates in 2022 as well. The market is projected to grow by the end of 2022 to USD 15.6 billion. Previous year: around USD 14 billion).

For the chip packaging process fan-out panel level packaging (FOPLP), Yole Développement forecasts the total market to grow to USD 88 million (previous year: USD 73 million). Among the key growth drivers on the application side, Yole counts the increasing demand for high-performance computing (HPC) and high-end smartphones or smartwatches.

Due to the strong growth in the electric vehicle sector, the market for cell contacting systems, which are an essential component for the integration and interconnection of battery cells or modules, will also continue to grow. For 2022, Manz forecasts a total of around 140 million cell contacting systems produced based on figures from IHS Markit (previous year: 106 million).

Expected development of the group and segments

Revenue forecast

	2020 actual	2021 forecast	2021 actual	2022 forecast
	Revenue in EUR million	**Revenue trend**	**Revenue in EUR million**	**Revenue trend**
Group	236.8	Low to moderate increase over previous year	227.1	Significant increase in revenues in the mid double-digit percentage range
Mobility & Battery Solutions			82.0	Doubling of revenues compared to the previous year
Industry Solutions			145.1	Increase of revenues in the lower double-digit percentage range

Earnings forecast

	2020 actual	2021 forecast	2021 actual	2022 forecast
	EBIT in EUR million	**Earnings development**	**EBIT in EUR million**	**Earnings development**
Group	7.2	EBIT margin in the low to mid positive single-digit percentage range	–16.1	EBIT margin in the low to mid positive single-digit percentage range
Mobility & Battery Solutions			2.2	EBIT margin in the low to mid positive single-digit percentage range
Industry Solutions			–18.3	EBIT margin in the low to mid positive single-digit percentage range

Given the overall positive outlook for the industry in the countries and markets relevant to Manz AG, the Managing Board is confident that Manz AG will again grow profitably in 2022. The extent to which the war in Ukraine and sanctions in Russia will affect the overall economic and industry-specific conditions in 2022 cannot be reliably estimated at present, due to considerable uncertainties and the highly dynamic nature of the situation. The Managing Board expects a significant increase in revenue in the mid double-digit percentage range compared to 2021, an EBITDA margin in the mid to upper positive single-digit percentage range and an EBIT margin in the low to mid positive single-digit percentage range. A value of around 40 % is expected for the equity ratio; with regard to Gearing, the Managing Board is anticipating a value in the lower single-digit percentage range.

At segment level, the Managing Board expects revenue for Mobility & Battery Solutions to almost double compared with the previous year and an EBIT margin in the low to mid positive single-digit percentage range. For Industry Solutions, the Managing Board forecasts an increase in revenue in the lower double-digit percentage range with an EBIT margin in the low to mid positive single-digit percentage range.

The Managing Board’s goal is to further develop the comprehensive technology portfolio, on the one hand, and to strengthen and expand Manz AG’s solid market position in both segments on the other. With its technologies, Manz AG will continue to focus, in particular, on the automotive and e-mobility, battery manufacturing, electronics, energy, and medical technology industries.

Forward-looking statements

This report contains forward-looking statements, which are based on the current assumptions and forecasts of Manz AG’s Managing Board. Such statements are subject to both risks and uncertainties. These and other factors could cause the actual results, financial position, developments or performance of the Company to differ materially from the estimates given here. Our Company assumes no obligation to update these forward-looking statements or adapt them to future events or developments.

Reutlingen, March 30, 2022

The Managing Board

Jürgen Knie | Martin Drasch | Manfred Hochleitner

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Consolidated Income Statement

(in TEUR)

	Notes	2021	2020
Revenues	1	227,060	236,768
Inventory changes, finished and unfinished goods		110	–908
Work performed by the entity and capitalized	2	10,643	5,790
Total operating performance		**237,812**	**241,650**
Other operating income	3	21,403	7,181
Material expenses	4	–131,821	–130,338
Personnel expenses	5	–75,481	–71,916
Other operating expenses	6	–33,378	–36,600
Result from investments using the equity method	16	–245	9,381
EBITDA		**18,290**	**19,358**
Amortization/depreciation and impairment	7	–34,354	–12,132
EBIT		**–16,064**	**7,225**
Finance income	8	527	91
Finance costs	9	–2,042	–2,345
Earnings before taxes (EBT)		**–17,579**	**4,971**
Income taxes	11	–4,848	–1,547
Consolidated net profit		**–22,427**	**3,425**
thereof attributable to non-controlling interests	12	–19	–10
thereof attributable to shareholders of Manz AG		–22,408	3,434
Weighted average number of shares (undiluted)		7,750,144	7,744,088
Earnings per share			
undiluted in EUR per share	13	–2.89	0.44
diluted in EUR per share	13	–2.89	0.42

Consolidated Statement of Comprehensive Income

(in TEUR)

	2021	2020
Consolidated profit or loss	**–22,427**	**3,425**
Difference resulting from currency translation	6,372	–750
Cash flow hedges	–15	15
Tax effect resulting from components not recognized in profit/loss	4	–4
Total of expenditures and income recorded directly in equity capital with future reclassification with tax effect	**6,361**	**–739**
Financial assets measured at fair value through other comprehensive income (FVOCI)	–7,260	–4,440
Tax effect resulting from financial assets measured at fair value through other comprehensive income (FVOCI)	0	0
Revaluation of defined benefit pension plans	–133	76
Tax effect resulting from revaluation of defined benefit pension plans	17	–15
Share of other comprehensive income from investments using the equity method	129	4
Total of expenditures and income recorded directly in equity without future reclassification with tax effect	**–7,247**	**–4,375**
Group comprehensive income	**–23,314**	**–1,690**
thereof non-controlling interests	6	–20
thereof shareholders Manz AG	–23,320	–1,670

Consolidated Balance Sheet

Assets (in TEUR)

	Notes	Dec. 31, 2021	Dec. 31, 2020
Non-current assets			
Intangible assets	14	44,118	59,119
Property, plant and equipment	15	45,911	45,426
Investments accounted for using the equity method	16	3,206	0
Financial assets	17	1,798	7,260
Other non-current assets	18	2,161	1,770
Deferred tax assets	11	4,301	6,835
		101,495	**120,411**
Current assets			
Inventories	19	32,087	29,913
Trade receivables	20	33,691	27,204
Contract assets	21	86,092	68,907
Current income tax receivables		1,107	347
Derivative financial instruments	22	0	15
Other current assets	23	17,791	11,375
Assets held for sale	24	0	30,039
Cash and cash equivalents	25	36,086	69,736
		206,855	**237,535**
Total assets		**308,350**	**357,946**

Shareholders' Equity and Liabilities (in TEUR)

	Notes	Dec. 31, 2021	Dec. 31, 2020
Equity			
Issued capital	26	7,757	7,744
Capital reserves		19,297	33,234
Retained earnings		76,416	83,824
Accumulated other comprehensive income		5,441	6,352
Shareholders of Manz AG		**108,910**	**131,154**
Non-controlling interests		262	255
		109,171	**131,410**
Non-current liabilities			
Non-current financial liabilities	27	8,337	5,677
Non-current financial liabilities from leases	28	10,703	12,609
Pension provisions	29	6,140	6,708
Other non-current provisions	30	2,777	3,719
Other non-current liabilities		75	11
Deferred tax liabilities	11	6,312	6,831
		34,345	**35,555**
Current liabilities			
Current financial liabilities	31	40,959	71,298
Current financial liabilities from leases	31	3,260	3,446
Trade payables	32	66,373	47,000
Contract liabilities	33	30,923	43,865
Current income tax liabilities		1,426	1,084
Other current provisions	34	6,514	7,575
Derivative financial instruments	22	225	0
Other current liabilities	35	15,155	16,713
		164,834	**190,980**
Total liabilities		**308,350**	**357,946**

Consolidated Cash Flow Statement

(in TEUR)

	Dec. 31, 2021	Dec. 31, 2020
Net profit/loss after taxes	–22,427	3,425
Amortization/depreciation and impairment	34,354	12,132
Increase (+) / decrease (–) of pension provisions and other non-current provisions	–1,511	567
Interest income (–) and expenses (+)	1,515	2,254
Taxes on income and earnings	4,848	1,547
Other non-cash income (–) and expenses (+)[1]	1,063	689
Gains (–) / losses (+) from disposal of assets	–14,644	11
Result from investments using the equity method	245	–9,381
Increase (–) / decrease (+) in inventories, trade receivables, contract assets and other assets	–34,648	12,013
Increase (+) / decrease (–) in trade payables, contract liabilities and other liabilities[1]	12,191	744
Received (+) / Paid income taxes (–)	–5,267	–1,123
Interest paid	–2,042	–2,345
Interest received	527	91
Cash flow from operating activities	**–25,795**	**20,623**
Cash receipts from the sale of fixed assets	442	569
Cash payments for the investments in intangible assets and property, plant and equipment	–14,856	–9,660
Cash receipts for the sale of investments using the equity method less liquid funds withdraw	28,013	0
Cash payments for investments using the equity method less liquid funds received	–2,251	0
Changes in investments on financial assets	–1,627	–271
Cash flow from investing activities	**9,721**	**–9,361**
Cash receipts from the assumption of non-current financial liabilities	4,849	4,949
Cash payments for the repayment of non-current financial liabilities	0	–7
Cash receipts from the assumption of current financial liabilities	40,971	71,298
Cash payments for the repayment of current financial liabilities	–60,990	–57,185
Purchase of treasury shares	0	0
Cash payment of lease liabilities	–3,723	–4,400
Cash flow from financing activities	**–18,893**	**14,655**
Cash and cash equivalents at the end of the period		
Net change in cash funds (subtotal 1-3)	–34,967	25,916
Effect of exchange rate movements on cash and cash equivalents	1,311	–234
Credit risk allowance on bank deposit	6	48
Cash and cash equivalents on January 1, 2021	69,736	44,005
Cash and cash equivalents on December 31, 2021	**36,086**	**69,736**

1 Adjustment of previous-year figures

The cash flow statement is discussed in the notes

Consolidated Statement of Changes to Equity 2020

(in TEUR)

					Other comprehensive income								
					Components which are not transferred to profit or loss			Components which may be transferred to profit or loss					
	Issued capital	**Capital reserves**	**Treasury Shares**	**Revenue reserves**	Remeasurement of pensions	Financial assets measured at fair value through other comprehensive income (FVOCI)	Investment accounted for using the equity method	Cashflow hedges	Currency translation	**Other comprehensive income**	**Equity to shareholders of Manz AG**	**Non-controlling interest**	**Total equity**
As of Jan. 1, 2020	**7,744**	**42,545**	**0**	**70,390**	**–1,864**	**–12,545**	**–133**	**0**	**25,999**	**11,457**	**132,136**	**275**	**132,411**
Consolidated net profit	0	0	0	3,434	0	0	0	0	0	0	3,434	–10	3,425
Other comprehensive income	0	0	0	0	61	–4,440	4	11	–740	–5,105	–5,105	–10	–5,115
Consolidated income statement	0	0	0	3,434	61	–4,440	4	11	–740	–5,105	–1,670	–20	–1,690
Withdrawal from Capital reserves	0	–10,000	0	10,000	0	0	0	0	0	0	0	0	0
Purchase of treasury shares	0	0	–1	0	0	0	0	0	0	0	–1	0	–1
Use of treasury shares	0	0	1	0	0	0	0	0	0	0	1	0	1
Share-based payment	0	689	0	0	0	0	0	0	0	0	689	0	689
As of Dec. 31, 2020	**7,744**	**33,234**	**0**	**83,824**	**–1,804**	**–16,985**	**–129**	**11**	**25,259**	**6,352**	**131,154**	**255**	**131,410**

Consolidated Statement of Changes to Equity 2021

(in TEUR)

	Issued capital	Capital reserves	Treasury Shares	Revenue reserves	Other comprehensive income: Components which are not transferred to profit or loss: Remeasurement of pensions	Financial assets measured at fair value through other comprehensive income (FVOCI)	Investment accounted for using the equity method	Components which may be transferred to profit or loss: Cashflow hedges	Currency translation	Other comprehensive income	Equity to shareholders of Manz AG	Non-controlling interest	Total equity
As of Jan. 1, 2021	**7,744**	**33,234**	**0**	**83,824**	**–1,804**	**–16,985**	**–129**	**11**	**25,259**	**6,352**	**131,154**	**255**	**131,410**
Consolidated net profit	0	0	0	–22,408	0	0	0	0	0	0	–22,408	–19	–22,427
Other comprehensive income	0	0	0	0	–116	–7,260	129	–11	6,346	–912	–912	25	–886
Consolidated income statement	0	0	0	–22,408	–116	–7,260	129	–11	6,346	–912	–23,320	6	–23,314
Issue of shares	13	0	0	0	0	0	0	0	0	0	13	0	13
Withdrawal from Capital reserves	0	–15,000	0	15,000	0	0	0	0	0	0	0	0	0
Purchase of treasury shares	0	0	0	0	0	0	0	0	0	0	0	0	0
Use of treasury shares	0	0	0	0	0	0	0	0	0	0	0	0	0
Share-based payment	0	1,063	0	0	0	0	0	0	0	0	1,063	0	1,063
As of Dec. 31, 2021	**7,757**	**19,297**	**0**	**76,416**	**–1,919**	**–24,245**	**0**	**0**	**31,605**	**5,441**	**108,910**	**262**	**109,171**

Consolidated Notes for Financial Year 2021

General disclosures

Manz AG ("Manz AG" or "Group") is a stock corporation (Commercial Registration Stuttgart, Registration number 353 989) incorporated in Germany with its registered office at Steigaeckerstrasse 5 in 72768 Reutlingen, Germany. Manz AG and its subsidiaries ("Manz Group" or "Manz") have many years of expertise in automation, laser processing, image processing and metrology as well as in wet chemistry and roll-to-roll processes. Manz AG's shares are traded on the regulated market (Prime Standard) of the Frankfurt Stock Exchange.

Manz AG's consolidated financial statements as of December 31, 2021 were prepared in accordance with International Financial Reporting Standards (IFRS), as applicable in the EU, and the supplementary provisions of German commercial and corporate law applicable in accordance with Section 315e(1) of the German Commercial Code (HGB). All mandatory standards and interpretations were taken into account. IFRS standards that have not yet become mandatory are not applied.

To better clarity, individual items have been summarized in the balance sheet and the income statement and disclosed separately in the notes. The Manz Group's financial year covers the period from January 1 to December 31 of one year. The consolidated financial statements are prepared in EUR. Unless stated otherwise, the disclosures in the notes are made in thousands of Euro (TEUR). The income statement is prepared in accordance with the total cost method. The consolidated financial statements for 2021 were released for submission to the Supervisory Board by resolution of the Managing Board on March 30, 2022.

Bases of Accounting

Consolidated group

The consolidated financial statements of Manz AG include all domestic and foreign companies which Manz AG can exercise direct or indirect control. Controll influence exists when Manz AG is exposed to, or has rights to, fluctuating returns on its investment and has the ability to influence these returns through its power over the company.

In addition to Manz AG, the group of consolidated companies includes the following domestic and foreign subsidiaries as of December 31, 2021:

		Shares in %
Manz Batterytech Tübingen GmbH	Tübingen/Germany	**100.0 %**
Manz USA Inc.	North Kingstown/USA	**100.0 %**
Manz Hungary Kft.	Debrecen/Hungary	**100.0 %**
Manz Slovakia s.r.o.	Nove Mesto nad Vahom/Slovakia	**100.0 %**
Manz Italy Srl	Sasso Marconi/Italy	**100.0 %**
Suzhou Manz New Energy Equipment Co., Ltd.	Suzhou/P.R. China	**56.0 %**
Manz Asia Ltd.	Hong-Kong/P.R. China	**100.0 %**
Manz China Suzhou Ltd.	Suzhou/P.R. China	100.0 %
Manz India Private Ltd.	New Delhi/India	75.0 %
Manz Chungli Ltd.	Chungli/Taiwan	100.0 %
Manz Taiwan Ltd.	Chungli/Taiwan	100.0 %

The financial statements of the subsidiaries and associated companies are prepared on the reporting date of the consolidated financial statements, which corresponds to the reporting date of Manz AG.

As of January 26, 2021 Manz (B.V.I.) Ltd., Road Town, British Virgin Islands, was dissolved. Its assets, liabilities and equity were transferred to Manz Taiwan Ltd., Chungli, Taiwan.

On February 3, 2021, Manz AG took a 40 % stake in CADIS Engineering GmbH, Schwendi, Germany. The acquisition costs are TEUR 2,400, which consisted of a cash contribution of TEUR 1,200 and an investment in kind of TEUR 1,200. The contribution in kind is to be provided as a service over a period of 30 months. The share is included in the consolidated financial statements using the equity method. The object of the company is the engineering, development and sale of printing systems, in particular consisting of printing engines, tank systems, print heads and print bars.

On October 11, 2021, Manz AG took a 24.99 % stake in Q.big 3D GmbH, Aalen, Germany. The purchase price is TEUR 1,000. The share is included in the consolidated financial statements using the equity method. The object of the company is the development and sale of 3D printers.

On November 30, 2021, Manz AG took 3.26 % stake in MetOx technologies Inc., Houston, United States of America. The purchase price was TEUR 1,798. There is also an investment over 11.1 % (previous year 11.1 %) in NICE PV Research Ltd. Beijing, PR China. In accordance with IFRS 9, the shares are included in the consolidated financial statements as an equity instrument to fair value through other comprehensive income.

On January 26, 2021 the shares in the associated company Talus Manufacturing Ltd. held for sale as of December 31, 2020 were sold to Lam Research for TEUR 44,715.

Impact of Covid-19 and climate-related issues

At the beginning of 2020, the Covid 19 pandemic spread first in China and later worldwide. On 11 March 2020, Covid-19 was declared a worldwide pandemic by the WHO. In the 2021 fiscal year, Manz AG continued to be affected by the effects of the pandemic. In regions with less developed healthcare systems, a production stop could have a negative impact on business development in the event of a pandemic. In this context, the Covid-19 pandemic could continue to have a negative impact, particularly on the execution of customer projects in the Solar and Electronic Components segments in Asia.

The economic impact of the pandemic is likely to diminish over time, as either the vaccination rates are high or a large proportion of the population has already come into contact with the virus and the health consequences are therefore limited. Nevertheless, the uncertainties of the new Omikron variant on the economy remain large. Due to the uncertainty of the not fully predictable global consequences of the Covid-19 pandemic and in particular the new omicron variant, the available information on the expected economic trends and country-specific measures with regard to the Covid-19 pandemic into account.

Due to the increased uncertainty at the beginning of the pandemic, an additional impairment test was performed in June 2020. This did not result in any need for impairment.

Overall, no significant effects on the Covid-19 pandemic or climate-related issues on the accounting or on the estimates, discretionary scope and planning assumptions underlying the accounting could be identified.

Consolidation principles

Capital consolidation uses the acquisition method. In this case, the acquired assets and liabilities are measured at their fair market values at the acquisition date. The acquisition costs for the acquired shares are then offset against the proportionate revalued equity of the subsidiary. Any remaining positive difference from offsetting the purchase price against the identified assets and liabilities is presented as goodwill in intangible assets. Costs incurred as part of the corporate merger are expensed and therefore are not part of the acquisition costs.

If a previous subsidiary is deconsolidated, the difference between the consideration received and the outgoing net assets at the the time of the loss of control is recognized in profit or loss.

Expenses and income, receivables and payables as well as cash flows from transactions between consolidated companies are fully eliminated. The necessary tax deferrals are carried out on consolidation processes. Furthermore, guarantees assumed by Manz AG or one of its consolidated subsidiaries in favor of other consolidated subsidiaries are eliminated.

Non-controlling interests

Non-controlling interests represent that part of the result and the net assets that is not attributable to the Group. Non-controlling interests are presented separately in the consolidated income statement and the consolidated balance sheet. They are recognized within equity in the consolidated balance sheet, separately from the equity attributable to the shareholders of the parent company.

Associated companies

Companies which Manz can exercise significant influence pursuant to IAS 28 Investments in Associates and Joint Ventures are accounted for using the equity method and are initially carried at cost. Manz's share in the results of the associated company is shown in the consolidated income statement. Changes in the equity of the associated company which do not affect income are recognized proportionately in the consolidated equity. The carrying amount of the associated company is increased or reduced by the overall changes. The carrying amount of the investment and all long-term shares allocated to the net investment in the associated company are consistent with Manz AG' s investment in the company.

Currency translation

The financial statements of subsidiaries included in the Group which are prepared in foreign currency are translated into Euro in accordance with IAS 21. With one exception, the functional currency of the consolidated companies corresponds to the respective national currency, as these subsidiaries manage their business activities independently in financial, economic and organizational respects. For Manz Hungary Kft., the functional currency differs from the national currency in Euro, as significant expenses and income are incurred or generated in Euro. Assets, liabilities, and contingencies are translated using the exchange rate on the reporting date, while equity is translated using historical exchange rates. The income statement and the expenses and income recognized directly in equity are translated at the average annual exchange rate. Translation differences resulting from the translation of the financial statements are directly recognized in accumulated other comprehensive income until the disposal of the subsidiaries.

In the annual financial statements of the companies included in the consolidated financial statements, foreign currency items are initially measured at cost. Exchange rate gains and losses as of the balance sheet date are recognized in profit or loss. Monetary assets and liabilities are valued at the exchange rate on the balance sheet date.

To determine the exchange rate to be applied on initial recognition of the related assets, expense or income and the associated liability (or part thereof) on derecognition of a non-monetary asset or non-monetary liability arising from prepaid consideration, the date of the transaction is the date of initial recognition of the non-monetary asset or non-monetary liability arising from the prepayment. If there are multiple prepayments or payments, the Group determines the transaction date for each prepayment or payment of prepaid consideration.

Exchange rates of the most important currencies in EUR:

Exchange rates of the most important currencies

Corresponds to 1 EUR		Closing rate		Average rate	
		Dec. 31, 2021	**Dec. 31, 2020**	**2021**	**2020**
USA	USD	1.1344	1.2266	1.1832	1.1417
China	CNY	7.2195	8.0188	7.6364	7.8631
Hong-Kong	HKD	8.8446	9.5115	9.1967	8.8560
Taiwan	TWD	31.4683	34.4646	33.0647	33.6155

Accounting and valuation principles in the financial year 2021

Manz AG's assets and its fully consolidated liabilities are uniformly recognized and measured according to the accounting and valuation methods applicable in the Manz Group as of December 31, 2021.

Manz does not recognize deferred taxes on temporary differences arising from the recognition of rights-of-use assets and lease liabilities in accordance with IFRS 16.

Fixed assets

Intangible assets that are not acquired in a business combination are initially recognized at acquisition or manufacturing cost. The cost of intangible assets acquired in a business combination is their fair value on the acquisition date. Following initial recognition, intangible assets are carried at acquisition or manufacturing cost, less any accumulated amortization and impairment losses. Costs for internally generated intangible assets, with the exception of capitalized development costs, are not capitalized, but recognized in profit or loss in the period in which they are incurred.

A distinction was drawn between intangible assets with a finite useful life and those with an indefinite useful life.

Intangible assets with a finite useful life are amortized on a straight-line basis over their economic useful life and tested for possible impairment if there are indications that the intangible asset may be impaired. The period and method of amortization for intangible assets with a finite useful life are reviewed at least at the end of each financial year. Any necessary changes to the method or period of amortization due to changes in the anticipated useful life or to the anticipated use of the future economic benefit of the asset are accounted for as changes in estimates.

The useful lives for the individual classes of intangible assets are listed below:

	Years
Software	3 to 5
Patents	3 to 8
Capitalized development costs	3 to 9
Technologies	6 to 8
Customer relationships	6 to 8
Non-current costs for obtaining a contract	1 to 5

Intangible assets with an indefinite useful life are not amortized. At Manz AG, all intangible assets with an indefinite useful life are brands. The indefinite nature of the useful life of brands is based on the assessment that the inflow of economic benefits from these assets cannot be attributed to a specific period (further information on subsequent measurement is provided in the section entitled "Impairment test"). Therefore, after the discontinuation of a product line for the production of displays, the product brand behind it can also be used for the next generations. As a result, an unlimited useful life is assumed for this. The useful life can only be considered to have ended when a business segment is discontinued or sold. Goodwill from business combinations and brands with an indefinite useful life are therefore not amortized, but only tested for impairment.

Development costs for equipment and equipment components are capitalized as long as the conditions of IAS 38 are fulfilled. In this case, acquisition and manufacturing cost covers all the costs directly attributable to the development process, as well as a reasonable share of development-related overheads. Capitalized development costs are amortized on a straight-line method from the start of production over the expected product life cycle, which is usually three to nine years. If capitalized development costs are not yet amortized because they are not yet available for use, each individual asset or cash-generating unit is tested for impairment at least once a year. Research costs and development costs that cannot be capitalized are expensed as incurred.

Property, plant and equipment is measured at cost less scheduled depreciation in accordance with the useful life and any impairment losses. Costs for repairs and maintenance are recognized as current expenses. Straight-line depreciation is carried out according to the anticipated progress of the consumption of the future economic benefit. Systematic depreciation is based predominantly on the following useful lives:

	Years
Buildings	20 to 50
Technical equipment and machinery	2 to 21
Other equipment, operating and office equipment	2 to 23
Right-of-use assets	1 to 9

Residual values, useful lives, and depreciation methods of assets are reviewed at the end of a given financial year and adjusted prospectively if necessary. The parameters from 2021 correspond to the previous year.

If a considerable period of time is required for the acquisition or manufacture of a qualified asset to prepare it for its intended use, the directly attributable borrowing costs are capitalized until the asset is ready for its intended use. No borrowing costs were capitalized in the current and previous financial years.

IFRS 16 leases

At the beginning of the contract, Manz AG assesses whether a contract constitutes or contains a lease. This is the case when the contract entitles the holder to control the use of an identified asset in exchange for payment of a fee for a certain period of time.

Lease liability

The lease liability is measured as the present value of the lease payments to be made over the lease term. In addition, payments in connection with purchase options are taken into account if it is sufficiently certain that they will be exercised, and penalties for terminating the lease if it is taken into account during the term that the Group will exercise the termination option. Variable lease payments that are not linked to an index or (interest) rate are recognized as an expense in the period in which the event or condition that triggers the payment occurs.

The lease payments are discounted using the incremental borrowing rate. The incremental borrowing rate is the interest rate that would have to be paid if the funds that would be required in a comparable economic environment for an asset with a value comparable to the right of use were borrowed for a comparable term with comparable security. The incremental borrowing rate is estimated using observable input factors, if these are available.

The lease liability is compounded in subsequent periods and reduced by the lease payments made.

In addition, the carrying amount of the lease liability is remeasured for changes in the lease, changes in the lease term, changes in lease payments, or a change in the assessment of a purchase option for the underlying asset.

Right-of-use assets

Right-of-use assets are valued at cost less any accumulated depreciation and any accumulated impairment losses and adjusted for any remeasurment of the lease liability. The cost of right-of-use assets includes the recognized lease liability, the initial direct costs incurred and the lease payments made at or before delivery, less any lease incentives received.

The right-of-use assets are amortized over the shorter of the two periods of the expected useful life and the term of the underlying lease. If ownership of the leased asset passes to the lease term or if the costs reflect the exercise of a purchase option, depreciation is determined based on the expected useful life of the leased asset.

The right-of-use assets are also checked for impairment.

For the development of right-of-use assets in the financial year, we refer to (15) property, plant and equipment.

Short-term and low value leases

Manz uses the exception rule for short-term leases, so that leases with a term of no more than twelve months from the date of availability and which do not contain any purchase options are expensed. In addition, the exemption for leases based on a low-value asset (max. TEUR 5) is applied, so that it is also recognized as an expense.

Manz as lessor

Leases where the Group does not transfer substantially all of the risks and rewards of ownership of an asset are classified as operating lease. Any rental income that arises is recognized on a straight-line basis over the term of the lease and, due to its operational nature, is reported under sales. Initial direct costs incurred in negotiating and arranging an operating lease are included in the carrying amount of the leased asset and expensed over the lease term in the same manner as lease income. Conditional rental payments are recognized as income in the period in which they are generated.

Presentation of the income statement

The following amounts were recognized in profit or loss in the financial year:

(in TEUR)	2021	2020
Income from subleases	18	19
Amortization expense for right-of-use assets	–2,846	–3,340
Interest expenses for lease liabilities	–490	–568
Expenses for current leases	–825	–640
Expenses for low-value lease assets	–122	–95
Variable lease payments	–315	–421
Total amount recognized in profit or loss	**–4,580**	**–5,045**

For the presentation of leases in the consolidated cash flow statement, please refer to Notes to the Cash Flow Statement. The cash outflows for leases are included in the cash flow from financing activities and amount to TEUR 3,723 (previous year TEUR 4,400) in the reporting year. Payments for short-term leases and for leases based on a low-value asset or for variable lease payments that are not recognized in the lease liabilities are allocated to cash flow from operating activities.

Impairment test

Intangible assets with indefinite useful lives or an intangible asset not yet available for use and goodwill are not subject to scheduled amortization. However, the recoverable amount of the cash-generating unit is reviewed annually to determine impairment losses. These checks are based on detailed budget and forecast calculations. The underlying planning period for goodwill and intangible assets with indefinite useful lives is three years. Intangible assets with indefinite useful lives and goodwill are tested for impairment once a year unless there are specific indications that a cash-generating unit may be impaired.

The recoverable amount is generally estimated separately for each asset. If this is not possible, it is determined on the basis of a group of assets that represents a cash-generating unit. The individual cash-generating units correspond to the management-relevant segments (Solar, Electronics, Energy Storage, Contract Manufacturing and Service). Due to the reorganization of the segment structure on January 1, 2022, the impairment test was carried out on December 31, 2021 for the old segment structure and the new segment structure. The segments Electronics, Solar and Contract Manufacturing are combined to form the new division Industry Solutions. The segment Energy Storage forms the new division Mobility & Battery Solutions. The segment Service will be split between the two new segments. The Service segment is broken down into the division in which the services accrued. With the realignment of the group organization, Manz is aiming to make even better use of the opportunities in these dynamic growth markets. See the opportunities report for further explanations.

Capitalized development costs and other intangible assets with finite useful lives as well as property, plant and equipment are amortized over the duration of their useful lives. In addition, an impairment test is only carried out if there are concrete indications of any impairment.

In an impairment test for goodwill, the recoverable amount of the cash-generating unit of the goodwill is compared to the carrying amount. If the carrying amount of the cash-generating unit allocated to goodwill exceeds the recoverable amount, an impairment loss must be recongized in profit or loss for that amount of goodwill. Any further impairments are allocated to the assets of the CGU in relation to their book values.

The recoverable amount of a cash-generating unit is the higher of its fair value less selling costs and its value in use. The value in use is determined using the discounted cash flow method on the basis of the estimated future cash flows expected to arise from the continuing use of an asset. An interest rate before taxes corresponding to market conditions is used as the discount rate.

If the reasons for an impairment recognized in previous years no longer apply, the impairment loss is reversed to the recoverable amount (with the exception of goodwill). The amount may not exceed the carrying amount that would have been determined, net of scheduled amortization, had no impairment loss been recognized for the asset in the past.

The carrying amounts of the cash-generating units were subjected to an impairment test in the first half of 2020 in view of the background of the strong fluctuations in market capitalization due to the uncertainty associated with the Covid-19 pandemic. They were compared with the values in use which are based on corporate planning. No impairment adjustments were identified out of this additional impairment test.

In addition, a sensitivity analysis was carried out, according to which a 1 % higher WACC without assumed growth in perpetuity and a 10 % reduction in EBIT over the entire planning period would not result in a need for impairment.

Inventories

Inventories are measured at the lower of cost or net realizable value in accordance with IAS 2 Inventories. Manufacturing cost includes not only direct costs, but also appropriate parts of the necessary material costs and production overheads, as well as production-related depreciation and proportionate administrative overheads, that can be directly allocated to the manufacturing process. Where required, the average cost method is used as the simplified measurement method. If the acquisition and manufacturing costs exceed the net realizable value, a write-down is made. The net realizable value is the estimated selling price in the ordinary course of business less estimated costs of completion and estimated selling expenses.

Revenues, trade receivables, contract assets, contract liabilities and additional costs for obtaining a contract

Revenue

Manz primarily generates revenues from customer-specific construction contracts in the equipment business. Services are also provided to a lesser extent.

Revenue from the performance obligations to construct the plants is regularly recognized over the performance period using the percentage of completion (POC) method in accordance with the stage of completion of a contract. The performance is rendered over the period in which the system is constructed and, accordingly, the revenues are recognized over the performance period, because the constructed system does not have any alternative use for Manz and Manz has a legal claim to payment for the performance already rendered during the period in which the performance is rendered. The percentage of completion is calculated as the ratio of the costs incurred to the overall expected costs of an order (Cost-to-Cost method). Under this method of measuring progress, both the revenue and the associated costs are systematically recorded and thus the results are realized appropriate to the period in which control of the goods and services is transferred. The Cost-to-Cost method provides an accurate picture of the progress of work because Manz uses of IT-supported project controlling system, which allows for a reliable estimation of planning costs and monitors overall costs. This also allows necessary adjustments to be made for costs that do not contribute to the progress of the performance in meeting the performance obligation or that are not in proportion to the progress of the performance in meeting the performance obligation.

Some of the contracts with customers provide for variable components of the consideration in the form of discount scales and penalties. In these cases, Manz determines the amount of the consideration that it is entitled to in exchange for the transfer of the goods and services to the customer. The variable consideration is estimated at the inception of the contract and may only be included in the transaction price if it is highly probable that the cumulative revenue recognized will not be significantly reversed once the uncertainty associated with the variable consideration no longer exists. Please refer to the *Management estimates and judgments, Determining the method to estimate variable consideration and assess the limit.*

Contract assets

A contract asset is the claim to receipt of a return in exchange for goods or services transferred to a customer. If Manz fulfills its contractual obligations by transferring goods or services to a client before the client pays the consideration or before payment is due, a contractual asset is recorded for the contingent claim to consideration. For the application of the impairment model to contractual assets, please refer to the section, Financial instruments in accordance with IFRS 9.

Trade receivables

A receivable, on the other hand, is the Group's unconditional right to receive consideration (i.e., it becomes due automatically as time passes). Implicit and payable claims to prepayments are recorded as receivables. For the application of the impairment model to receivables, please refer to the section, Financial instruments in accordance with IFRS 9.

Contract liabilities

A contract liability is the obligation of the Group to transfer goods or services to a customer for which it receives a consideration (or will receive one). If a customer pays consideration before the Group transfers goods or services to the customer, a contractual liability is recognized when payment is made or due (whichever occurs earlier). Contract liabilities are recognized as revenue when the Group has fulfilled its contractual obligations.

Additional costs for obtaining a contract

Moreover, the additional costs for obtaining a contract are capitalized. This item represents sales commissions. The capitalized costs are amortized according to the stage of completion of the underlying project. Impairment losses on capitalized costs for obtaining a contract are recognized immediately in income statement if the residual book value of the capitalized costs for obtaining a contract is higher than the remaining part of the consideration less the costs direclty associated with the delivery of the goods or provisions of services which have not yet been recognized in the income statement.

Service type warranties

In individual cases, a guarantee is offered in addition to the rectification of defects that existed at the time of sale. These service-type warranties can be defined independently in the context of the contract. Using the relative stand-alone selling price method, a portion of the transaction price is allocated to the service-type warranty and recognized as a contract liability. Service-type warranty revenue is recognized over the period in which the service is provided based on elapsed time.

Financial instruments in accordance with IFRS 9

A company shall recognize a financial asset or financial liability in its balance sheet when it becomes a party to the financial instrument. A financial asset is recognized as such if a contract gives the right to receive cash or another financial asset from the other contract party. Common market purchases and sales of financial assets are recognized at the time the risks and rewards are transferred (usually on the trade date). A financial liability is recognized as such if the obligation to transfer cash or other financial assets to the other party arises from a contract. With the exception of trade receivables without a significant financial component, financial instrument is initially measured at fair market value. Transaction costs are included. In the course of subsequent measurement, financial instruments are recognized either at amortized cost or at fair value.

Financial assets

Other non-current assets, financial assets, trade receivables from third parties and trade receivables from associated companies, derivative financial assets, other current financial assets and cash and cash equivalents are classified as financial assets. With the exception of trade receivables without a significant financing component, they are initially recognized at the fair value plus the transaction costs accrued, if the financial instruments are not classified under the category of Fair Value Through Profit or Loss (FVTPL). Trade receivables without a significant financing component are initially recognized at transaction price.

For financial assets carried at amortized cost, the carrying amounts reported in the balance sheet commonly correspond to the fair value of the financial assets. The classification and, derived from this, the valuation is carried out in accordance with the underlying business model and the contractually agreed cash flow conditions.

Measurement of financial assets and contract assets

The group recognizes an allowance for expected credit losses (ECLs) for all debt instruments not held at fair value through profit or loss. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

ECLs are recognized in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of exposure, irrespective of the timing of the default (a lifetime ECL).

For trade receivables and contract assets, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECLs at each reporting date. An allowance matrix was created based on past credit loss experience and adjusted for forward-looking factors specific to borrowers and economic conditions.

Financial liabilities

Financial liabilities include primary and derivative liabilities with a negative fair value. Primary financial liabilities are measured at fair value upon initial recognition. For subsequent measurement, they are measured at amortized cost or, for contingent consideration, at fair value. Derivative financial liabilities are measured at fair value through profit or loss.

Manz uses derivative financial instruments such as forward exchange contracts in order to hedge against currency risks. When IFRS 9 was applied for the first time on January 1, 2018, there was an option to continue to use either the hedge accouting regulations of IFRS 9 or those of IAS 39. Manz has opted to continue to use hedge accounting in accordance with IAS 39. Derivative financial instruments are measured at fair value on initial recognition and in subsequent periods. Recognition of these changes – whether through profit or loss or through other comprehensive income (hedge reserve) – depends on whether the derivative financial instrument is part of an effective hedge in accordance with IAS 39. Changes in fair value are recognized through profit or loss unless the special criteria of IAS 39 for hedge accounting are satisfied.

Cash and cash equivalents

Cash and cash equivalents comprise cash accounts and short-term deposits with banks with a remaining term of up to three months at the time of the addition. As a result of the application of IFRS 9, a risk provision is recongized.

Share-based compensation

As an additional incentive-based compensation for work performed, Manz Group employees (including executives) receive share-based compensation in the form of equity instruments. Equity instruments are measured at fair value at the date granted. This Performance Share Plan was first introduced in the financial year 2008. Currently, the Manz Performance Share

Plan 2019 is being applied, which includes the achievement of performance targets. These new targets consist of the EBITDA margin and the development of company's value, measured by the change in the share price between the time the subscription rights are issued and the expiry of the vesting period. The stock awards expire when the employment relationship is terminated or a termination agreement is concluded. The share awards are not entiled to dividends during the vesting period. Fair value is determined by applying an appropriate measurement model (We refer to (10) Share-based compensation).

The expenses resulting from the granting of equity instruments and the corresponding increase in equity are recognized over the period in which the exercise or performance conditions must be fulfilled (vesting period). This period ends on the date of the first exercise opportunity, i.e., the date when the employee concerned becomes irrevocably entitled to the award. The cumulative expense recognized at each reporting date until the vesting date reflects the extent to which the vesting period has expired and the Group's best estimate of the number of equity instruments that will ultimately vest. The income or expense recognized in profit or loss for the period is the change in the cumulative expense recognized at the beginning and end of the reporting period.

No expense is recognized for compensation rights that do not vest. Exceptions to this are compensation rights for which certain market conditions must be met before they can be exercised. Irrespective of whether the market conditions are fulfilled, these are seen as exercisable, provided that all other performance conditions are fulfilled.

If the conditions of a compensation agreement compensated by equity instruments are modified, expenses are recognized in the amount in which they would have been incurred if the conditions of the agreement had not been modified. The company also recognizes the effects of modifications that increase the total fair value of the share-based compensation agreement or are associated with another benefit for the employee, measured at the time of the modification.

If a compensation agreement compensated by equity instruments is canceled, this is treated as if it had been exercised on the cancellation date. The previously unrecognized expense is recognized immediately. This applies to all compensation agreements if non-vesting conditions over which either the company or the counterparty has an influence are not fulfilled. However, if the canceled compensation agreement is replaced by a new compensation agreement and the new compensation agreement is declared as a replacement for the cancelled compensation agreement on the day it is granted, the cancelled and the new compensation agreement are accounted for as a modification of the original compensation agreement (see section above).

The dilutive effect of outstanding share awards is additionally considered as dilution in the calculation of earnings per share (we refer to (13) Earnings per share).

Treasury shares

Any treasury shares that the Group acquires are recognized at cost and deducted from equity. The purchase, sale, issue or withdrawal of treasury shares is not recognized in profit or loss.

Government grants

Government grants are recognized when there is reasonable assurance that the grants will be received and the company will comply with the conditions attached to them. Expenditure-related grants are recognized as income on a scheduled basis over the period required to offset them against the corresponding expenses for which the grants are intended to compensate. Grants for capitalized development projects reduce the acquisition and manufacturing cost of the associated assets.

Actual income taxes

The amount of current tax assets and liabilities for the current period is calculated based on the tax rates and tax laws applicable on the reporting date in the countries in which the Group operates and generates taxable income.

Deferred taxes

Deferred taxes are recognized for temporary differences between the carrying amounts in the IFRS consolidated balance sheet and the tax base, as well as for tax loss carry-forwards and tax credits. Deferred tax assets are recongized if it is probable that they will be utilised to a large extent.

Deferred taxes are measured at the tax rates that apply or are expected to apply at the time of realization based on the current legal situation in the individual countries. Deferred taxes that relate to items directly recognized in equity are presented in equity. Deferred tax assets and liabilities are offset if the Group has a legally enforceable right to set off current tax assets against current tax liabilities and the deferred taxes relate to income taxes levied by the same taxation authority on the same taxable entity.

Pension provisions

Defined contribution plans are shown under pension provisions. Provisions for pensions are determined according to the projected unit credit method pursuant to IAS 19. In addition to the pensions and acquired benefits known on the balance sheet date, this method also takes expected future salary and pension increases into account. If pension obligations have been re-insured using plan assets, these are reported net.

The calculation is based on actuarial expert opinions, taking biometric calculation principles into account. Actuarial gains and losses are recognized in other comprehensive income. The service cost is reported in personnel expense, the interest element of the allocation to reserves in the financial result.

Other provisions and accrued liabilities

Other provisions are recognized if a past event has led to a current legal or constructive obligation to third parties, which is expected to lead to a future outflow of resources that can be reliably estimated. Provisions are generally measured at the expected settlement amount, taking into account all identifiable risks. The calculation of the settlement amount is based on best estimates. The settlement amount also includes anticipated cost increases. Provisions with a term of more than one year are discounted to their present value at the market interest rate.

Accruals are not presented under provisions, but under trade payables or other liabilities, depending on their nature.

Liabilities

Non-current liabilities are recognized at amortized cost. Differences between their historical cost and their repayment amount are accounted for using the effective interest method. Current liabilities are recognized at their settlement amount.

Contingent liabilities

A contingent liability is a possible obligation to third parties that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Manz Group. A contingent liability may also be a present obligation that arises from past events but is not recognized because the outflow of resources is not probable, or the amount of the obligation cannot be estimated with sufficient reliability.

Management estimates and judgments

The preparation of consolidated financial statements requires assumptions and estimates that have an effect on the recognition, measurement, and presentation of assets, liabilities, income, and expenses, as well as contingent assets and contingent liabilities. The main circumstances affected by such discretionary judgments and estimates relate to the viability of receivables, determination of defining the percentage of completion of long-term manufacturing projects, assumptions about future cash flows from cash-generating units, and development projects, as well as the recognition and measurement of provisions. The values that actually occur may differ from the estimates in individual cases. The carrying amounts of assets and liabilities affected by estimates can be seen in the breakdowns of the individual balance sheet items.

The assumptions and estimates are based on premises that reflect the currently available level of knowledge. Specifically, the expected future business performance is based on the circumstances known at the date of preparation of the consolidated financial statements and a realistic assessment of the future development of the global and sector-specific environment. Developments in this environment that diverge from the assumptions and that are outside the control of management may result in amounts that differ from the original estimates. The key assumptions concerning the future and other sources of estimation uncertainty on the reporting date that entail a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below:

Goodwill and intangible assets with indefinite useful lives: Goodwill and other intangible assets with indefinite useful lives are not amortized; instead, an impairment test is performed at least once a year on the cash-generating units with the aim of adequately determining future cash surpluses. Parameters are defined for the calculation, such as the planning horizon (three years), the choice of interest rate or the weighting of the opportunities and risks to be considered. Please also refer to (14) Intangible Assets

Revenues: Manz made the following discretionary decisions, which have a significant impact on determining the amount and timing of revenues from agreements with customers:

Determination of the method for the estimation of the variable considerations and assessment of the restriction of

Scales of discounts and penalties result in variable fees for Manz. In the estimation of the variable considerations, the Group must use either the expected value method or most probable value method. The method to be selected is the one that allows the consideration due to the Group can be reliably estimated. The Group came to the conclusion that the expected value is the most suitable method for the estimation of the variable considerations for delivery of goods and services with scales of discount and contractual penalties. This estimation of the variable considerations is included in the transaction price to the extent that there will most probably not be a significant reversal of the realized sales revenues once the uncertainty associated with the variable consideration no longer exists.

Estimation of the overall cost of the project

The use of the POC method based on an estimation of the overall cost of the project. Due to the uncertainties, it is therefore possible that the estimates of the expenses required until completion may have to be subsequently adjusted. Such adjustments to income and expenses are recognized in the period in which the need for adjustment is identified.

Trade account receivables and contract assets: An impairment model in accordance with IFRS 9 is applied to trade receivables and contract assets, in which expected losses must be taken into account. For this, valuation models have been developed which are used to determine default rates for trade receivables and contract assets. An analysis of the historical default rates with different regions is performed. These historical default rates are adjusted by the influence of forward-looking information in the macroeconomic environment. In addition, the default rates are reviewed individually by the responsible management. Factors such as maturity structures of receivables balances, customer creditworthiness or macroeconomic data are included in the review.

Pension provisions: we refer to Notes to the Balance Sheet (29) Pension Provisions

Provisions for warranties: Provisions for warranties are recognized in accordance with past history or the estimated future level of claims. Non-current provisions are recognized at their settlement amount, discounted to the balance sheet date. The interest rate used is a risk-free pretax rate. The interest expense resulting from the unwinding of the discount is presented in finance costs. We refer to (30) Other non-current provisions.

Provisions for onerous contracts: The formation of provisions for onerous contracts is highly influenced by estimates, both in terms of reason and amount. Manz creates provisions for anticipated losses for customer orders for which the estimated total costs exceed the agreed consideration on the balance sheet date. Regular checks and assessments of the project progress of customer orders are carried out by project controlling, which is the basis for the creation of a provision for onerous contracts. We refer to (34) Other current provisions.

Income taxes: Estimates must also be made for the recognition of tax provisions and for the assessment of the recoverability of deferred taxes assets on loss carryforwards. In any assessment of the recoverability of deferred taxes, uncertainties exist with respect to the interpretation of complex tax regulations and the amount as well as timing of future taxable income. Deferred taxes assets are recognized for all unused tax loss carryforwards to the extent that it is probable that taxable income will be available to enable the loss carryforwards can be actually utilised. When calculating the value of deferred tax assets that can be recognized, management judgement is required with regard to the expected time of occurrence and the value of future taxable income, as well as the future tax-planning strategies. If income tax uncertainties exist, they are reviewed for possible effects on the consolidated financial statements and recognized accordingly.

Uncertain tax positions: If it is uncertain whether the responsible authorities will accept an income tax treatment of Manz, this is an uncertain tax position. For the valuation of uncertain tax items, Manz first assesses whether these have to be valued separately or together with other uncertain tax items. The decision is based on whether there is such a connection between the items that a common resolution of the uncertainty for the items can be expected. Then, based on the assumption that the tax authorities will review the uncertain tax position in full factual knowledge, an assessment is made as to whether the tax authorities accept Manz's tax treatment. If it is probable that the authorities will accept Manz's tax treatment, only this assessment of the uncertain tax position is used. Otherwise, the uncertain tax positions are measured based on the most probable amount or using the expected value method. If the possible results are binary or concentrated around one value, the uncertain tax position is valuated on the basis of the most probable amount, otherwise using the expected value method.

Development services of the Imortant Project of Common European Interest (IPCEI-project): An essential discretionary decision of the management is the determination of the relevant accounting unit. The requirements of IAS 38 regarding capitalization are assessed at their level. As part of the IPCEI-project, five technical developments in connection with battery production (cell assembly, battery electrolyte filling, laser application, module production line and lamination & Stacking of cells) were identified as independently identifiable development services.

The capitalization of the IPCEI-related development costs is based on management's assessment that the technical and economic feasibility has been proven. In this contect, management makes assumptions, in particular, about the existence of future inflow of economic benefits. In case of existing customer oders, there are areas of application in relation to the above-mentioned technical developments with an associated direct future inflow of economic benefit. In addition, the management expects a further acceleration in the growth of the demand for machines for the production of battery cells, particulary in the next 5 years. Here, too, the basis for the associated future inflow of economic benefits is the technical advance developments.

Changes to accounting policies with insignificant impact on the current group's financial statements

The following standards, interpretations and amendments that have been published but are not yet mandatory are not expected to have any material impact on future consolidated financial statements:

- Amendments to IFRS 16 Covid-19 Related Rent Concessions: The amendments provide relief to lessees from applying IFRS 16 guidance on lease modification accounting for rent concessions arising as a direct consequence of the Covid-19 pandemic. As a practical expedient, a lessee may elect not to assess whether a Covid-19 related rent concession from a lessor is a lease modification. A lessee that makes this election accounts for any change in lease payments resulting from the Covid-19 related rent concession the same way it would account for the change under IFRS 16, if the change were not a lease modification. Originally, these changes should apply until June 30, 2021. However, since the corona pandemic continues, on March 31, 2021, the IASB extended the period of application of the practical aid to June 30, 2022 There were no rental concessions at Manz, so the relief was not applied.

- Amendments to IFRS 9, IAS 39 and IFRS 7, IFRS 4 and IFRS 16 with regard to the effects of the IBOR reform (Phase 2): The changes offer users temporary relief regulations for the effects resulting from the replacement of the Interbank Offered Rates (IBOR) can result from alternative, almost risk-free interest rates (risk-free rates) on the financial reporting.

Published standards, interpretations and amendments not yet applied

The following published but not yet applicable standards, interpretations and amendments probably do not have any material effect on future consolidated financial statements.

- Amendment to IAS 1, Classification of liabilities as current or non-current. To be applied to financial years beginning on or after January 1, 2023.

- Amendments to IAS 1, Presentation of Financial Statements - Disclosure of Accounting Policies, effective for annual periods beginning on/after January 1, 2023.

- Amendment to IFRS 3, Reference to the Framework: Subsequent addition of the reference to the new framework of 29 March 2018, to be applied to business combinations beginning on or after January 1, 2022.

- Amendment to IAS 16, Revenue before an asset is ready for use. Revenue from the sale of goods produced before the item of property, plant and equipment is ready for use is no longer to be deducted from the cost of the item of property, plant and equipment, but is to be recognized together with the cost of the item of property, plant and equipment in the income statement. To be applied to financial years beginning on/after January 1, 2022.

- Amendments to IAS 12, Deferred Tax related to assets and liabilities arising from a single transaction. In the future, the initial recognition exemption will no longer apply to such transactions in which both deductible and taxable temporary differences of the same amount arise upon initial recognition. The changes are applicable to reporting periods beginning January 1, 2023.

- IFRS 17, Insurance Contracts: Changes upon first-time application (January 1, 2023). The changes relate to: Acquisition costs, dissolutions of the contractual service margin, risk reduction option, reinsurance contract and separate presentation of asset and liabilities.

- IFRS 17 Insurance Contracts: Recognition, Measurement, Disclosure and Presentation Principles for Insurance Contracts within the Scope of the Standard. Effective for annual periods beginning on/after January 1, 2023.

- Amendments to IAS 37, onerous contracts – costs of fulfilling a contract: Clarification of the costs to be taken into account when assessing whether a contract is onerous or loss-making. To be applied to financial years beginning on or after January 1, 2022.

- Annual Improvements to IFRS 2018 - 2020. Amendments to IFRS 1, IFRS 9, IFRS 16 and IAS 41. To be applied for financial years beginning on/after January 1, 2022.

- Amendments to IAS 8, Definition of Accounting Estimates – In February 2021, the IASB published amendments to OAS 8, Which introduced a new definition of accounting estimates. The changes clarify the extend to which changes in accounting estimates differ from changes in accounting policies and error corrections. They also explain how companies can make accounting estimates using measurement techniques and inputs. The changes apply to fiscal years beginning on or after January 1, 2023.

Notes to the Income Statement

Revenues (1)

The breakdown of revenues by business segment and region is shown in the segment reporting. We also refer to our comments on segment reporting.

In 2017, Manz received two major orders for the delivery of production systems for the manufacture of solar modules with a total volume of EUR 263 million, which was scheduled for completion in July 2019. The one major CIGS project CIGSLab was finalized in September 2021.

The major project CIGSFab has a total order volume of 217.5 million. The installation of the systems was interrupted at the customer's request in December 2020 and has not been resumed since then. Only minor work was carried out in the first quarter of 2021. With letters dated June 10, 2021, 2021, November 11, 2021 and February 18, 2022 Manz terminated the contract for the delivery of the system and simultaneously asserted claims of approximately EUR 64 million. These claims relate to the open payments from the contract (EUR 43 million, contractual payments at FAT and 12 months after FAT) and additional expenses of EUR 21 million. The customer has objected to these claims and refuses to pay, or asserts claims on its part. Manz has reduced the total claim to around EUR 30 million in the draft of a settlement agreement dated February 25, 2022. Contract assets from the contract amounting to EUR 23.2 million (previous year EUR 21.5 million) are recognized in the consolidated financial statements of Manz AG as of December 31, 2021. Due to the still pending agreement with the customer, there is considerable uncertainty regarding the claims that will be asserted. Based on the contractual agreements as well as legal assessments and the current status of discussions with the customer, Manz AG continues to assume that these contract assets are recoverable.

In addition, Manz received follow up orders of around EUR 55 million from a long-term customer in the Energy Storage segment in 2019. As part of these orders, equipments were delivered by Manz in 2020 as planned. All orders were completed in the second half of 2021. In 2020, Manz received follow up orders of around EUR 71 million from this long-term customer in the Energy Storage segment. The completion date for all orders is expected to be in 2023.

(in TEUR)		Germany	Rest of Europe	China	Taiwan	Rest of Asia	USA	Other Regions	Total
Solar	2021	812	160	4,278	–	–	64	–	5,314
	2020	7,737	6	15,412	–	–	5	–	23,160
Electronics	2021	37,150	51	21,218	21,721	12,060	4,321	–	96,521
	2020	32,012	3,071	42,372	6,606	6,529	96	–	90,686
Energy Storage	2021	43,177	8,295	3,163	–	2,925	19,768	284	77,612
	2020	57,096	1,713	14	–	20	4,992	854	64,690
Contract Manufaturing	2021	14,642	8,023	1,967	–	–	–	–	24,632
	2020	10,430	26,581	13	–	–	–	–	37,024
Service	2021	6,932	2,667	3,760	6,952	1,396	1,250	24	22,981
	2020	6,544	1,431	3,297	5,979	577	2,782	599	21,209
Total	2021	**102,713**	**19,196**	**34,386**	**28,673**	**16,381**	**25,403**	**308**	**227,060**
	2020	**113,819**	**32,802**	**61,108**	**12,585**	**7,126**	**7,875**	**1,453**	**236,768**

Work performed by the entity and capitalized (2)

In the financial year 2021, development costs were capitalized in particular in the segments Solar and Energy Storage at TEUR 466 (previous year TEUR 2,846) and TEUR 10,109 (previous year TEUR 2,230) respectively. In addition, capitalization of TEUR 68 (previous year TEUR 303) was made in the Electronics business segment and in the business segment Contract Manufacturing and Service of TEUR 0 (previous year TEUR 412).

Other operating income (3)

(in TEUR)	2021	2020
Income from the sale of investments using the equity method	15,241	–
Subsidies	2,515	2,787
Income from the reversal of provisions	865	1,337
Insurance claim	576	120
Lease and rental income	439	287
Right to reimbursement of court costs	380	–
Reversal of valuation allowances on receivables	63	246
Exchange rate gains	53	1,224
Income from the disposal of fixed assets	17	11
Fair value adjustment on financial liabilities	–	150
Other operating income	1,254	1,019
Total	**21,403**	**7,181**

Of the TEUR 2,515 subsidies, TEUR 1,584 (previous year TEUR 776) are tax credits from the Italian government for R&D projects. In 2020, an additional TEUR 581 are due to Covid-19 government support in Slovakia and Italy. TEUR 150 reimbursement of social security due to short-time work in Germany is reported in April and May 2020 under the other operating income.

Material costs (4)

(in TEUR)	2021	2020
Cost of raw materials, consumables, and supplies, and of purchased merchandise	110,375	114,869
Cost of purchased services	21,446	15,469
Total	**131,821**	**130,338**

Personnel expenses (5)

(in TEUR)	2021	2020
Wages and salaries	61,701	59,806
Share-based compensation	1,063	689
Social security, pension and other benefit costs	12,717	11,421
Total	**75,481**	**71,916**

In 2020 TEUR 164 wages and salaries out of short-time work were paid to the employees by the government through Manz in Germany. In 2021 no short-time allowance was received.

Other operating expenses (6)

(in TEUR)	2021	2020
Advertising and travel expenses	5,303	5,020
Exchange rate losses	3,796	2,828
Facility costs	3,352	3,126
It costs (IT costs and maintenance contracts)	3,142	2,151
Legal and consulting fees	2,682	3,701
Other personnel-related expenses	2,121	1,910
Outgoing freight	2,030	2,173
Rent and leases	1,262	1,156
Impairment expenses on financial assets and contract assets	1,210	6,524
Insurance	888	742
Increase of provisions	826	1,360
Research-related (project-based) other operating expenses	83	274
Other	6,683	5,635
Total	**33,378**	**36,600**

The higher impairment expenses on financial assets and contract assets in 2020 is mainly driven by an impairment loss of TEUR 4,996 made for a project in Asia.

The item "Others" consists mainly of bank guarantee commissions of TEUR 1,096 (previous year: TEUR 1,135), expenses of other taxes of TEUR 650 (previous year TEUR 624) and expenses from stock exchange listing of TEUR 437 (previous year TEUR 414).

Amortization/depreciation and impairment (7)

(in TEUR)	2021	2020
Fixed assets	8,740	8,256
Right-of-use assets from leases	2,846	3,340
Non-current costs for obtaining a contract	734	342
Current costs for obtaining a contract	83	324
Amortization on development costs	311	–
Impairment on goodwill	19,801	–
Impairment on Trademark	1,839	–
Total	**34,354**	**12,132**

Finance income (8)

(in TEUR)	2021	2020
Other interest and similar income	509	72
Interest income from subleases	18	19
Total	**527**	**91**

Finance costs (9)

(in TEUR)	2021	2020
Interest on current liabilities	1,385	1,683
Interest cost from financial liabilities arising from leases	490	568
Interest component of long-term provisions	27	54
Interest on non-current liabilities	33	40
Other interest expenses	107	–
Total	**2,042**	**2,345**

Share-based payment (10)

Performance share plan

The Group has set up a so-called "Performance Share Plan" for members of the Managing Board and other eligible employees. The performance targets relate to the EBITDA margin and the development of the company value, measured by the change in the share price between the issue of the subscription rights and the expiry of the vesting period. The share awards lapse if the employment relationship is terminated or a termination agreement is concluded. The share awards are not entitled to dividends during the vesting period. Manz AG can settle the stock awards with new issued shares or with treasury shares.

The share awards (subscription rights) are issued at the discretion of the Executive Board with the approval of the Supervisory Board – insofar as Executive Board members are concerned, at the discretion of the Supervisory Board – in annual tranches, within a period of three months after the expiry of four weeks following the publication of the consolidated financial statements for the previous financial year.

In the 2021 financial year, 20 (previous year: 17) employees and the 3 (previous year: 3) members of the Executive Board received 23,948 (previous year: 89,145) share awards/stock options. Of these, 12,101 (previous year: 48,675) share awards/stock options were granted to the Executive Board. In the 2021 financial year, 12,416 share awards/stock options (5,332 of which were exercised by the Executive Board) were exercised at a share price of EUR 66.80 at the exercise date for employees and EUR 53.20-56.20 for the Executive Board. The subscription price was EUR 1 each.

The following table shows the development of the share awards/subscription rights with the corresponding weighted average fair values per share awarded at the time they were granted:

	(in shares)	(in EUR)
	Share awards/ share options	Weighted average fair value on the grant date
Inventory at the beginning of the year (not vested)	171,927	19.02
Exercised in the reporting period	–12,416	20.53
Lapsed during the reporting period	–6,035	24.14
Granted during the reporting period	23,948	55.72
Inventory at the end of the year (not vested)	**177,424**	**28.20**

In accordance with IFRS 2, share awards are accounted for at the fair value of the awards at the grant date and are recongized in personnel expenses and a corresponding increase in equity (capital reserve). The fair values are determined using an appropriate measurement model.

The calculation is based on the following parameters:

	2021	2020
Strike price	EUR 1.00	EUR 1.00
Risk-free annual interest rate	0 %	0 %
Volatility	52.9 %	18.0 %
EBITDDA-margin	8.7 %	9.6 %
Corporate development	30 %	30 %
Expected dividends	EUR 0.00	EUR 0.00
Fair value of each share award	EUR 28.20	EUR 19.02
Option term	4 years	4 years

Expected volatility is based on the assumption that future trends can be inferred from historical volatility over a period similar to the term of the options, although the volatility that actually occurs may differ from the assumptions made.

In the reporting year, personnel expenses of TEUR 1,063 (previous year: TEUR 689) were recongized from the performance share plan.

Income taxes (11)

Income taxes include both actual and deferred income taxes arising from temporary differences and existing tax loss carryforwards.

(in TEUR)	2021	2020
Actual tax expense		
Current period	2,745	2,285
Previous periods	–396	266
Deferred tax income/expenses (+)	2,499	–1,004
	4,848	**1,547**

The current income tax expense is calculated using the tax rates effective as of the balance sheet date. When calculating deferred taxes for domestic subsidiaries, the domestic tax rate of 29.13% (previous year: 29.13%) was applied. For the foreign companies, tax rates of 9%–26% (previous year: 9%–26%) were used. In 2020 the tax rate in China has changed from 15%–25% as reduced tax rate for High-tech enterprise is no longer applied.

The income tax expense in the reporting year in the amount of TEUR 4,848 (previous year: TEUR 1,547) is derived as follows from an “expected” income tax expense that would have resulted from the application of the statutory income tax rate of the parent company to earings before income taxes:

(in TEUR)	2021	2020
Earnings before income taxes	–17,579	4,971
Manz AG income tax rate	29.13 %	29.13 %
Expected income tax expense	**–5,120**	**1,448**
International tax rate differences	–1,471	–1,105
Change of tax rate abroad	–158	–793
Non-deductible expenses	6,792	453
Prior-period taxes	–396	266
Tax-free income	–3,899	–2,764
Non-recognition of tax loss carryforwards	6,213	3,260
Use of tax loss carryforwards	–53	–11
Valuation allowance on deferred taxes	1,427	–35
Foreign withholding tax	1,739	689
Other	–226	139
Reported income tax expense	**4,848**	**1,547**
Effective tax rate	–27.58 %	31.11 %

The following table shows deferred tax assets and liabilities:

(in TEUR)	Deferred tax assets		Deferred tax liabilities	
	Dec. 31, 2021	**Dec. 31, 2020**	**Dec. 31, 2021**	**Dec. 31, 2020**
Intangible assets	413	0	6,035	5,816
Property, plant, and equipment	3	1	647	57
Contract assets, inventories and contract liabilities	4,357	5,539	11,004	14,730
Receivables	318	1,411	1,167	2,114
Cash and cash equivalents	4	2	0	0
Pension provisions	721	761	0	0
Derivative financial instruments	0	0	0	4
Trade payables	2,176	2,057	631	0
Provisions	706	463	0	0
Tax loss carry forwards	8,775	12,492	0	0
Gross value	17,473	22,725	19,484	22,721
Offsetting	–13,172	–15,890	–13,172	–15,890
Balance according to consolidated balance sheet	**4,301**	**6,835**	**6,312**	**6,831**
Net amount of deferred tax assets/deferred tax liabilities	**0**	**4**	**2,011**	

The net amount of deferred tax assets developed as follows:

(in TEUR)	2021	2020
As of January 1	**4**	**–811**
Deferred tax expense (-) / income (+) in the income statement	–2,499	1,004
Changes in deferred taxes recognized in other comprehensive income in connection with:		
Revaluation of defined benefit pension plans	17	–15
Hedging future cash flows (cash flow hedges)	4	–4
Difference from currency translation	463	–170
As of December 31	**–2,011**	**4**

Deferred taxes are only recognized for tax loss carryforwards and deductible temporary differences if their utilization can be expected with sufficient certainty. For two (previous year: four) companies have incurred tax losses in the current or previous period, a deferred tax asset on loss carryforwards of TEUR 176 (previous year: TEUR 3,550) was recognized. A deferred tax claim on temporary differences of TEUR 492 was reported in the year under review for a foreign company that suffered tax losses in the current or previous period. Based on the short-term and medium-term planning as well as the existing oder backlog and the positive market prospects in the battery sector, Manz believes that in the future, these companies will have taxable income against which the unused tax losses amd temporary differences can be offset. The deferred tax assets of TEUR 3,005 recognized for China in 2020 were fully impaired in 2021 due to the continuing loss situation.

As of the balance sheet date, the tax loss carryforwards totaled TEUR 268,181 (previous year: TEUR 264,369). Of this amount, TEUR 568 (previous year: TEUR 371) over five years and TEUR 16,371 (previous year: TEUR 13,376) is limited to ten years and the rest can be carried forward indefinitely. For loss carry forwards amounting to TEUR 237,608 (previous year: TEUR 219,186), no deferred tax assets were recognized since IAS 12 stipulates in the case of losses in the recent past, high recongnization requirements are not met on the balance sheet date.

No deferred tax assets were recognized for loss carryforwards of TEUR 237,608 (previous year: TEUR 219,186) and deductible temporary differences of TEUR 271 (previous year: TEUR 0) as IAS 12 imposes stringent requirements for capitalization in the case of losses in the recent past, which were not met at the reporting date.

In accordance with IAS 12, deferred taxes for temporary differences in connection with shares in Group companies must be recognized (outside basis differences). No deferred tax liabilities were recognized for outside basis differences of EUR 53.4 million (previous year: EUR 6.8 million), as these profits are to be reinvested for an indefinite period.

Share of profits non-controlling interests (12)

The share of profits attributable to non-controlling interests consists of allocated earnings in the amount of TEUR –19 (previous year: TEUR –10).

Earnings per share (13)

The undiluted earnings per share are calculated by dividing Manz AG shareholders' share of earnings by the weighted average number of shares in circulation during the financial year. The earnings per share are diluted as a result of so-called "potential shares." These include option and subscription rights if such rights result in the issue of shares at a value below the share's average stock exchange price. There was a dilution effect from the share awards in the context of the Performance Share Plan (see (10) Share-based payment).

Earnings per share was calculated in accordance with IAS 33.

	2021	**2020**
Consolidated net profit allocable to Manz AG's shareholders (in TEUR)	–22,408	3,434
Weighted average number of outstanding shares (undiluted)	7,750,144	7,744,088
Effect from share-based compensation shares	354,848	343,854
Weighted average number of outstanding shares (diluted)	**8,088,591**	**8,011,876**
Earnings per share in EUR (undiluted)	–2.89	0.44
Earnings per share in EUR (diluted)	–2.89	0.42

No other transactions in ordinary shares or potential ordinary shares took place in the period between the balance sheet date and the authorization to issue the consolidated financial statements.

Notes to the Segment Reporting

Manz discloses the results of operations grouped by business segment and region in accordance with IFRS 8 (Operating Segments) within the framework of segment reporting. This grouping is based on internal management and takes the segments' different risk and earnings structures into account.

The breakdown of turnover by region is based on the location of the customer. I.e., if a customer orders from China, the turnover is allocated to the China region.

The "Solar" business segment includes system solutions for the manufacturing costs of thin-film solar modules and CIGS thin film technology. Business in equipment to produce lithium-ion batteries is reported in the "Energy Storage" business segment. The "Electronics" business segment focuses on the manufacture of production systems for the manufacture of consumer electronics.

In addition to the three strategic segments, there are two reporting segments, "Contract Manufacturing" (equipment and parts production as well as assembly work for customers in various industries) and "Service" which offers services relating to Manz AG's core technological expertise.

The segment structure was reorganized on January 1, 2022. The Electronics, Solar and Contract Manufacturing segments are combined to form the new Industry Solutions division. The Energy Storage segment forms the new Mobility & Battery Solutions division. The Service segment is split between the two new divisions. With the successful realignment of the corporate organization, Manz is aiming to make even better use of the opportunities in these dynamic growth markets. The service segment is broken down into the division in which the services accrued.

Mobility & Battery Solutions will essentially include the business activities of the former Energy Storage segment with a clear focus on the growth market of E-Mobility. In the Industry Solutions reporting segment, Manz AG combines the activities of the two business areas Electronics (semiconductor backend production, fan out panel level packaging and display technologies) and Industrial Automation (industrial assembly solutions for the manufacture of consumer electronics, power electronics and other components of the electrical powertrain.

The primary factor used to evaluate and control a business segment's cash flow is the operating profit (EBIT).

Segment reporting shows revenues and profits in the Group's individual business segments. Delivery and service relationships exist only to a limited extent between the individual segments.

Sales revenue in the amount of TEUR 36,761 with one customer were included in the Electronics business segment. In addition, sales revenue of TEUR 22,237 with one customer were included in the Energy Storage business segment.

In the Solar segment, amoritization/depreciation and impairment includes impairments of EUR 21.6 million Goodwill and a trademark. For more detailed information, see the goodwill and trademark rights chapter.

Segment reporting business units

As of December 31, 2021

(in TEUR)	Solar	Electronics	Energy Storage	Contract Manu-facturing	Service	Consolidation	Group
Revenues with third parties							
2021	5,314	96,521	77,612	24,632	22,981	0	227,060
2020	23,160	90,686	64,690	37,024	21,209	0	236,768
Revenues with other segments							
2021	0	65	0	0	0	–65	0
2020	0	293	0	0	0	–293	0
Total revenues							
2021	**5,314**	**96,586**	**77,612**	**24,632**	**22,981**	**–65**	**227,060**
2020	**23,160**	**90,979**	**64,690**	**37,024**	**21,209**	**–293**	**236,768**
Result from investments using the equity method							
2021	0	–245	0	0	0	0	–245
2020	0	0	0	9,381	0	0	9,381
EBITDA							
2021	–5,917	–1,139	5,506	16,935	2,938	–33	18,290
2020	–5,143	–979	10,347	13,090	2,114	–73	19,358
Amoritization/depreciation and impairment							
2021	25,139	3,654	3,848	878	836	0	34,354
2020	2,703	4,373	3,458	798	800	0	12,132
EBIT							
2021	**–31,056**	**–4,793**	**1,659**	**16,057**	**2,102**	**–33**	**–16,064**
2020	**–7,846**	**–5,352**	**6,889**	**12,292**	**1,315**	**–73**	**7,225**
Financial results							
2021	–292	–378	–545	–123	–177	0	–1,515
2020	–242	–651	–722	–189	–451	0	–2,254
Earnings before taxes (EBT)							
2021	–31,348	–5,171	1,114	15,934	1,925	–33	–17,579
2020	–8,088	–6,003	6,167	12,104	864	–73	4,971
Income taxes							
2021	–600	–2,213	885	–335	–2,585	0	–4,848
2020	–5	1,152	–1,050	–660	–983	0	–1,547
Consolidated profit or loss							
2021	**–31,948**	**–7,384**	**1,999**	**15,599**	**–661**	**–33**	**–22,427**
2020	**–8,093**	**–4,851**	**5,118**	**11,443**	**–119**	**–73**	**3,425**

Segment reporting regions

As of December 31, 2021

(in TEUR)	Revenues	Non-current assets (without deferred tax)
Germany		
2021	102,713	42,745
2020	113,819	47,602
Rest of Europe		
2021	19,196	23,328
2020	32,802	24,297
China		
2021	34,386	13,994
2020	61,108	13,236
Taiwan		
2021	28,673	14,948
2020	12,585	26,083
Rest of Asia		
2021	16,381	17
2020	7,126	585
USA		
2021	25,403	1
2020	7,875	2
Other Regions		
2021	308	0
2020	1,453	0
Group		
2021	227,060	95,033
2020	236,768	111,805

Notes to the Cash Flow Statement

The cash flow statement shows how cash has changed in the Manz Group over the course of the reporting year due to cash inflows and outflows. In accordance with IAS 7 Cash Flow Statements, cash flows are distinguished between operating activities, investing activities and financing activities. Effects from changes to the basis of consolidation and exchange rates are eliminated in the respective items. The change in liquid assets due to changes in exchange rates is presented separately.

The cash and cash equivalents reported in the cash flow statement comprise all cash and cash equivalents reported on the balance sheet, which consist of cash in hand and bank balances with a term of up to three months. Any fluctuations in the value of cash and cash equivalents were considered by means of a risk provision.

The cash inflows and outflows from investing and financing activities are presented in accordance with the direct method. The cash inflows and outflows from investing activities from current operations include additions and disposals of property, plant and equipment as well as additions and disposals of intangible assets. In financing activities, besides cash inflows from equity increases and the issuance of other financial liabilities, cash outflows from the repayment of loans are also included.

On the other hand, cash inflows and outflows from operating activities are derived indirectly from the consolidated net profit. For this purpose, the consolidated net profit is adjusted by non-cash expenses and income, mainly depreciation and changes in non-current provisions and deferred taxes and supplemented by changes in operating assets and liabilities.

According to IFRS 16, the payment of the redemption portion of leases is shown in financing activities. The payment for the interest portion of the lease liability and payments for current leases and leases involving an asset of minor value and variable lease payments that are not recognized as part of the liability are shown under operating activities.

Investing and financing processes which have not led to a change in cash are not part of the cash flow statement.

Development of liabilities from financing activities

(in TEUR)	Carrying amount as of Jan 1, 2021	Cash flows	Non-cash changes: Foreign exchange movement	Non-cash changes: Addition	Non-cash changes: Transfer	Non-cash changes: Changes in fair values	Carrying amount as of Dec. 31, 2021
Non-current financial liabilities							
from financial institutions	5,677	4,849	0	0	–2,189	0	8,337
from lease	12,609	0	8	826	–2,740	0	10,703
Current financial liabilities							
from financial institutions	54,992	–20,031	3,809	0	2,189	0	40,959
from other companies	16,306	0	1,552	–17,858[1]	0	0	0
from lease	3,446	–3,723	29	768	2,740	0	3,260
Derivative financial instruments	0	0	0	225	0	0	225
	93,030	**–18,905**	**5,398**	**–16,039**	**0**	**0**	**63,484**

1 This is the settlement of the previously granted loan from Lam Research International B.V. to Manz Taiwan Ltd., as part of the sale. See Chapter (24) “Assets held for sale” for further explanations.

(in TEUR)	Carrying amount as of Jan 1, 2020	Cash flows	Non-cash changes: Foreign exchange movement	Non-cash changes: Addition	Non-cash changes: Transfer	Non-cash changes: Changes in fair values	Carrying amount as of Dec. 31, 2020
Non-current financial liabilities							
from financial institutions	728	5,281	0	0	–332	0	5,677
from lease	12,268	0	–7	2,943	–2,595	0	12,609
Others	7	0	0	–7	0	0	0
Current financial liabilities							
from financial institutions	57,185	–1,330	–1,195	0	332	0	54,992
from other companies	0	16,306	0	0	0	0	16,306
from lease	3,329	–4,400	–13	1,935	2,595	0	3,446
Derivative financial instruments	0	0	0	0	0	0	0
	73,517	**15,857**	**–1,215**	**4,871**	**0**	**0**	**93,030**

Notes to the Balance Sheet

Intangible Assets (14)

(in TEUR)	Licenses, software, and similar rights	Capitalized development costs	Goodwill	Plants under construction/ Advance payment	Non-current capitalized contract costs	Total
Acquisition/manufacturing costs						
As of January 1, 2020	**33,607**	**77,729**	**35,483**	**209**	**5,143**	**152,171**
Currency adjustment	–13	–87	–715	0	0	–815
Additions	405	4,615	0	472	0	5,492
Disposals	–256	–325	0	–84	0	–665
Reclassifications	0	0	0	0	0	0
As of December 31, 2020	**33,743**	**81,932**	**34,768**	**597**	**5,143**	**156,183**
Amortization/Depreciation						
As of January 1, 2020	**28,149**	**59,106**	**0**	**0**	**4,067**	**91,322**
Currency adjustment	–14	–71	0	0	0	–85
Additions	833	4,909	0	0	342	6,084
Disposals	–256	–1	0	0	0	–257
Reclassifications	0	0	0	0	0	0
As of December 31, 2020	**28,712**	**63,943**	**0**	**0**	**4,409**	**97,064**
Acquisition/manufacturing costs						
As of January 1, 2021	**33,743**	**81,932**	**34,768**	**597**	**5,143**	**156,183**
Currency adjustment	5,531	341	1,569	0	0	7,441
Additions	554	10,091	0	0	0	10,645
Disposals	–52	–1,249	0	0	–5,143	–6,444
Reclassifications	597	0	0	–597	0	0
As of December 31, 2021	**40,373**	**91,115**	**36,337**	**0**	**0**	**167,825**
Amortization/Depreciation						
2021 of January 1, 2021	**28,712**	**63,943**	**0**	**0**	**4,409**	**97,064**
Currency adjustment	4,283	292	0	0	0	4,575
Additions[1]	2,416	5,511	19,801	0	734	28,462
Disposals	–52	–1,199	0	0	–5,143	–6,394
Reclassifications	0	0	0	0	0	0
As of December 31, 2021	**35,359**	**68,547**	**19,801**	**0**	**0**	**123,707**
Residual carrying amount December 31, 2020	5,031	17,989	34,768	597	734	59,119
Residual carrying amount December 31, 2021	**5,014**	**22,568**	**16,536**	**0**	**0**	**44,118**

1 Thereof TEUR 19,801 impairment of goodwill and TEUR 1,839 impairment of trademark.

Capitalized development costs

Development costs are capitalized in accordance with the requirements of IAS 38 Intangible Assets in the accounting and valuation methods presented. For the purpose of determining the amounts to be capitalized, management must make assumptions about the amount of anticipated future cash flows from assets, the discount rates to be applied and the period of the inflow of expected future cash flows that generate assets.

As part of the annual review of capitalized development costs that have not yet been amortized, impairments of TEUR 311 were recongized in the reporting year (previous year: none)

The following amounts were recognized in profit or loss:

(in TEUR)	2021	2020
Total research and development costs	–16,003	–18,081
Scheduled depreciation on development costs	–5,511	–4,909
Capitalized development costs	10,091	4,615
Research and development costs charged to income	**–11,423**	**–18,375**

Through the European batteries Innovation project (EUBatIn project), which is being carried out on the IPCEI platform, the European Commission is to promote the establishment of a European Li-Ion battery production with highly innovative and sustainable production technology for Lithium-ion battery cells and modules. Subject to securing the financing of Manz AG´s own share, the project is to be subsidized by group companies in Germany and Italy. The aim of the project is the development of innovative production processes on the associated systems based on a new, digitized and more cost-effective business model.

The expenses incurred for development services are capitalized. The associated scope for discretion is described in the chapter “Estimates and assessments by the management”. In 2021, development services related to the IPCEI project in the amount of TEUR 3,295 were performed at Manz Srl. In Italy and TEUR 5,673 at Manz AG in Germany.

Until 2027, there are funding entitlements for the IPCEI project of a maximum of EUR 71.3 million at Manz AG in Germany and EUR 48.7 million at Manz Italy Srl. Grants for capitalized development projects reduce the acquisition and production costs of the assets concerned. The subsidy from the funding agency is recognized when there is sufficient certainty that the conditions will be met, and the subsidy will be granted.

Goodwill and trademark rights

Goodwill and intangible assets with indefinite useful lives (brand rights) are allocated to the individual business units as follows:

(in TEUR)	Goodwill		Trademark rights	
	Dec. 31, 2021	**Dec. 31, 2020**	**Dec. 31, 2021**	**Dec. 31, 2020**
Solar	0	17,022	0	1,835
Electronics	9,854	11,064	2,898	2,753
Energy Storage	6,682	6,682	0	0
Contract Manufacturing	0	0	0	0
Service	0	0	0	0
	16,536	**34,768**	**2,898**	**4,588**

Goodwill and trademarks rights are tested for impairment at least once a year by comparing the carrying amounts of the units underlying the respective goodwill and trademark rights with the value in use. The Goodwill is impaired if the carrying amount of a cash-generating unit exceeds its value in use. The segments Solar, Electronics, Energy Storage, Contract Manufacturing and Service are used as cash-generating unit. The E-Mobility and Other industrial Business divisions are used for the new segment structure.

The value in use is determined by using the discounted cash flow method. The starting point is the current three-year plan for the respective business segment.

As part of this test, estimates must be made in relation to future cash surpluses. To determine the recoverable amount, an appropriate discount rate needs to be selected.

The calculation of discount rates takes into account the circumstances of the Group and its segments and is based on its weighted average cost of capital (WACC). The average cost of capital takes debt and equity into account. The cost of equity is determined on the basis of a peer group. They include the basic interest rate including country risk and a market risk premium. The segment-specific risk is included by applying individual beta factors. The cost of debt is based on interest-bearing debt. They include the debt spread, base interest rate and country risk. The debt spread was calculated on the basis of the interest difference between the yield of a basket of industrial companies rated BBB+ to BBB- and the yield on German government bonds.

The key planning assumptions include, above all, the anticipated market development in relation to the Manz Group’s development, the development of key production and other costs, as well as the discount factor and growth rates. General market forecasts, current developments and experience are taken into account in establishing the assumptions.

The demand for electric cars is constantly increasing, which is accompanied by an increase in the demand for battery drives. Manz AG should benefits from this positive market development with its broad customer base in the segment Energy Storage. A significant improvement in earnings and an increase in sales in the Energy Storage segment is therefore expected.

The planning assumptions in the solar area are based in particular on the fact that new projects can be achieved with existing and especially new customers in the short and medium term. On this basis, growth in sales and earnings is expected. However, this was not sufficient to avoid an impairment.

In the Electronics segment, Manz AG offers its customers production, assembly and handling equipment for the manufacture of displays for LCD, OLED and AMOLED flat screens, touch sensors, printed circuit boards and chip carriers, as well as smartphones, tablet computers, notebooks, wearables and other consumer electronics. Furthermore, the automated assembly solutions offer "Tier 1 and Tier 2 companies" in the automotive industry transformation solutions from the classic powertrain to the future e-drive train. A further increase in sales and improvement in earnings in the Electronics segment is therefore expected in the future.

Cash flows are predicted individually for each business segment to which goodwill and trademark rights are allocated to it based on revenue and cost planning. Growth rates were recorded at 0%–1.0% (previous year: 0.5%–1.0%). The discount rate after tax used for discounting (weighted average cost of capital (WACC)) is 7.8%–12.7% (previous year: 7.4%–13.2%). In this context, the cost of equity is calculated based on a comparable group (peer group). The discount rates and growth rates are listed in the following table:

(in %)	Discount rate before taxes		Growth rate	
	Dec. 31, 2021	**Dec. 31, 2020**	**Dec. 31, 2021**	**Dec. 31, 2020**
Solar	17.9	18.6	0.0	0.5
Electronics	11.1	10.5	0.5	0.5
Energy Storage	11.1	10.7	1.0	1.0
Contract Manufacturing	11.5	13.2	1.0	1.0
Service	11.1	10.5	1.0	1.0

Equity and borrowing cost rates calculated in this way were weighted on the basis of the peer group's average capital structure.

In the course of the strong fluctuations in market capitalization in the first half of 2020, the carrying amount of the cash-generating units were subjected to an additional impairment test. These were compared to the values in use, which are based on the current corporate planning. No need for impairment was determined for the reporting date of June 30, 2020.

The value in use of the respective cash-generating units Electronics, Energy Storage, Contract manufacturing and Service determined in the impairment test is recognizably higher than the respective carrying amount, so that the fair value less costs to sell was not determined. Overall, no need for impairment of the recongized goodwill and intangible assets without definite useful lives was determined for the above-mentioned segments in the financial years 2021 and 2020.

The impairment test performed in 2021 led to an impairment of goodwill and a trademark in the Solar segment.

The impairment primarily results from the fact that the focus of business activities in the Solar segment in the 2021 financial year continued to be on the completion of the major CIGS*fab* order. However, since the continuation of the business relationship with the customer was still uncertain at the time the financial statements were prepared and this could also have an impact on follow-up orders with this customer and new customer relationships has to be established as part of the realignments of the segment, impairment losses of EUR 21.6 million were recoginized on goodwill and a trademark in the financial year. Of this amount, TEUR 19,801 related to goodwill and TEUR 1,839 to the trademark. The calculated value in use represents the recoverable amount, which was compared with the carrying amount in the impairment test. The recoverable amount is TEUR 8,472 as of December 31, 2021.

The impairment was recognized in the income statement under Amortization/depreciation and impairment.

A WACC that is 1 % higher and a calculation without assumed growth in perpetuity does not influence the intrinsic value of goodwill. Even an additional 10 % reduction in EBIT over the entire planning period would not have led to an impairment of the remaining goodwill or trademark rights in the 2021 or 2020 financial year.

Costs for obtaining a contract

Intangible contract assets include non-current costs for obtaining a contract if they are covered by income from the contract and can be clearly allocated to a project. The capitalized costs for obtaining a contract are amortized according to the stage of completion of the underlying project. The balance as of December 31, 2021 was TEUR 0 (previous year: TEUR 734). In the reporting period, an amortization of TEUR 734 (previous year: TEUR 342) was recognized for this purpose.

Property, plant, and equipment (15)

(in TEUR)	Land and buildings	Technical equipment and machinery	Other equipment, operating and business facilities	Right-of-use assets	Equipment under construction/ Advance payment	Total
Acquisition/manufacturing costs						
As of January 1, 2020	**25,216**	**23,617**	**13,006**	**18,309**	**2,352**	**82,500**
Currency adjustment	–446	–62	–95	–46	0	–649
Additions	202	446	497	3,679	3,023	7,847
Disposals	–12	–438	–244	–707	0	–1,401
Reclassifications	0	6	0	0	–6	0
As of December 31, 2020	**24,960**	**23,569**	**13,164**	**21,235**	**5,369**	**88,297**
Amortization/Depreciation						
As of January 1, 2020	**7,908**	**19,472**	**7,771**	**3,343**	**0**	**38,494**
Currency adjustment	–141	–28	–79	–40	0	–288
Additions	664	890	960	3,340	0	5,854
Disposals	–3	–306	–222	–658	0	–1,189
Reclassifications	0	0	0	0	0	0
As of December 31, 2020	**8,428**	**20,028**	**8,430**	**5,985**	**0**	**42,871**
Acquisition/manufacturing costs						
As of January 1, 2021	**24,960**	**23,569**	**13,164**	**21,235**	**5,369**	**88,297**
Currency adjustment	1,900	266	288	111	7	2,572
Additions	750	1,875	939	1,032	1,214	5,810
Disposals	–1,307	–1,129	–605	–871	–67	–3,979
Reclassifications	347	54	12	0	–413	0
As of December 31, 2021	**26,650**	**24,635**	**13,798**	**21,507**	**6,110**	**92,700**
Amortization/Depreciation						
As of January 1, 2021	**8,428**	**20,028**	**8,430**	**5,985**	**0**	**42,871**
Currency adjustment	647	109	253	111	0	1,120
Additions	1,154	917	893	2,846	0	5,810
Disposals	–1,042	–515	–592	–863	0	–3,012
Reclassifications	0	0	0	0	0	0
As of December 31, 2021	**9,187**	**20,539**	**8,984**	**8,079**	**0**	**46,789**
Residual carrying amount December 31, 2020	16,532	3,541	4,734	15,250	5,369	45,426
Residual carrying amount December 31, 2021	**17,463**	**4,096**	**4,814**	**13,428**	**6,110**	**45,911**

The right-of-use assets from leases are subdivided as follows:

(in TEUR)	Dec. 31, 2021	Dec. 31, 2020
Right of use-assets – building	12,361	14,022
Right of use-assets – vehicles	791	838
Right of use assets – IT	276	390
	13,428	**15,250**

Depreciation of right of use assets have been recorded in accordance with the above breakdown.

(in TEUR)	2021	2020
Depreciation of right of use-assets – building	2,105	2,686
Depreciation of right of use-assets – vehicles	613	610
Depreciation of right of use assets – IT	128	44
	2,846	**3,340**

Land and buildings of Manz Slovakia s.r.o. with a carrying amount of TEUR 3,302 (previous year: TEUR 3,506), are used as collateral for bank loans.

Investments accounted for using the equity method (16)

Manz AG holds 40 % of voting rights and shares in CADIS Engineering GmbH, Schwendi, Germany. Manz AG has call options to buy the shares of the other shareholders. The call options are classified as insubstantial because the instrument is not in the money and Manz AG does not benefit from exercising the instrument for other reasons either. One of the former shareholders can demand the assignment of the shares from Manz AG through his call options. As a result of these substantial purchase options, the former shareholder gains control over the company.

(in TEUR)	**Dec. 31, 2021**
Current assets	1,097
Non-current assets	2,697
Short-term debts	381
Non-current liabilities	1,325
Shareholders' equity	**2,087**
Stake of Group in equity capital	40 %
Book value of the share in the Group	**2,300**

(in TEUR)	**Jan. 1 to Dec. 31, 2021**
Revenues	695
Operating earnings (EBIT)	–378
Earnings before taxes (EBT)	–342
Income tax expense	–
Earning after tax	–342
Other comprehensive income	–
Overall result for the financial year	**–342**

Manz AG holds 24.99% of voting rights and shares in Q.big 3D GmbH, Aalen, Germany. Manz AG has call options to acquire the shares of the previous shareholder. In order to be able to exercise the purchase options, the company`s turnover must exceed a certain threshold. Since the rights cannot be exercised on the balance sheet date, the purchase option is not considered substantial.

(in TEUR)	Dec. 31, 2021
Current assets	868
Non-current assets	251
Short-term debts	149
Non-current liabilities	254
Shareholders`equity	**715**
Stake of Group in equity capital	24.99%
Book value of the share in the Group	**905**

(in TEUR)	Jan. 1 to Dec. 31, 2021
Revenues	104
Operating earnings (EBIT)	–659
Earnings before taxes (EBT)	–706
Income tax expense	1
Earning after tax	–707
Other comprehensive income	–
Overall result for the financial year	**–707**

As of December 31, 2021, the associated companies had no contingent liabilities or capital commitments.

Financial assets (17)

Manz AG holds an investment of 11.1 % in NICE PV Research Ltd. Beijing, PRC. The fair value of the investment as of December 31, 2021 was TEUT 0 (previous year TEUR 7,260). This decrease is due to the high reported liabilities and low cash position as of December 31, 2021, combined with minimal earning prospects.

Manz AG holds an investment of 3.26% in MetOx Technologies Inc., United States of America. The entity valuation carried out at the end of the year did not result in any change in the fair value of the share of TEUR 1,798.

Other non-current assets (18)

The othe non-current assets contains of non-current recivables of leases of TEUR 575 (previous year: TEUR 687) and tenant's loan of TEUR 1,291 (previous year: TEUR 796). The receivables of leases are corresponding to their fair value and not impaired. The tenant's loan will be repaid at the end of the lease agreement.

Inventories (19)

(in TEUR)	**Dec. 31, 2021**	**Dec. 31, 2020**
Materials and supplies	16,855	9,615
Unfinished goods and products	6,669	8,116
Finished goods and merchandise	1,308	1,258
Advance payments	7,255	10,924
	32,087	**29,913**

The total valuation allowances on inventories decreased to TEUR 4,708 (previous year: TEUR 6,019) after taking into account exchange rate differences, scrapping and write up of inventory. In the reporting period, a net write down of TEUR 13 (previous year: write up of TEUR 948) were recognized. The carrying amount of inventories pledged as collateral amounts to TEUR 4,074.

Trade receivables (20)

Trade receivables do not bear interest and are usually due within one year.

(in TEUR)	Dec. 31, 2021	Dec. 31, 2020
Trade receivables from third parties	33,691	27,204
	33,691	**27,204**

Impairments on trade receivables have developed as follows:

(in TEUR)	Dec. 31, 2021	Dec. 31, 2020
As of January 1	1,327	2,245
Currency translation	25	–9
Utilization	91	927
Reversal	63	246
Addition	237	264
As of December 31	**1,435**	**1,327**

Contract assets (21)

Contract assets consisted of the following amounts:

(in TEUR)	Dec. 31, 2021	Dec. 31, 2020
Manufacturing costs, including profit or loss on the construction contracts	371,472	403,487
Minus advance payments received	–285,380	–334,580
	86,092	**68,907**

Impairments on contract assets developed as follows:

(in TEUR)	Dec. 31, 2021	Dec. 31, 2020
As of January 1	6,615	489
Currency translation	464	–123
Utilization	–129	0
Reversal	0	0
Addition	792	6,249
As of December 31	**7,742**	**6,615**

Manufacturing costs, including profit or loss on the construction contracts includes the large-scale CIGSfab project with a total order volume of EUR 217.5 million. The installation of the systems was interrupted at the customer's request in December 2020 and has not been resumed since then. Only minor work was carried out in the first quarter of 2021. With letters dated June 10, 2021, 2021, November 11, 2021 and February 18, 2022 Manz terminated the contract for the delivery of the system and simultaneously asserted claims of approxi-mately EUR 64 million. These claims relate to the open payments from the contract (EUR 43 million, contractual payments at FAT and 12 months after FAT) and additional expenses of EUR 21 million. The customer has objected to these claims and refuses to pay, or as-serts claims on its part. Manz has reduced the total claim to around EUR 30 million in the draft of a settlement agreement dated February 25, 2022. Contract assets from the con-tract amounting to EUR 23.2 million (previous year EUR 21.5 million) are recognized in the consolidated financial statements of Manz AG as of December 31, 2021. Due to the still pending agreement with the customer, there is considerable uncertainty regarding the claims that will be asserted. Based on the contractual agreements as well as legal assessments and the current status of discussions with the customer, Manz AG continues to assume that these contract assets are recoverable.

Derivative financial instruments (22)

On the balance sheet date, the following forward exchange transactions were used to hedge the exchange rate of USD/EUR transactions (previous year: USD/EUR transactions) in the course of the following financial year:

(in TEUR)	Dec. 31, 2021		Dec. 31, 2020	
	Currency hedging	Interest rate derivatives	Currency hedging	Interest rate derivatives
Change in fair value	–225	0	–10	0
Nominal value	4,682	0	390	0
Positive fair value	0	0	15	0
Negative fair value	225	0	0	0
Remaining term	max, 03/2023	–	max, 07/2021	–

Other current assets (23)

(in TEUR)	Dec. 31, 2021	Dec. 31, 2020
Restricted cash	6,893	7,065
Receivables from legal case claim	3,750	0
Other deferrals (primarily insurance policies)	2,270	1,064
Tax receivables (not income and income taxes)	1,795	1,420
Receivables for employees	269	307
Current receivables of leases	219	173
Other	2,595	1,346
	17,791	**11,375**

The other current assets are not overdue and no impairment losses were recognized. “Other” mainly includes tax credits of TEUR 2,345 (previous year: TEUR 754) related to a grant for royalty, research and development activities in Italy.

Assets held for sale (24)

Manz AG held 80.5 % of the voting rights and shares in Talus Manufacturing Ltd. Based in Chungli, Taiwan. This unlisted company is active in the areas of production, sales and service and reported under the contract manufacturing segment.

After the information about the exercise of the call option by Talus by the co-owner on November 6, 2020, the asset was reclassified to “Assets held for sale” and the at Equity accounting was stopped. The official approvals for the sale of the shares were granted at the end of January 2021 and the book value is derecognized. The sale resulted in a profit of EUR 14.8 million.

As part of the payment of the purchase price, a previously granted loan of TEUR 16,306 was offset.

Cash and cash equivalents (25)

Cash and cash equivalents include cash on hand, cash accounts, and short-term bank deposits. On bank deposits and current cash investments a risk provision in the amount of TEUR 24 (previous year: TEUR 30) was recorded.

(in TEUR)	Dec. 31, 2021	Dec. 31, 2020
Cash and cash equivalents	36,086	69,736

Equity (26)

Changes in the equity and comprehensive income are presented separately in the “Consolidated Statement of Changes in Equity” (Appendix 5). The components of comprehensive income are presented in aggregate form in the income statement.

The Managing Board and Supervisory Board have defined a minimum equity ratio of 40 % and gearing of less than 50 % as targets. Gearing is defined as the quotient of net debt and equity of the shareholders of Manz AG.

Issued capital

The subscribed capital of the parent company, Manz AG, is reported as issued capital. The issued capital of 7,756,804.00 is divided into 7,756,804 no-par-value registered shares.

Authorized capital

Based on the resolution of the Annual General Meeting of July 07, 2021, the Executive Board of the Company is authorized, with the consent of the Supervisory Board, pursuant to Article 3 paragraph 3 of the Articles of Association, to increase the share capital of the Company in the period until 06 July 2026 once or in partial amounts by a total of up to EUR 3,872,044.00 by issuing a total of up to 3,872,044 new bearer shares (no-par value shares) against cash or non-cash contributions (Authorized Capital 2021).

In principle, the new shares are to be offered to the shareholders for subscription. The new shares may also be taken over by banks designated by the Executive Board with the obligation to offer them to the shareholders for subscription (indirect subscription right). However, the Executive Board was authorized, with the consent of the Supervisory Board, to exclude the shareholders' subscription rights

- in the case of a capital increase against cash contributions, if the issue price of the new shares is not significantly lower than the stock exchange price of the Company's shares of the same class at the time of the determination of the issue price, which should be as close as possible to the placement of the new shares, within the meaning of section 203 (1) and (2) and section 186 (3) sentence 4 of the AktG. This authorisation to exclude subscription rights shall only apply to the extent that the shares to be issued in the course of the capital increase do not account for more than EUR 774,408.00 of the share capital and, in total, do not account for more than 10 % of the share capital at the time the authorisation is exercised. The proportionate amount of the share capital of shares issued or sold during the term of this authorisation on the basis of other authorisations in direct or corresponding application of section 186, paragraph 3, sentence 4 of the German Stock Corporation Act (Aktiengesetz, AktG) with the exclusion of subscription rights shall be counted towards this maximum amount for the exclusion of subscription rights;

- in the case of a capital increase against contributions in kind for the acquisition of enterprises, parts of enterprises or participations in enterprises or of other assets or for the implementation of mergers;

- to the extent necessary to grant to the holders of bonds with warrants or convertible bonds, profit participation rights or participating bonds (or combinations of these instruments) issued by the Company or direct or indirect group companies of the Company a subscription right to new shares to the extent to which they would be entitled after exercising their option or conversion right or after fulfilment of their conversion obligation;

- to exclude fractional amounts from the subscription right.

The Executive Board is authorized, with the consent of the Supervisory Board, to determine the further details of the implementation of capital increases from the authorized capital.

The Supervisory Board is authorized to amend the wording of the Articles of Association in accordance with the implementation of the increase in the share capital through the exercise of the authorized capital and after the authorization period has expired.

Authorisation to issue bonds with option or conversion rights or conversion obligations, profit participation rights and participating bonds (or combinations of these instruments) as well as conditional capital I

The Annual General Meeting of July 2, 2019 authorized the Executive Board, with the consent of the Supervisory Board, to issue bearer bonds with warrants or convertible bonds, profit participation rights or participating bonds or a combination of these instruments (together "bonds") with a total nominal value of up to EUR 150 million on one or more occasions until 1 July 2024 and to grant option rights to the holders of bonds with warrants or conversion rights to the holders of convertible bonds for bearer shares in the Company with a proportionate amount of the share capital of up to EUR 3,100,000.00 in total in accordance with the more detailed provisions, to grant the holders of convertible bonds conversion rights for bearer shares of the Company with a proportionate amount of the share capital of up to EUR 3,100,000.00 in total in accordance with the terms and conditions of the bonds with warrants or convertible bonds.

The statutory subscription right is granted to the shareholders in such a way that the bonds are taken over by a credit institution or a syndicate of credit institutions with the obligation to offer them to the shareholders for subscription. If bonds are issued by a group company of Manz AG within the meaning of Section 18 of the German Stock Corporation Act (AktG), the company must ensure that the statutory subscription right is granted to the shareholders of Manz AG accordingly.

However, the Executive Board is authorized, with the consent of the Supervisory Board, to exclude fractional amounts from the shareholders' subscription right and to exclude the subscription right also to the extent necessary to grant the holders of previously issued bonds with option or conversion rights or conversion obligations a subscription right to the extent to which they would be entitled as shareholders after exercising the option or conversion rights or upon fulfilment of the conversion obligation.

The Executive Board is further authorized, with the consent of the Supervisory Board, to fully exclude the subscription right of the shareholders to bonds issued with option and/or conversion rights or conversion obligations, provided that the Executive Board, after due examination, comes to the conclusion that the issue price of the bonds is not significantly lower than their hypothetical market value determined in accordance with recongized, in particular financial mathematical methods. This authorisation to exclude subscription rights applies to bonds issued with option and/or conversion rights or conversion obligations, with option and/or conversion rights or conversion obligations on shares with a pro rata amount of the share capital which in total may not exceed 10 % of the share capital, either at the time the authorisation becomes effective or – if this value is lower – at the time the present authorisation is exercised. The following shall be counted towards the aforementioned ten percent limit

- new shares issued from authorized capital excluding subscription rights pursuant to section 186 (3) sentence 4 AktG during the term of this authorisation until the issue of the bonds with option and/or conversion rights or conversion obligations without subscription rights pursuant to section 186 (3) sentence 4 AktG, as well as

- such shares which are acquired on the basis of an authorisation of the general meeting and which are sold in accordance with § 71 para. 1 no. 8 sentence 5 AktG in conjunction with § 186 para. 3 sentence 4 AktG during the term of this authorisation until the issue of the bonds with option and/or conversion rights or conversion obligations without subscription rights in accordance with § 186 para. 3 sentence 4 AktG, excluding subscription rights.

Insofar as profit participation rights or participating bonds without option rights or conversion rights/obligations are issued, the Executive Board shall be authorized, with the consent of the Supervisory Board, to exclude the shareholders' subscription rights altogether. If these profit participation rights or participating bonds have bond-like features, i.e., do not establish any membership rights in the Company, do not grant any participation in the liquidation proceeds and the amount of interest is not calculated based on the amount of the net profit for the year, the balance sheet profit or the dividend. Furthermore, in this case the interest rate and the issue amount of the profit participation rights or participating bonds must correspond to the current market conditions at the time of issue.

Pursuant to Article 3 paragraph 4 of the Articles of Association, the share capital of the Company is conditionally increased by up to EUR 3,100,000.00 by issuing up to 3,100,000 new bearer shares (no-par value shares) (Conditional Capital I). The conditional capital increase shall only be carried out to the extent that the holders of option or conversion rights or those obliged to convert from option or convertible bonds, profit participation rights or participating bonds issued by the Company or a group company of the Company within the meaning of § 18 of the German Stock Corporation Act (AktG) on the basis of the resolution passed by the Annual General Meeting of July 2, 2019 under agenda item 5. The shareholders may exercise their option or conversion rights or, if they are obliged to convert, fulfil their conversion obligation, provided that no cash settlement is granted and no treasury shares or shares of another listed company are used for servicing. The new shares shall be issued at the option or conversion price to be determined in accordance with the aforementioned authorisation resolution. The new shares shall participate in the profits from the beginning of the financial year in which they come into existence due to the exercise of option or conversion rights or the fulfilment of conversion obligations. The Executive Board is authorized, with the consent of the Supervisory Board, to determine the further details of the implementation of the conditional capital increase.

Authorisation to issue share subscription rights as part of the Manz Performance Share Plan 2015 and conditional capital II

The Annual General Meeting of July 7, 2015 authorized the Executive Board, with the consent of the Supervisory Board, to grant up to 59,000 subscription rights ("performance shares") for a total of up to 118,000 shares in the Company to members of the management of affiliated companies of the Company as well as to executives of the Company below the Executive Board and executives of affiliated companies of the Company below the management, in each case in Germany and abroad, on one or more occasions up to and including 30 June 2020. The Supervisory Board was authorized to grant up to 56,000 subscription rights ("performance shares") for a total of up to 112,000 shares in the Company to members of the Executive Board of the Company on one or more occasions until June 30, 2020 inclusive.

The granting, structuring and exercise of the subscription rights shall be carried out in accordance with the provisions set out in the resolution of the Annual General Meeting of July 7, 2015.

The authorization of July 7, 2015 was revoked by resolution of the Annual general Meeting of July 2, 2019, insofar as no subscription rights have yet been issued on the basis of this authorization.

Pursuant to Article 3 (5) of the Articles of Association, the share capital of the Company is conditionally increased by up to EUR 217,284.00 by issuing up to 217,284 no-par value bearer shares (Conditional Capital II). The conditional capital increase serves to secure the rights of the holders of subscription rights ("performance shares"), which were granted on the basis of the authorisation of the Annual General Meeting of July 7, 2015. The shares will be issued at the issue price stipulated in the authorisation resolution of the Annual General Meeting of July 7, 2015. The conditional capital increase will only be implemented to the extent that subscription rights are exercised and the Company does not grant treasury shares or a cash settlement to fulfil the subscription rights. The new shares are equal to the already issued shares of the same class with regard to their dividend entitlement. The Executive Board and, insofar as members of the Executive Board are concerned, the Supervisory Board are authorized to determine the further details of the conditional capital increase and its implementation.

Authorization to issue stock subscription rights as part of the Manz Performance Share Plan 2019 and conditional capital III

The Annual General Meeting on July 02, 2019 authorized the Management Board to issue a total of up to 95,000 subscription rights for a total of up to 190,000 shares in the company to the members of the management of affiliated companies of the company on one or more occasions up to and including June 30, 2024 with the consent of the Supervisory Board as well as to executives of the company below the Management Board and executives of affiliated companies, both in Germany and abroad. The Supervisory Board was authorized to grant a total of up to 85,000 subscription rights for a total of up to 170,000 shares in the company to members of the company´s Management Board on one or more occasions up to and including June 30, 2024.

The subscription rights are granted, structured and exercised in accordance with the provisions laid down in the resolution of the Annual General meeting of July 2, 2019.

Pursuant of Section 3 (6) of the Articles of Association, the company´s share capital is conditionally increased by up to EUR 360,000.00 through the issue of up to 360,000 no-par value bearer shares (conditional capital III). The conditional capital increase serves to secure the rights of the holders of subscription rights, which were granted on the basis of the authorization of the Annual General Meeting on July 2, 2019. The conditional capital increase will only be carried out to the extend that subscription rights are exercised and the company grants neither treasury shares nor cash compensation to fulfill the subscription rights. With regard to their entitlement to dividends, the new no-par value bearer shares are the same as the shares of the same class that have already been issued. The Management Board and, insofar as members of the Management Board are affected, the Supervisory Board are authorized to determine the further details of the conditional capital increase and its implementation.

Furthermore, the general meeting on June 30, 2020 authorized the managing board – for the issue of shares to members of the managing board – the supervisory board, to use own shares for servicing subscription rights, applying Manz Performance Share Plan 2015, which was resolved under Point 6 of the agenda according to the annual general meeting on July 7, 2015 or Manz Performance Share Plan 2019, which was resolved under Point 6 of the agenda according to the annual general meeting on July 2, 2019 for the issue of shares to members of the managing board and executive personnel. This reissuing authorization defines the group of people, to whom Manz shares can be transferred to.

Manz Performance Share Plan 2015 for members of the managing board and executive personnel of the company and its affiliated companies was explicated in a report of the managing board to the annual general meeting of July 7, 2015. In the same way, Manz Performance Share Plan 2019 for members of the managing board and executive personnel of the company and its affiliated companies, which was resolved at the annual general meeting of 2019, was explicated in a report of the managing board to the annual general meeting of July 2, 2019. The shares will be issued at the issue price specified in the authorization resolution of the Annual General Meeting on July 2, 2019.

The possibility to fulfill subscription rights by granting own shares of Manz AG to those entitled, is a suitable way to counteract the dilution of capital holdings and voting rights, which occurs when fulfilling subscription rights using newly created shares from authorized capital. As long as the company uses this possibility, the authorized capital II set forth in Article 3, Paragraph 5 of the Articles and accordingly the authorized capital III set forth in Ariticle 3, Paragraph 6 need not be used. Whether or not and to what extent the authorization to dispense treasury shares when fulfilling subscription rights will be used, or whether new shares from authorized capital will be dispensed instead, will be decided by the managing board, and in cases where a member of the managing board is exercising subscription rights then by the supervisory board, both of which when doing so will act in the best interests of the company and its shareholders.

Capital reserves

The capital reserve essentially contains payments from shareholders in accordance with section 272 (2) no. 1 of the German Commercial Code (HGB) less the costs of raising capital after tax. Furthermore, the value of the share-based remuneration granted as a salary component to executives (including the Executive Board) in the form of equity instruments is recongized.

In the 2021 financial year, a total of EUR 15 million was withdrawn from the capital reserve and offset against the retained earnings.

Treasury shares

The Annual General Meeting of June 30, 2020 authorised the Executive Board of the Company to acquire own shares until June 29, 2025 in accordance with § 71 para. 1 no. 8 of the German Stock Corporation Act (AktG) with a proportionate amount of the share capital attributable to them of up to 10 % of the share capital of the Company existing at the time this authorisation becomes effective or – if this amount is lower – at the time this authorisation is exercised. The shares acquired on the basis of this authorisation, together with other shares of the Company which the Company has already acquired and still holds or which are attributable to the Company pursuant to §§ 71d and 71e of the German Stock Corporation Act (AktG), may at no time account for more than 10% of the share capital of the Company. The provisions of § 71 para. 2 sentences 2 and 3 AktG shall be observed.

The acquisition may only be made on the stock exchange or by means of a public purchase offer addressed to all shareholders and must comply with the principle of equal treatment of shareholders (section 53a AktG).

The Executive Board was authorised to sell the treasury shares acquired on the basis of the above authorisation in a manner other than via the stock exchange or by means of an offer to all shareholders, provided that the sale is made in return for a cash payment and at a price that is not significantly lower than the stock exchange price of the Company's shares of the same class at the time of the sale. This authorisation to use shares is limited to shares with a proportionate amount of the share capital that may not exceed a total of 10 % of the share capital of the Company, either at the time this authorisation becomes effective or – if this amount is lower – at the time this authorisation is exercised. The maximum limit of 10 % of the share capital shall be reduced by the pro rata amount of the share capital attributable to those shares that are issued or sold during the term of this authorisation under exclusion of the subscription right pursuant to or in accordance with § 186 section 3 sentence 4 of the German Stock Corporation Act. The maximum limit of 10% of the share capital shall also be reduced by the proportionate amount of the share capital attributable to those shares that are to be issued to service bonds with option or conversion rights or option or conversion obligations, insofar as these bonds are issued during the term of this authorisation under exclusion of the subscription right in analogous application of section 186 (3) sentence 4 of the AktG.

The Executive Board was also authorised to transfer the treasury shares acquired on the basis of the above authorisation to third parties, provided that this is done for the purpose of acquiring companies, parts of companies or participations in companies or other assets. The Executive Board was also authorised to transfer the treasury shares acquired on the basis of the above authorisation to third parties, provided this is done for the purpose of acquiring companies, parts of companies or participations in companies or other assets or to carry out business combinations.

The Managing Board and – insofar as the obligation exists towards members of the Managing Board – the Supervisory Board were also authorized to use the treasury shares acquired on the basis of the above authorization to fulfill subscription rights that were granted within the scope of the Annual General Meeting on July 07, 2015 under item 6 Manz Performance Share Plan 2015 resolved on the agenda or as part of the Manz Performance Share Plan 2019 resolved by the Annual General Meeting on July 2, 2019 under item 6 of the agenda. The Management Board was also authorized to transfer the treasury shares acquired on the basis of the above authorization to third parties, insofar as this is done for the purpose of acquiring companies, parts of companies or interests in companies or other assets or to carry out business combinations.

The Executive Board was further authorised to use the treasury shares acquired on the basis of the above authorisation to fulfil subscription or conversion rights arising from the exercise of option or conversion rights or to fulfil option or conversion obligations granted or imposed in connection with the issue of bonds with warrants or convertible bonds, profit participation rights or participating bonds (or combinations of these instruments) of the Company or its group companies.

The Executive Board was also authorised to transfer the treasury shares acquired on the basis of the above authorisation to employees of the Company or employees or members of governing bodies of subordinate affiliated companies of the Company within the meaning of §§ 15 et seq. German Stock Corporation Act (AktG).

In the financial year 2021, the company did not acquire any (previous year: 64) of its own shares. The average price of the owb shares acquired in the previous year was EUR 23.14 with a market value of TEUR 1.

Revenue reserves

Revenue reserves include the earnings generated in the past by the companies included in the consolidated financial statements, insofar as they have not been distributed.

Accumulated other comprehensive income

Other comprehensive income includes reserves for the revaluation of pensions, financial assets measured at fair value through other comprehensive income (FVOCI), reserves for the subsequent measurement of cash flow hedges, income and expense recognized directly in equity from financial assets accounted for using the equity method, and currency translation adjustments from the translation of the financial statements of foreign subsidiaries.

Non-controlling interests

The non-controlling interests relate to the minority shareholders of Manz India Private Limited, in which Manz Asia Ltd. holds a 75% interest, and Suzhou Manz New Energy Equipment Co. Ltd. in which Manz AG holds a 56% interest. The share of equity and annual profit/loss attributed to the minority shareholders is disclosed separately in the balance sheet and/or income statement.

Proposed appropriation of profits

In accordance with article 58, paragraph 2 of the Corporation Act, Manz AG's dividend payout is based on the retained profits disclosed in Manz AG's annual financial statements (individual financial statements) as of December 31, 2021. Manz AG's annual financial statements as of December 31, 2021 closed with a net loss for the year of TEUR 6,464 (previous year: net loss of TEUR 6,143).

Information regarding capital management

The objectives, methods and processes of capital management are described in the management report.

(in TEUR)	Dec. 31, 2021	Dec. 31, 2020
Cash and cash equivalents	36,086	69,736
Financial liabilities	49,296	76,975
Net financial liabilities	13,210	7,239
Total Manz AG shareholders equity capital	**108,910**	**131,154**
Equity ratio (in %)	35.41	36.71
Gearing (in %)	12.1	5.5

In the financial year 2021, net financial liabilities increased. Cash and cash equivalents is lower than the level of financial liabilities. This shortfall is due to a delay in the project schedule for major orders. Furthermore, the equity ratio is decreasing mainly due to the one time effect out of the impairment on goodwill and trademark, it is below the targeted minimum equity ratio of 40 %. As a result of the increase in net financial liabilities, the ratio of net financial liabilities to equity before non-controlling interests, has increased to 12.1 % (previous year: 5.5 %). The Managing and Supervisory Boards have defined gearing of less than 50 % as a target. The specified target figure was achieved in the year under review.

Non-current financial liabilities (27)

Non-current financial liabilities totaling TEUR 8,337 consist of long-term loans of TEUR 7,738 from Manz Italy Srl which have a remaining term of up to six year and long-term loans of TEUR 599 from Manz Hungary Kft. which have a remaining term of up to seven years.

Non-current financial liabilities from leases (28)

Of the non-current financial liabilities from leases, TEUR 2,920 have a remaining term of more than one year and TEUR 7,783 of more than two years.

Pension provisions (29)

In the calculation of pension provisions, the selection of the discount rate or trend assumptions plus the formation of biometric probabilities, leads to differences in comparison to the actual obligations emerging over the course of time.

The components of expenses for pension benefits recognized in the Group's income statement and the amounts carried in the balance sheet are presented in the following tables.

The present value of performance-based obligations at the end of the year is balanced against the plan assets at fair market value (financing status).

Pension provisions

(in TEUR)	2021	2020
Changes in the present value of benefits		
Present value of performance-based obligations as of January 1	**7,216**	**7,821**
Service cost	8	9
Interest cost	33	55
Benefits paid	–634	–536
Actuarial losses (+) / gains (–)		
due to changes in demographic assumptions	–36	19
due to changes in financial assumptions	77	201
due to adjustments based on past experience	–1	–295
Currency differences from international plans	187	–57
Present value of performance-based obligations as of December 31	**6,850**	**7,216**
Change in plan assets		
Value of plan assets as of January 1	**508**	**619**
Income from plan assets	2	5
Company contributions	326	159
Benefits paid	–178	–277
Actuarial losses (+) / gains (–)	8	16
Currency differences from international plans	44	–14
Value of plan assets as of December 31	**710**	**508**
Financing status (= pension reserves)	**6,140**	**6,708**
which apply to:		
Manz AG, Reutlingen	3,509	3,781
Manz Italy Srl, Sasso Marconi/Italy	1,110	1,419
Manz Taiwan Ltd., Chungli/ Taiwan	1,521	1,508

The pension obligations of Manz AG, Reutlingen consist of three different pension commitments:

1. a pension plan of the Maier company in Tübingen, which was purchased by Manz. All company employees over the age of 25 were pension beneficiaries. The pension plan was closed as of July 15, 1997. A reinsurance policy exists for this pension plan and the resulting claims.

2. a direct commitment with reinsurance for the former Executive Board member Otto Angerhofer. Mr. Angerhofer received a monthly benefit from this commitment until his death. His widow continues to receive 60% of this benefit.

3. a reinsured provident fund for the Executive Board with a defined contribution plan.

The obligations at Manz Italy S.r.l. include the statutory compensation for the separation of employees in each employment relationship.

There are currently two different pension funds in Taiwan. The Old Labor Pension fund (OLPF) for pension commitments from 1984 to 2005 and the New Labor Pension fund (NLPF) for pension commitments since 2005. With the introduction of the new one, the old pension fund was closed. Under the OLPF, only around 10 % of the employees registered in the private sector were eligible for benefits as a result of the payment requirement of 25 years of servce. Eligible employees do not have individual accounts, but only company accounts, which were often not funded. With the NLPF, the system was changed to a defined contribution system. Each employee now has an account and old contributions from former employers are transferred. In addition, employees can make additional contributions of their own without obligation. The government also provides guarantees for a minimum return of 2 %. Employees have the opportunity to transfer from the OLPF to the NLPF during the period from 2005 to 2010. In the NLPF, the employer pays in 6 % minimum of the salary of its employees and the employees can pay in additional personal contributions of up to 6 % of their salary.

The following amounts have been included in the income statement:

(in TEUR)	2021	2020
Current service costs	–8	–9
Net interest costs	–31	–50

The service cost is reported in personnel expenses, while the interest cost is reported under financial expenses.

In the next financial year, the employer contributions to plan assets are expected to increase by TEUR 52 (previous year: TEUR 54) and the expected pension payments are TEUR 1,471 (previous year: TEUR 1,798). In the next two to five years, total expected pension payments are TEUR 1,166.

The plan assets for German pension obligations consist exclusively of reinsurance policies. The plan assets for Manz Taiwan Ltd. are legally required by law that must be paid into an external central trust (Taiwan's Labor Pension Fund). The fund's assets comprise reinsurance policies (Germany) and trust assets (Taiwan), which make up 20 % and 80 % of the fund's total assets, respectively. The plan assets are measured at fair value.

For defined contribution plans, payments were made in the financial year under review in the amount of TEUR 389 (previous year: TEUR 361). In addition, the domestic companies also paid contributions to the state pension insurance fund in the amount of TEUR 2,799 (previous year: TEUR 2,370).

The calculation of pension reserves was carried out based on the following underlying assumptions:

(in %)	Germany		Italy		Taiwan	
	2021	2020	2021	2020	2021	2020
Discount rate	0.91	0.63	0.44	–0.02	0.80	0.44
Salary and wage increases	2.50	2.50	1.75	0.80	4.00	3.00
Pension increases	1.70	1.70	2.81	2.10	0.80	0.44

An increase or decline in key actuarial assumptions would have the following effect on the present value of financing status:

(in TEUR)		2021	2020
Discount rate sensitivity	+0.50 %	884	1,223
Discount rate sensitivity	–0.50 %	1,359	1,642
Sensitivity for pension dynamics	+0.50 %	1,105	1,597
Sensitivity for pension dynamics	–0.50 %	1,117	1,262

The sensitivity analyses have been determined based on a method that extrapolates the impact on the defined benefit obligation because of reasonable changes in key assumptions occurring at the end of the reporting period. The sensitivity analyses are based on a change in a significant assumption, keeping all other assumptions constant. The sensitivity analyses may not be representative of an actual change in the defined benefit obligation as it is unlikely that changes in assumptions would occur in isolation from one another.

In case of a one year higher life expectancy, the pension obligation would be increased of TEUR 3,540.

The weighted average term of the defined benefit obligations at the end of the reporting year is 12.0 years (previous year: 12.3 years).

Other non-current provisions (30)

Other non-current provisions developed as follows:

(in TEUR)	Jan 1, 2021	Currency adjustment	Utilization	Reversal	Discount rate	Addition	Dec. 31, 2021
Warranties	3,370	94	2,204	602	–8	1,753	2,419
Personnel	349	0	103	0	0	112	358
	3,719	**94**	**2,307**	**602**	**–8**	**1,865**	**2,777**

(in TEUR)	Jan 1, 2020	Currency adjustment	Utilization	Reversal	Discount rate	Addition	Dec. 31, 2020
Warranties	2,359	–19	540	602	4	2,176	3,370
Personnel	300	0	56	0	0	105	349
	2,659	**–19**	**596**	**602**	**4**	**2,281**	**3,719**

Long-term personnel obligations include obligations arising from partial retirement and long-service and anniversary bonuses. The provision for partial retirement in the amount of TEUR 11 was netted against the planned assets.

Provisions for warranty obligations are recognized based on past experience. It is expected that the costs will be incurred within the next two financial years.

Current financial liabilities (31)

Basically current liablities are due within one year. However, based on past experience and the existing backlog, it is to be expected that the respective credit lines will be prolonged.

For the presentation of current financial liabilities, please refer to table “Development of liabilities from financing activities”.

Trade payables (32)

Trade payables are accounted for at amortized cost. Their balance sheet values generally correspond to their market values and they are due within one year.

(in TEUR)	Dec. 31, 2021	Dec. 31, 2020
Trade payables to third parties	66,373	47,000
	66,373	**47,000**

Contract liabilities (33)

Contract liabilities, which represent the surplus of advance payments from customer orders, consisted of the following amounts as of December 31, 2021:

(in TEUR)	Dec. 31, 2021	Dec. 31, 2020
Contract liabilities	30,923	43,865

The decrease in contract liabilities is due to a decrease in advance payments compared to the project work performed. The contract liabilities from January 1, 2021 of TEUR 43.825 were fully recognized as revenue in the period ending December 31, 2021.

Other current provisions (34)

Other current provisions developed as follows:

(in TEUR)	Jan. 1, 2021	Currency adjustment	Utilization	Reversal	Addition	Dec. 31, 2021
Personnel	2,782	72	1,235	184	632	2,067
Sales comissions	1,620	144	1,241	38	1	486
Reworking	313	0	313	0	1,479	1,479
Other	2,860	151	2,363	41	1,875	2,482
	7,575	**367**	**5,152**	**263**	**3,987**	**6,514**

(in TEUR)	Jan. 1, 2020	Currency adjustment	Utilization	Reversal	Addition	Dec. 31, 2020
Personnel	1,895	–22	931	89	1,929	2,782
Sales comissions	4,999	–161	3,024	199	5	1,620
Reworking	386	0	305	0	232	313
Other	3,413	–40	2,355	447	2,289	2,860
	10,693	**–223**	**6,615**	**735**	**4,455**	**7,575**

Costs of the annual financial statements of TEUR 404, provisions for warranties of TEUR 355 and anticipated losses of TEUR 637 are recognized in the area “Other”.

The provisions will be settled in the next year.

Other current liabilities (35)

(in TEUR)	Dec. 31, 2021	Dec. 31, 2020
Tax liabilities	3,464	7,822
Personnel-related liabilities	6,396	6,339
Other	5,295	2,552
	15,155	**16,713**

The tax liabilities are primarily made up of value added tax liabilities. TEUR 1,200 outstanding investment to CADIS Engineering GmbH was reported under “Others”. All liabilities are due within one year.

Leases

In financial year 2019 subleases were concluded for parts of the building of the Tübingen location. It is identified as a finance lease contract as the terms of the sub-leases cover the major part of the economic life of the right of use asset. Accordingly, the right of use was reduced and at the same time receivables from subleasing relationships were recognized at the present value of EUR 795 thousand.

In the reporting period finance income of lease receivables of TEUR 18 (previous year: TEUR 19) were recorded.

Below the the maturity analysis shows the lease receivables consisting of the non-discounted annual lease payments expected after the balance sheet date:

(in TEUR)	2021	2020
less than one year	219	173
one to two years	219	173
two to three years	173	173
three to four years	148	173
four to five years	75	148
more than five years	0	74
Total of non-discounted annual lease payments	**834**	**914**

Report on Financial Instruments

Trade receivables, contract assets, other current assets, cash and cash equivalents, trade payables and the majority of other liabilities within the scope of IFRS 7 have short remaining terms. The carrying amounts of these financial instruments are therefore assumed to equate approximately to their fair market values.

The following table shows the reconciliation of balance sheet items to the categories of financial instruments, broken down according to the carrying amounts and fair values of the financial instruments.

Assets as of December 31, 2021

IFRS 9 – Financial Assets		Carrying amounts by measurement category				
(in TEUR)	Fair value	At continued acquisition cost	Fair value through other comprehensive income (equity instruments)	Designated hedge instruments	Not in the scope of IFRS 7, IAS 9	Carrying amount Dec. 31, 2021
Investments	1,798	0	1,798	0	0	1,798
Other non-current assets	2,161	1,586	0	0	575	2,161
Trade receivables from third parties	33,691	33,691	0	0	0	33,691
Other current assets	15,743	15,743	0	0	0	15,743
Cash and cash equivalents	36,086	36,086	0	0	0	36,086
	89,479	**87,106**	**1,798**	**0**	**575**	**89,479**

Liabilities as of December 31, 2021

IFRS 9 – Financial Liabilities		Carrying amounts by measurement category				
(in TEUR)	Fair value	Fair value through Profit or loss	At continued acquisition cost	Designated hedge instruments	Not in the scope of IFRS 7, IAS 9	Carrying amount Dec. 31, 2021
Financial liabilities	49,296	0	49,296	0	0	49,296
Trade payables to third parties	66,373	0	66,373	0	0	66,373
Dervivative financial instruments	225	225	0	0	0	225
Other liabilities	5,295	0	5,295	0	0	5,295
	121,189	**225**	**120,964**	**0**	**0**	**121,189**

Assets as of December 31, 2020

IFRS 9 – Financial Assets	Carrying amounts by measurement category					
(in TEUR)	Fair value	At continued acquisition cost	Fair value through other comprehensive income (equity instruments)	Designated hedge instruments (cash flow hedges)	Not in the scope of IFRS 7, IAS 9	Carrying amount Dec. 31, 2020
Investments	7,260	0	7,260	0	0	7,260
Other non-current assets	1,770	1,083	0	0	687	1,770
Trade receivables from third parties	27,204	27,204	0	0	0	27,204
Trade receivables from associated companies	0	0	0	0	0	0
Derivative financial instruments	15	0	0	15	0	15
Other current assets	9,670	9,670	0	0	0	9,670
Cash and cash equivalents	69,736	69,736	0	0	0	69,736
	115,655	**107,693**	**7,260**	**15**	**687**	**115,655**

Liabilities as of December 31, 2020

IFRS 9 – Financial Liabilities	Carrying amounts by measurement category					
(in TEUR)	Fair value	Fair value through Profit or loss	At continued acquisition cost	Designated hedge instruments (cash flow hedges)	Not in the scope of IFRS 7, IAS 9	Carrying amount Dec. 31, 2020
Financial liabilities	76,975	0	76,975	0	0	76,975
Financial liabilities from leases	0	0	0	0	0	0
Trade payables to third parties	47,000	0	47,000	0	0	47,000
Trade payables to associated companies	0	0	0	0	0	0
Dervivative financial instruments	0	0	0	0	0	0
Other liabilities	2,552	0	2,552	0	0	2,552
	126,527	**0**	**126,527**	**0**	**0**	**126,527**

Measurement classes

The Group uses the following hierarchy to determine fair values of financial instruments for each valuation method:

Level 1: (unadjusted) prices for identical assets or liabilities quoted on active markets.

Level 2: input data that is observable either directly (i.e., as prices) or indirectly (i.e., derived from prices) for the asset or liability and that does not represent any quoted price as described in Level 1.

Level 3: input data that is not based on observable market data for the measurement of the asset or liability (unobservable input data).

The financial assets and liabilities recognized by Manz at fair market value are broken down by the fair market value hierarchy levels as follows:

Assigned to fair market value hierarchy levels

		Fair value hierarchy		
(in TEUR)	**Dec. 31, 2021**	**Level 1**	**Level 2**	**Level 3**
Assets at fair value – affecting net income				
Derivatives with a balance sheet hedging relationship	0	0	0	0
Assets at fair value – not affecting net income				
Investments	1,798	0	0	1,798
Derivatives with a balance sheet hedging relationship	0	0	0	0
Liabilities at fair value – affecting net income				
Contingent purchase price liabilities	225	0	225	0
Liabilities at fair value – not affecting net income				
Derivatives with on-balance-sheet hedging relationship	0	0	0	0

		Fair value hierarchy		
(in TEUR)	**Dec. 31, 2020**	**Level 1**	**Level 2**	**Level 3**
Assets at fair value – affecting net income				
Derivatives with a balance sheet hedging relationship	0	0	0	0
Assets at fair value – not affecting net income				
Investments	7,260	0	0	7,260
Derivatives with a balance sheet hedging relationship	15	0	15	0
Liabilities at fair value – affecting net income				
Contingent purchase price liabilities	0	0	0	0
Liabilities at fair value – not affecting net income				
Derivatives with on-balance-sheet hedging relationship	0	0	0	0

The measurement of the fair market value of the financial instruments in levels 1, 2, and 3 held as of December 31, 2021, resulted in the following total income and expenses:

(in TEUR)	2021	2020
Assets		
included in the income statement	0	–10
recorded in equity	–7,260	–4,440
at amortized cost		
included in the income statement	–225	150
recorded in equity	0	15

Financial assets of the fair market value hierarchy Level 3

Development (in TEUR)	2021	2020
As of January 1	7,260	11,700
Additions	1,798	0
Disposals	0	0
Change in fair value	–7,260	–4,440
As of December 31	**1,798**	**7,260**

Financial assets of the fair market value hierarchy Level 3

Development (in TEUR)	2021	2020
As of January 1	0	3,000
Additions	0	0
Utilization	0	–2,850
Change in fair value	0	–150
As of December 31	**0**	**0**

The Group holds a non-controlling 11.1 % stake in NICE PV Research Ltd. Beijing, PR China. This company is not listed on the stock exchange. The Group holds these shares as a strategic investment and has therefore measured them at fair value through other comprehensive income.

As of December 31, 2021, the fair value of NICE PV Research Ltd. has been decreased to zero. For more detailed information, we refer to Chapter (17) Financial Assets.

If the underlying parameters (Equity) had been 10 % higher (lower) in the current periods, the value of the stake would have been TEUR 0 higher (lower)

The Group holds 3.26 % share in MetOx Technologies Inc., Houston, United States of America. This company is not listed on the stock exchange. The Group holds these shares as a strategic investment and has therefore measured them at fair value through other comprehensive income.

If the underlying parameters (EBIT) of MetOx Technologies Inc. had been 10 % higher (lower) in the current periods, the value of the share would have been TEUR 552 higher (lower)

Net results according to IFRS 9 valuation categories

(in TEUR)	Net profits/ losses	Total interest income/ expenses	Total interest income	Total interest expenses
Financial year 2021				
Amortized cost (AC)	–4,741	–1,043	509	–1,552
thereof:				
Financial liabilities	–3,796	–1,552	0	–1,552
Financial assets	–1,170	509	509	0
Fair value through profit or loss (FVTPL)	0	0	0	0
Derivatives	–225	0	0	0
	–5,191	**–1,043**	**509**	**–1,552**

(in TEUR)	Net profits/ losses	Total interest income/ expenses	Total interest income	Total interest expenses
Financial year 2020				
Amortized cost (AC)	–6,784	–1,706	72	–1,778
thereof:				
Financial liabilities	–2,828	–1,778	0	–1,778
Financial assets	–3,957	72	72	0
Fair value through profit or loss (FVTPL)	150	0	0	0
Designated hedging instruments	–10	0	0	0
	–6,645	**–1,706**	**72**	**–1,778**

The net gains and losses from the category “amortized costs (AC)” primarily include gains and losses from currency translation and changes in valuation allowances on receivables as well as losses on receivable from construction contracts.

Interest income for financial instruments in the “amortized costs (AC)” category is the result of investing liquid funds. The interest expenses within the category “amortized cost (AC)” relate to financial liabilities to banks.

Financial risk management and financial derivatives

As a company which operates internationally, the Manz Group is exposed to credit, liquidity, and market risks during the course of its ordinary business activities. Market risks particularly result from changes to exchange rates and interest rates. Financial risk management measures are designed to manage and limit these market risks within the scope of operating and financial activities. Depending on the risk assessment, derivative hedging instruments are used. To reduce the default risk, hedging transactions are entered into only with leading financial institutions which have excellent credit ratings.

The basic principles of Manz financial policy are regularly determined by the Managing Board and monitored by the Supervisory Board.

For information on risk concentration, please refer to the Risk Report in the Group Management Report.

The sensitivity analyses in the following sections refer to the situation as of December 31, 2021 and 2020 respectively. The sensitivity analyses were carried out based on the hedging relationships existing as of December 31, 2021, and on the premise that net debt, the relationship between the fixed and variable interest rates of liabilities and derivatives, and the proportion of financial instruments held in foreign currencies will remain constant.

The sensitivity analyses were prepared under the assumption that the relevant items of the income statement reflect the effect of assumed changes in the corresponding market risks.

Credit risks

Credit risk is the risk that business partners will not be able to meet their contractual obligations, resulting in a financial loss for the Manz Group. Within the scope of its operating activities, the Group is particularly exposed to default risks when it comes to trade receivables, as well as risks associated with its financing activities, including cash investments with banks and derivative financial instruments.

The credit risk from receivables from customers is managed (locally) at the company level and monitored continuously. In project business, the risk of default is minimized by advance payments. If default risks are noticeable in the case of financial assets, these risks are recognized by means of valuation allowances. The risk of default with regard to cash investments and derivative financial instruments is reduced by distributing the investments across various banks.

The maximum credit risk of financial assets (including derivatives with a positive market value) corresponds to the carrying amount recognized in the balance sheet. As of the balance sheet date December 31, 2021, the maximum credit risk was TEUR 89,479 (previous year: TEUR 115,655).

	Trade receivables	
(in TEUR)	**Dec. 31, 2021**	**Dec. 31, 2020**
Not overdue and not impaired	28,558	22,305
Overdue and value adjusted gross	4,235	5,671
Overdue and not impaired (1–30 days)	1,811	277
Overdue and not impaired (31–60 days)	158	96
Overdue and not impaired (61–90 days)	199	0
Overdue and not impaired (91–180 days)	133	96
Overdue and not impaired (>180 days)	32	86
Value adjustment	–1,435	–1,327
	33,691	**27,204**

In certain cases, Manz may assume that a financial asset will default if there are internal or external indications that the outstanding amounts will not be paid in full. Such information is available, e.g., if the debtor's financial difficulties become known or if the borrower becomes insolvent or goes bankrupt. A financial asset is impaired if there is certainty that the contractual cash flows will not be realized.

There were no indications of an impairement requirement for the trade receivables that were not impaired. In order to determine the recoverability of trade receivables, valuation models are used to determine possible default rates. Both the use of default rates under consideration of different regions and an examination of individual default rates by the responsible management were carried out. The recoverability of receivables that are neither overdue nor impaired is considered very high. This assessment based primarily on the long-standing business relationship with most of the customers and the creditworthiness of the customers.

The other assets are not overdue.

Liquidity risks

Liquidity risks, i.e., the risk that Manz will not be able to fulfill its financial obligations, were limited by setting up financial reserves and using appropriate financial instruments to manage our future liquidity situation.

Manz Group has sufficiently high bank balances and cash credit lines. The subsidiaries in Slovakia, Hungary, Italy, China and Taiwan are financed primarily through short-term overdraft facilities and, to a lesser extent, through long-term loans. As of December 31, 2021, the Manz Group had guarantee credit lines with banks totaling EUR 17.8 million (previous year: EUR 16.9 million).

In general, in order to reduce liquidity and financing risks, the companies in the Manz Group are required to process orders "cash positive" as far as possible. Here, the deposits should exceed the payouts over the entire term of the respective project.

As usual in project-based business, delays in incoming orders or payments have significant effects on liquidity of the respective company and possibly also on the Group. In order to recognize these risks from delayed payments in a timely manner, the Manz Group works with a rolling liquidity forecast, which is updated bi-weekly. The Group thus achieves a balance between covering its financial requirements and ensuring flexibility through the use of bank overdrafts, bank loans and leases. Manz has sufficient sources of finance at its disposal. Liabilities to existing lenders with a term of up to twelve months are generally extended. There are no contractual extension rights in favor of Manz.

Based on current corporate planning and an order backlog of EUR 229.1 million as of December 31, 2021 (previous year: EUR 202.3 million), the Managing Board assumes that Manz AG will be able to meet its payment obligations in fiscal years 2022 and 2023.

The following lists show the contractually agreed, non-discounted interest and principal payments for the primary financial liabilities covered by IFRS 7. If the maturity date is not fixed, the liability is applied to the earliest maturity date. We mainly assume that the cash outflows will not occur earlier than shown.

(in TEUR)	Total	2022	2023	>2024
Dec. 31, 2021				
Financial liabilities	51,577	42,508	3,433	5,636
Trade payables	66,373	66,373	0	0
Financial liabilities arising from leases	16,413	3,750	3,410	9,253
Derivative financial instruments	4,682	3,829	853	0
Other liabilities	5,295	5,295	0	0
	144,340	**121,755**	**7,696**	**14,889**

(in TEUR)	Total	2021	2022	>2023
Dec. 31, 2020				
Financial liabilities	79,366	73,299	259	5,808
Trade payables	47,000	47,000	0	0
Financial liabilities arising from leases	18,895	4,014	3,278	11,603
Derivative financial instruments	0	0	0	0
Other liabilities	2,552	2,552	0	0
	147,813	**126,865**	**3,537**	**17,411**

Some of the Manz Group's cash and guarantee credits with banks that were utilised on the balance sheet date are secured in the form of pledges on land charges on buildings (see chapter (15) "Property, plant and equipment", inventories (see chapter (19) "inventories", and receivables(in the amount of TEUR 562).

Currency risks

Currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate due to changes in exchange rates. The Manz Group is primarily exposed to this risk from its business activities (if revenues and/or expenses are denominated in a currency other than the functional currency of the respective Manz company). In order to reduce the effects of exchange rate fluctuations, Manz AG continually quantifies exchange rate risks and hedges all major risks with forward exchange contracts and foreign exchange swaps whenever this is possible and economically meaningful. The hedging of value fluctuations of future cash flows from expected transactions involves planned sales in foreign currency. Differences resulting from the translation of financial statements into the Group currency are disregarded.

To present market risks, IFRS 7 requires sensitivity analyses which show possible effects of changes in relevant risk variables (e.g., exchange rates, interest rates) might have on earnings and equity. To determine the periodic effects, a possible change in the risk variables on the financial instruments held by the company on the reporting date is undertaken. It is assumed that the instruments held at the end of the year are representative for the financial year. Foreign currency derivatives are always assigned to hedged items so that no currency risks arise from these instruments.

With regard to foreign currency risks, in the 2021 fiscal year Manz was particularly exposed to exchange rate fluctuations of the Taiwanese dollar to the US dollar and the Euro, as well as the Chinese renmimbi to the Euro, since a significant portion of the goods and services were traded in these currency pairs in the reporting year.

If the USD had appreciated by 5 % against the TWD as of December 31, 2021 (2020), the consolidated result would have been TEUR 2,653 higher (previous year TEUR 2,177 higher). Equity before tax would have been correspondingly higher by TEUR 2,653 (previous year: TEUR 2,177 higher). If the USD had been devalued by 5 % against the TWD as of December 31, 2021 (2020), the consolidated result would have been TEUR 2,653 lower (previous year: TEUR 2,177 lower). Equity before taxes would have been reduced accordingly by TEUR 2,653 (previous year: TEUR 2,177 reduced).

If the EUR had appreciated by 5 % against the TWD as of December 31, 2021 (2020), the consolidated result would have been TEUR 653 higher (previous year TEUR 718 higher). Equity before taxes would have been correspondingly higher by TEUR 653 (previous year: TEUR 718 higher). If the EUR had been devalued by 5 % against the TWD as of December 31, 2021 (2020), the consolidated result would have been TEUR 653 lower (previous year: TEUR 718 lower). Equity before taxes would have been reduced accordingly by TEUR 653 (previous year: TEUR 718 reduced).

If the EUR had appreciated by 5 % against the CNY as of December 31, 2021 (2020), the consolidated result would have been TEUR 551 higher (previous year TEUR 527 higher). Equity before taxes would have been correspondingly higher by TEUR 551 (previous year: TEUR 527 higher). If the EUR had been devalued by 5 % against the CNY as of December 31, 2021 (2020), the consolidated result would have been TEUR 551 lower (previous year: TEUR 527 lower). Equity before taxes would have been reduced accordingly by TEUR 551 (previous year: TEUR 527 lower).

Interest rate risks

Interest rate risk is the risk that the fair value or future cash flow of a financial instrument will fluctuate due to changes in market interest rates. The risk of fluctuations in market interest rates to which the Group is exposed results primarily from loans with variable interest rates.

Manz has loans with variable interest rates that were subject to interest rate changes as of December 31, 2021. A hypothetical increase in these interest rates by 25 basis points per year would have led to an increase in interest expenses of TEUR 147 (previous year: TEUR 189). A hypothetical reduction of 25 basis points per year would have led to a reduction in interest expenses of TEUR 147 (previous year: TEUR 189).

Manz holds a balanced portfolio of fixed-rate and variable-rate loans to manage interest rate risk. To ensure this balance, Manz enters into interest rate swaps in which variable and fixed interest amounts are exchanged with the contractual partner.

The interest rates of the Manz Group's financing agreements are based in part on reference interest rates such as EURIBOR and LIBOR. The current reform of the reference interest rates is of very minor importance for manz, as the financing affected is largely short-term and the Group does not hold any derivatives in its portfolio that relate to reference interest rates. In the event of a significant change or the omission of the reference interest rates that affect the Group´s financing contracts, manz intends to mutually agree on a standard market alternative with the banks.

Events after Reporting Period

To what extend the Russia-Ukraine conflict will affect Manz AG cannot be reliably estimated at the present due to considerable uncertainty and the high dynamics. Manz does not maintain direct business relationships with business partners in Russia or in the Ukraine. So far, there have been no direct effects on Manz AG´s accounting resulting from the war in Ukraine or from the sanctions imposed by Russia. The indirect effects are currently not foreseeable.

On January 1, 2022, Manz AG will reorganize the segment structure. The segments Electronics, Solar and Contract Manufacturing are combined to form the new segment Other Industrial Business. The segment Energy Storage will become the new E-Mobility segment. The segment Service will be split between the two new segments.

Related Party Disclosures

IAS 24 requires disclosures of relationships, transactions and outstanding balances (including obligations) with related parties.

Natural related persons include the Supervisory Board and the Managing Board of Manz AG including their family members as related persons. In addition, the Manz family together holds 25.01 % of the shares in Manz AG.

It also includes companies that are controlled by a related party or are under the joint control of a related company or are involved with a related party, to the related company. The companies accounted for using the equity method are also assigned to related companies. Accordingly, the associated companies Cadis Engineering GmbH, Schwendi, Germany and Q.big 3D GmbH, Aalen, Germany was identified as related party, In the 2021 financial year, contract assets of TEUR 102 existed with Cadis Engineering GmbH as of the balance sheet date. There were no outstanding balances as of the balance sheet date. There were business transactions with Q.big 3D GmbH in the amount of 0 TEUR. There were no outstanding balances as of the balance sheet date. In addition, Manz GmbH Management Consulting and Investment, Schlaitdorf, is a related party. No consulting services were obtained from this company in the 2021 financial year (previous year: 0 TEUR). There were no outstanding balances as of the balance sheet date.

Managing Board

The following persons were appointed as members of the Managing Board in the financial year 2020.

- Martin Drasch, Chief Executive Officer
- Manfred Hochleitner, Chief Financial Officer
- Jürgen Knie, Chief Operations Officer

Compensation of the Managing Board

The total compensation of the Managing Board in accordance with Section 314 Subsection 1 No. 6a) of the German Commercial Code amounted to TEUR 1,563 for the financial year 2021 (previous year: TEUR 2,250). The non-performance-related benefits amount to TEUR 877 (previous year: TEUR 862) and the performance-related benefits amount to TEUR 28 (previous year: TEUR 254). In the financial year 2021, this figure does not include any severance payments (previous year: TEUR 0). In the year under review, a total of 12,101 (previous year: 48,675) subscription rights to shares were granted to members of the Managing Board as part of the Performance Share Plan with a total fair value of TEUR 658 (previous year: TEUR 1,134).

The subscription rights to shares of Manz AG based on the 2019 Manz Performance Share Plan and the 2015 Manz Performance Share Plan (tranches 2016, 2017 and 2018) were measured at fair value using recognized financial mathematical methods.

Managing Board member Martin Drasch has a defined contribution plan. For this purpose, TEUR 12 (previous year: TEUR 12) p.a. are paid into an externally funded pension fund.

Managing Board member Manfred Hochleitner has a defined contribution plan. For this purpose, TEUR 12 (previous year: TEUR 12) p.a. are paid into an externally funded pension fund.

There is a defined contribution plan for Managing Board member Jürgen Knie. For this purpose, TEUR 12 (previous year: TEUR 12) p.a. are paid into an externally funded pension fund.

The board member Jürgen Knie has been a member of the board of directors of Christian Maier GmbH & Co. KG Maschinenfabrik, Heidenheim an der Brenz and member of the board of directors of CMH Maschinenfabrik GmbH, Heidenheim an der Brenz since July 17, 2021.

The former Executive Board member Otto Angerhofer (deceased in Oct. 2020) and his widow received a pension payment of TEUR 6 (previous year: TEUR 10) in fiscal year 2021. There is a pension obligation to the former Executive Board member or his widow in the amount of EUR 99 thousand (previous year: EUR 106 thousand).

The following table provides an overview of the compensation paid to the members of the Managing Board for performing their duties in the financial year 2021 according to IAS 24.17:

(in TEUR)	**Total 2021**	**Total 2020**
Short-term employee benefits	**905**	1,116
Post-employment benefits	**0**	0
Benefits on termination of employment	**0**	0
Share-based compensation	**542**	319

Supervisory Board

Prof. Dr. Heiko Aurenz, Dipl. oec., Managing Director of Ebner Stolz Management Consultants GmbH, Stuttgart, Chairman of the Supervisory Board.

Dieter Manz, Dipl. Ing. (FH), Managing Director of Manz GmbH Management Consulting and Investment, Schlaitdorf, Deputy Chair of the Supervisory Board.

Prof. Dr.-Ing. Michael Powalla, Director of the Photovoltaics Division and a member of the board of directors of the Center for Solar Energy and Hydrogen Research in Baden-Württemberg (ZSW) and professor of thin-film photovoltaics at the Karlsruhe Institute of Technology (KIT), Institute of Light Technology, Faculty of Electrical Engineering and Information Technology.

Dr. Zhiming Xu, Chief Technical Officer of the Shanghai Electric Automation Group of Shanghai Electric Group Company Ltd., Shanghai, PR China and Managing Director of Shanghai Electric Group Automation Engineering Co, LTD, Shanghai, PR China.

The Chairman of the Supervisory Board Heiko Aurenz is also Chairman of the Supervisory Board of Know How! Company for continuing education, Leinfelden-Echterdingen, Germany; Dep. Chairman of the Supervisory Board of MQ Result AG, Tübingen; Member of the Supervisory Board of Anna-Haag-Mehrgenerationenhaus e.V., Stuttgart; Member of the Supervisory Board of Anna Haag Stiftung GmbH, Stuttgart; Member of the Supervisory Board of TanDiEM gGmbH, Stuttgart; member of the Foundation Board of the Foundation Aufbruch und Chance, Stuttgart; Advisory Board Chairman of Bumüller GmbH & Co Backbetriebe KG, Hechingen; member of advisory board of Herrmann Ultraschalltechnik GmbH & Co. KG, Karlsbad and member of the advisory board of Herrmann Ultraschalltechnik Holding KG, Karlsbad.

The Deputy Chairman of the Supervisory Board Dieter Manz is a member of the Supervisory Board of TecInvest Holding AG, Puchheim, member of advisory board of Adlatus Robotics GmbH, Ulm and member of advisory board of Q. big 3D GmbH, Aalen.

Supervisory Board member Prof. Dr.-Ing. Michael Powalla does not hold any mandates in other statutory Supervisory Boards or comparable domestic and foreign supervisory bodies of commercial companies.

Supervisory Board member Dr. Zhiming Xu is a member of the Supervisory Board of Suzhou Manz New Energy Equipment Co., Ltd., Suzhou, People’s Republic of China, Deputy Chairman of the Supervisory Board of NICE PV Research Ltd., Beijing, People’s Republic of China and chairman of the Supervisory Board of Shanghai Tanzhen Laser Technology Co., Ltd., Shanghai, People’s Republic of China.

Compensation of the Supervisory Board

For the financial year 2021, the members of the Supervisory Board were paid a basic compensation and additional compensation for committee activities and this was a total, including attendance fees, of TEUR 192 (previous year: TEUR 189).

Employees

The number of employees in the Manz Group breaks down as of December 31, 2021, and as an average over the 2021 reporting period as follow:

Average Headcount during the year	**2021**	**2020**
Commercial employee	611	645
Production	760	792
Total employees	**1,371**	**1,437**

Auditor fees

The auditor fees assessed for services is split up in the following table:

(in TEUR)	**2021**	**2020**
Audit services	280	182
Other attestation services	6	0
Tax services	0	0
Other services	0	0

The other certification services include the fee for the formal review of the compensation report, which was carried out in accordance with Section 162 AktG.

Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, Stuttgart audited the consolidated financial statements of the financial years 2021 and 2020.

Corporate Governance Code

Manz AG's Managing Board and Supervisory Board have issued the declaration required by Section 161 of the German Stock Corporation Act (AktG) and made it permanently available to shareholders on Manz AG's website at www.manz.com.

Reutlingen, March 30, 2022

The Managing Board of Manz AG

Jürgen Knie Martin Drasch Manfred Hochleitner

Responsibility Statement

To the best of our knowledge, and in accordance with the applicable accounting principles, the consolidated financial statements give a true and fair view of the financial position, cash flows and profit or loss of the Group, and the Group management report, which is combined with the management report of Manz AG, includes a true and fair view of the development and performance of the business position of the Group together with a description of the principal opportunities and risks associated with the expected development of the Group.

Reutlingen, March 30, 2022

The Managing Board of Manz AG

Jürgen Knie | Martin Drasch | Manfred Hochleitner

Independent Auditor's Report

To Manz AG

Report on the audit of the consolidated financial statements and of the group management report

Qualified opinions

We have audited the consolidated financial statements of Manz AG, Reutlingen, and its subsidiaries (the Group), which comprise the consolidated income statement, and the consolidated statement of comprehensive income for the fiscal year from January 1 to December 31, 2021, the consolidated balance sheet as at December 31, 2021, consolidated cash flow statement flows and consolidated statement of changes in equity for the fiscal year from January 1 to December 31, 2021, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of Manz AG for the fiscal year from January 1 to December 31, 2021. In accordance with the German legal requirements, we have not audited the content of the combined statement on corporate governance, which is published on a website stated in the group management report and is part of the group management report (Secs. 289f and 315d HGB ["Handelsgesetzbuch": German Commercial Code]).

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

- with the exception of the possible effects of the matter described in section "Basis for the qualified opinions", the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB and, with the exception of these possible effects, in compliance with these requirements, give a true and fair view of the assets, liabilities and financial position of the Group as at December 31, 2021, and of its financial performance for the fiscal year from January 1 to December 31, 2021, and

- with the exception of the possible effects of the matter described in section "Basis for the qualified opinions", the attached management report as a whole provides an appropriate view of the Group's position. With the exception of the possible effects of this matter, the group management report is in all material respects consistent with consolidated financial statements prepared according to German commercial law, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our opinion on the group management report does not cover the content of the combined corporate governance statement referred to above.

Pursuant to Sec. 322 (3) Sentence 1 HGB, we declare that, with the exception of the qualifications of the opinions on the consolidated financial statements and on the group management report, our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the qualified opinions

A significant project of Manz AG is the CIGS*fab* project with the Chinese client Chongquin Shenhua Thin Film Solar Technology Co., Ltd., for the delivery of a solar module production line. By letters dated June 10, 2021, November 11, 2021 and February 18, 2022, Manz AG terminated the contract on the delivery of the solar module production line making reference to the relevant regulations of the contract between Manz AG and Chongquin Shenhua Thin Film Solar Technology Co., Ltd., because the completion of the solar module production line has been interrupted since the installation of machines upon customer request in December 2020 and has not been resumed ever since. In addition, Manz AG has asserted all claims for the services rendered to date. The claims asserted relate to outstanding payments from the contract and accrued additional expenses. The client has rejected these claims and refuses payment or has asserted claims of its own against Manz AG. Taking into account the impairment losses already recognized, Manz AG recognized a contract asset of EUR 23.2 million as of December 31, 2021.

Due to ongoing negotiations and the outstanding agreement with the client as well as the uncertain liquidity situation of the client, there is a risk of material misstatement of the contract asset recognized. The Managing Board made an assessment regarding the recoverability of the contract asset recognized on the basis of historical, public information which was available to them. Suitable evidence of the future liquidity situation of the client could not be presented. Therefore, the information on recoverability provided to us does not constitute sufficient and appropriate audit evidence for the assessment of creditworthiness and liquidity situation of the client. We were also unable to obtain reasonable assurance regarding the recoverability of the recognized contract asset by performing alternative procedures. We are therefore unable to rule out that an impairment of the recognized contract asset should have been performed with corresponding effects on the consolidated result and the shareholders' equity.

This matter also has a possible negative effect on the presentation of the development of business in the group management report, including the business result and the Group's position, and the presentation of opportunities and risks of future development.

In accordance with Article 10 (2) c) ii) of the EU Audit Regulation, we summarize our audit response to this risk as follows:

As part of our audit procedures to assess the recoverability of contract assets in connection with the CIGS*fab* project, we discussed the current status of negotiations regarding the claims that have been asserted with Manz AG's Managing Board and inspected

Manz AG's written communication with the client. In so doing, we particularly examined the contractual basis of the termination of the contract by Manz AG.

Furthermore, we analyzed the contractual basis taking into account the assessment of the external legal advisors of Manz AG and a lawyer confirmation obtained regarding the legal claim and the ability to enforce this claim. To assess the creditworthiness and liquidity situation of the client, we analyzed the historical, public information provided by the Managing Board.

We conducted our audit of the consolidated financial statements and of the group management report in accordance with Sec. 317 HGB and the EU Audit Regulation (No 537/2014, referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Art. 10 (2) f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Art. 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the group management report.

Key audit matters in the audit of the consolidated financial statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the fiscal year from January 1 to December 31, 2021. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon; we do not provide a separate opinion on these matters.

In addition to the matter described in section "Basis for the qualified opinions", we determined the following matters to be a key audit matter, which are disclosed in our auditor's report:

1. Revenue recognition on construction contracts

Reasons why the matter was determined to be a key audit matter:

Construction contracts account for a significant share of the Group's business activities. Revenue from construction contracts is recognized in accordance with IFRS 15, Revenue from Contracts with Customers, generally based on the percentage of completion.

We consider the accounting for construction contracts to be an area posing a significant risk of material misstatement (including the potential risk of management override of internal controls) and thus a key audit matter, because the assessments made by the executive directors significantly affect the calculation of the percentage of completion. This particularly applies to the estimated total costs, remaining costs to completion, estimated total revenue as well as contract risks including technical risks. Revenue, estimated total contract costs and revenue recognition may deviate significantly from original estimates based on new knowledge about cost overruns and changes in project scope over the term of a construction contract.

Auditor's response

As part of our audit procedures, we obtained an understanding of the Company's internally established methods and processes of project management in the bid and execution phase of construction contracts.

As part of our substantive audit procedures, we evaluated the executive directors' estimates and assumptions based on a risk-based selection of a sample of contracts. Our audit procedures included, among others, the review of contracts and their terms and conditions, including contractually agreed termination rights and damages. We conducted interviews with project managers on the selected projects as regards the development of the projects, the reasons for deviations between planned and actual costs, the current estimated costs to complete the projects, and the assessments of the executive directors on probabilities that contract risks will materialize. To identify anomalies in margin development throughout the projects' execution, we also used data analytics.

Moreover, we examined the billable revenue as of the reporting date and the related cost of sales recognized in profit or loss according to the percentage of completion to assess whether income is calculated in the correct period and evaluated the accounting treatment of relevant items in the balance sheet.

In the analysis performed by the executive directors for the significant customer projects, we evaluated in particular whether the requirements to recognize revenue over a period of time have been met based on a sample of construction contracts.

Our audit procedures did not lead to any reservations relating to revenue recognition on construction contracts.

Reference to related disclosures

Additional disclosures on revenue recognition of construction contracts as well as the associated accounting policies and judgments are included in the notes to the consolidated financial statements in the sections "Summary of significant accounting policies" as well as "Notes to the balance sheet", note 21 "Contract assets".

2. Recoverability of goodwill and trademarks

Reasons why the matter was determined to be a key audit matter

Goodwill of EUR 16.5 million (previous year: EUR 34.8 million) and trademarks of EUR 2.9 million (previous year: EUR 4.6 million) with an indefinite useful life were recognized in the consolidated financial statements of Manz AG and are subject to an annual impairment test pursuant to IAS 36. In light of the uncertain continuation of business relationships regarding the CIGS*fab* project, which may also affect the follow-up orders with this customer, and as in connection with the realignment of the segment new customer relationships have to be developed first, there was impairment of goodwill of EUR 19.8 million and of trademarks in the amount of EUR 1.8 million in the Solar cash-generating unit.

The result of the impairment test depends chiefly on the future cash inflows estimated by the executive directors as well as the discount rate used. The impairment test is therefore associated with a large degree of judgment and uncertainty, which is why it was determined to be a key audit matter.

Auditor's response

We discussed the method used to perform the impairment test with the Company's executive directors and assessed its compliance with the requirements of IAS 36. We checked on a sample basis that the planning assumptions used in the detailed forecasts of each of the cash-generating units, especially the Solar segment, are in line with the business plan of the Company prepared by the Managing Board and ratified by the Supervisory Board. In addition, we verified the growth rates for income and expenses used to roll forward the budget using internal data, in particular related to the expected future orders. We also analyzed the forecasts with regard to adherence to the budget in the past and obtained evidence substantiating the individual assumptions of the forecasts.

We verified the individual components used to determine the discount rate with the support of our internal valuation experts by analyzing the peer group, comparing market data with external evidence and examining the calculation. We examined the clerical accuracy of the valuation model on a sample basis.

We verified the significant assumptions used in the sensitivity calculations prepared by the Company in order to estimate any potential impairment risk associated with a change in one of the significant assumptions used in the valuation.

Our audit procedures did not lead to any reservations regarding the impairment of goodwill taking into account the impairment in the Solar cash-generating unit.

Reference to related disclosures

Additional disclosures on the impairment of goodwill as well as the associated recognition and measurement policies and judgments are included in the notes to the consolidated financial statements in the sections "Summary of significant accounting policies" as well as "Notes to the balance sheet," note 14 "Intangible assets."

Other information

The Supervisory Board is responsible for the Report from the Supervisory Board. The executive directors and the Supervisory Board are responsible for the declaration pursuant to Sec. 161 AktG ["Aktiengesetz": German Stock Corporation Act] on the German Corporate Governance Code, which is part of the declaration on corporate governance. In all other respects, the executive directors are responsible for the other information. The other information comprises the Group statement on corporate governance referred to above. Furthermore, the other information, of which we received a version prior to issuing this auditor's report, comprises the following components designated for the annual report: the disclosures in the section "To Our Shareholders" of the annual report, the Group non-financial statement and the Responsibility Statement.

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

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

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or

- otherwise appears to be materially misstated.

Responsibilities of the executive directors and the Supervisory Board for the consolidated financial statements and the group management report

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

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

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

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

Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report

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

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

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.

- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.

- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.

- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

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

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Other legal and regulatory requirements

Report on the assurance on the electronic rendering of the consolidated financial statements and the group management report prepared for publication purposes in accordance with Sec. 317 (3a) HGB.

Opinion

We have performed assurance work in accordance with Sec. 317 (3a) HGB to obtain reasonable assurance about whether the rendering of the consolidated financial statements and the group management report (hereinafter the "ESEF documents") contained in the attached file Manz _ AG _ KA+KLB _ ESEF-2021-12-31 (SHA-256-checksum: dc6d5ec74de3 cd89c8ea40581d5044d47cc6627611af0e4ba1a5468d60eba680) and prepared for publication purposes complies in all material respects with the requirements of Sec. 328 (1) HGB for the electronic reporting format ("ESEF format"). In accordance with German legal requirements, this assurance work extends only to the conversion of the information contained in the consolidated financial statements and the group management report into the ESEF format and therefore relates neither to the information contained within these renderings nor to any other information contained in the file identified above.

In our opinion, the rendering of the consolidated financial statements and the group management report contained in the file identified above and prepared for publication purposes complies in all material respects with the requirements of Sec. 328 (1) HGB for the electronic reporting format. Beyond this assurance opinion and our audit opinions on the accompanying consolidated financial statements and the accompanying group management report for the fiscal year from January 1 to December 31, 2021 contained in the "Report on the audit of the consolidated financial statements and of the group management report" above, we do not express any assurance opinion on the information contained within these renderings or on the other information contained in the file identified above.

Basis for the opinion

We conducted our assurance work on the rendering of the consolidated financial statements and the group management report contained in the file identified above in accordance with Sec. 317 (3a) HGB and the IDW Assurance Standard: Assurance on the Electronic Rendering of Financial Statements and Management Reports Prepared for Publication Purposes in Accordance with Sec. 317 (3a) HGB (IDW AsS 410) (10.2021). Our responsibility in accordance therewith is further described in the "Group auditor's responsibilities for the assurance work on the ESEF documents" section. Our audit firm applies the IDW Standard on Quality Management 1: Requirements for Quality Management in the Audit Firm (IDW QS 1).

Responsibilities of the executive directors and the Supervisory Board for the ESEF documents

The executive directors of the Company are responsible for the preparation of the ESEF documents including the electronic rendering of the consolidated financial statements and the group management report in accordance with Sec. 328 (1) Sentence 4 No. 1 HGB and for the tagging of the consolidated financial statements in accordance with Sec. 328 (1) Sentence 4 No. 2 HGB.

In addition, the executive directors of the Company are responsible for such internal control as they have determined necessary to enable the preparation of ESEF documents that are free from material intentional or unintentional non-compliance with the requirements of Sec. 328 (1) HGB for the electronic reporting format.

The Supervisory Board is responsible for overseeing the process for preparing the ESEF documents as part of the financial reporting process.

Group auditor's responsibilities for the assurance work on the ESEF documents

Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material intentional or unintentional non-compliance with the requirements of Sec. 328 (1) HGB. We exercise professional judgment and maintain professional skepticism throughout the assurance work. We also:

- Identify and assess the risks of material intentional or unintentional non-compliance with the requirements of Sec. 328 (1) HGB, design and perform assurance procedures responsive to those risks, and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance opinion.

- Obtain an understanding of internal control relevant to the assurance on the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance opinion on the effectiveness of these controls.

- Evaluate the technical validity of the ESEF documents, i.e., whether the file containing the ESEF documents meets the requirements of Commission Delegated Regulation (EU) 2019/815, in the version in force at the date of the financial statements, on the technical specification for this file.

- Evaluate whether the ESEF documents enable an XHTML rendering with content equivalent to the audited consolidated financial statements and to the audited group management report.

- Evaluate whether the tagging of the ESEF documents with Inline XBRL technology (iXBRL) in accordance with the requirements of Arts. 4 and 6 of Commission Delegated Regulation (EU) 2019/815, in the version in force at the date of the financial statements, enables an appropriate and complete machine-readable XBRL copy of the XHTML rendering.

Further information pursuant to Art. 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on July 7, 2021. We were engaged by the Supervisory Board on November 10, 2021. We have been the group auditor of Manz AG without interruption since fiscal year 2018.

We declare that the opinions expressed in this auditor's report are consistent with the additional report to the Supervisory Board pursuant to Art. 11 of the EU Audit Regulation (long-form audit report).

Other matter – use of the auditor’s report

Our auditor’s report must always be read together with the audited consolidated financial statements and the audited group management report as well as the assured ESEF documents. The consolidated financial statements and the group management report converted to the ESEF format – including the versions to be published in the Bundesanzeiger [German Federal Gazette] – are merely electronic renderings of the audited consolidated financial statements and the audited group management report and do not take their place. In particular, the ESEF report and our assurance opinion contained therein are to be used solely together with the assured ESEF documents made available in electronic form.

German Public Auditor responsible for the engagement

The German Public Auditor responsible for the engagement is Steffen Maurer.

Stuttgart, March 30, 2022

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Maurer	Ilg
Wirtschaftsprüfer	Wirtschaftsprüfer
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