

ENGINEERING
TOMORROW'S
PRODUCTION

OCTOBER 18, 2023 – MARTIN DRASCH, CEO / MANFRED HOCHLEITNER, CFO

CAPITAL MARKETS DAY 2023



OUR VISION

As a high-tech equipment manufacturer, our **innovative solutions for selected growth markets** create the foundation for a **future worth living.**

HISTORY



1987

Foundation

1990

Development of the first automation system for processing crystalline solar cells in pilot production

1994

First order of FPD industry in Asia

2006

IPO on Entry Standard of Frankfurt stock exchange

2008

Acquisition of R&D and production sites in Slovakia, Taiwan & China

2009

Entry on market for lithium-ion batteries

2012

Development of the modular assembly platform "LightAssembly" for electronic products

2014

Acquisition of Arcotronics in Bologna, Italy: Expansion of the technology portfolio for the production of Li-Ion batteries

2022

Manz, GROB-WERKE and Dürr conclude unique European cooperation in the field of Li-Ion production technology

GLOBAL PRESENCE

Facts & Figures

HEADQUARTERS

- » Germany

R&D AND PROTOTYPING

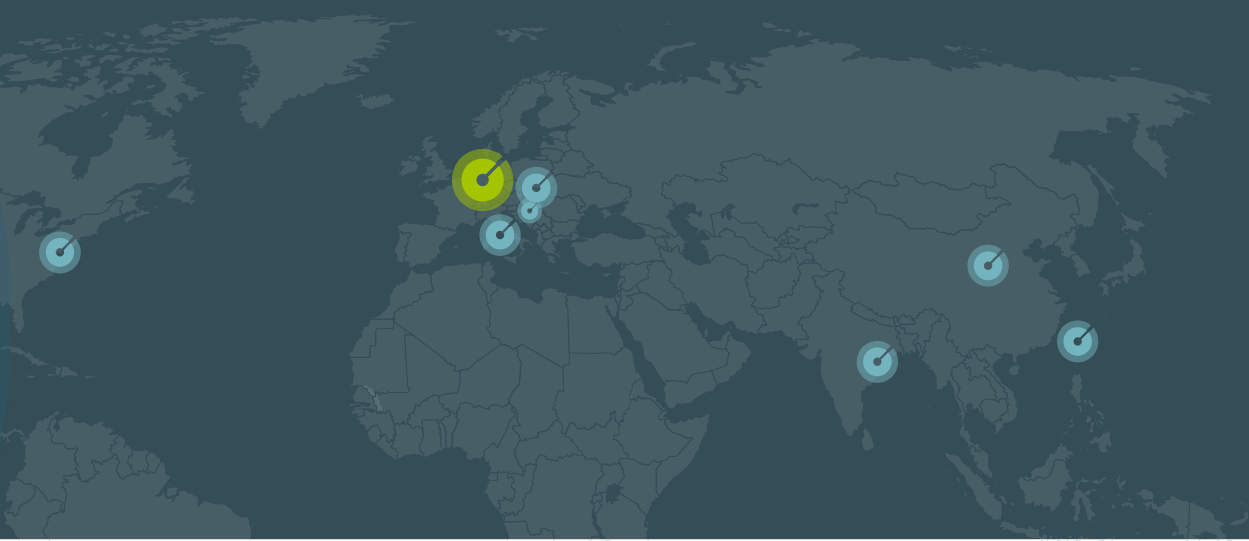
- » Germany
- » Italy
- » Taiwan

PRODUCTION

- » Slovakia
- » Hungary
- » China

SALES & SERVICE


- » Asia
- » Europe
- » USA

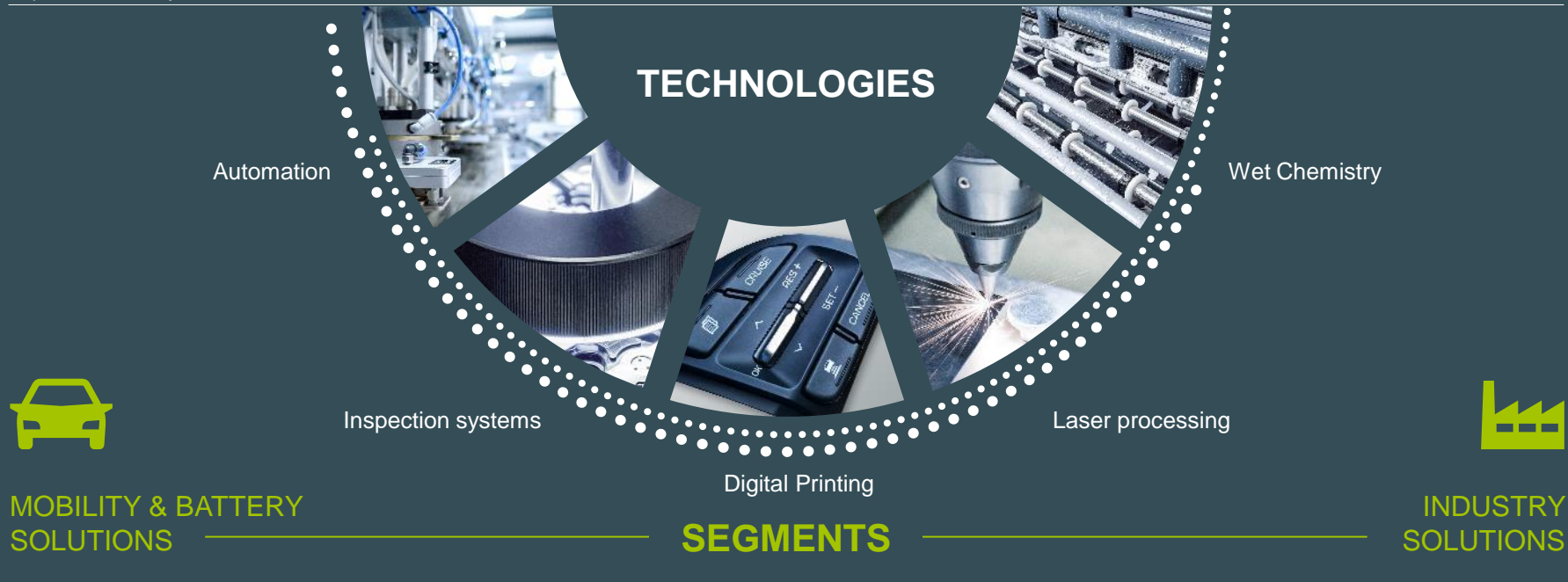


 1987

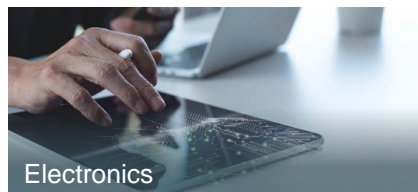
 1,500

 55,000 m²

 € 251 million



INDUSTRIES





STRATEGY & GROWTH DRIVERS

STRATEGIC FOCUS

“As a **high-tech equipment manufacturer**, our **innovative solutions** for selected **growth markets** create the **foundation for a future-worth living.**”



Top 3 EU/US supplier and integrator of production equipment for the manufacture of lithium-ion batteries

Renowned solution provider for assembly and production solutions for electronic components and devices

Principles of focused strategy & concept of growth in partnership

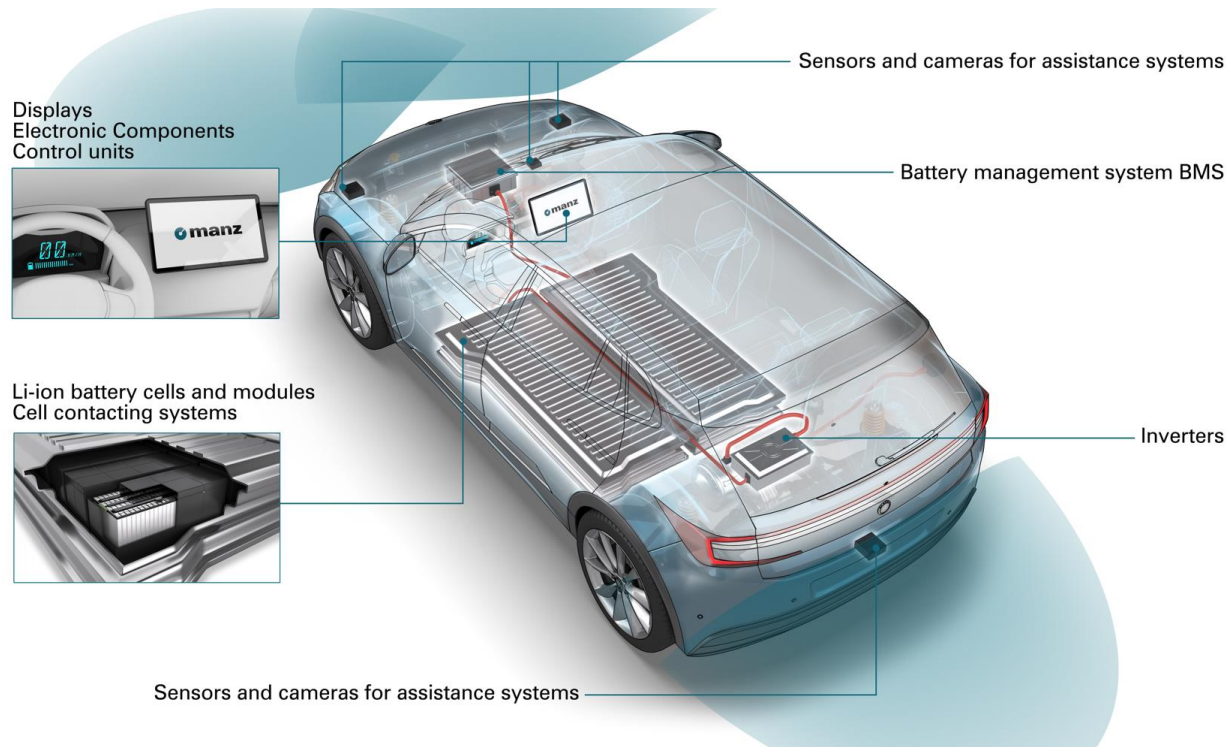
Actively seizing **opportunities in new markets** and capitalizing them

Realizing business potentials in maturing markets

Keep pushing for **innovative technologies and businesses**

Further expanding **service business**

PRODUCTION SYSTEMS FOR CENTRAL COMPONENTS OF THE ELECTRIC POWERTRAIN



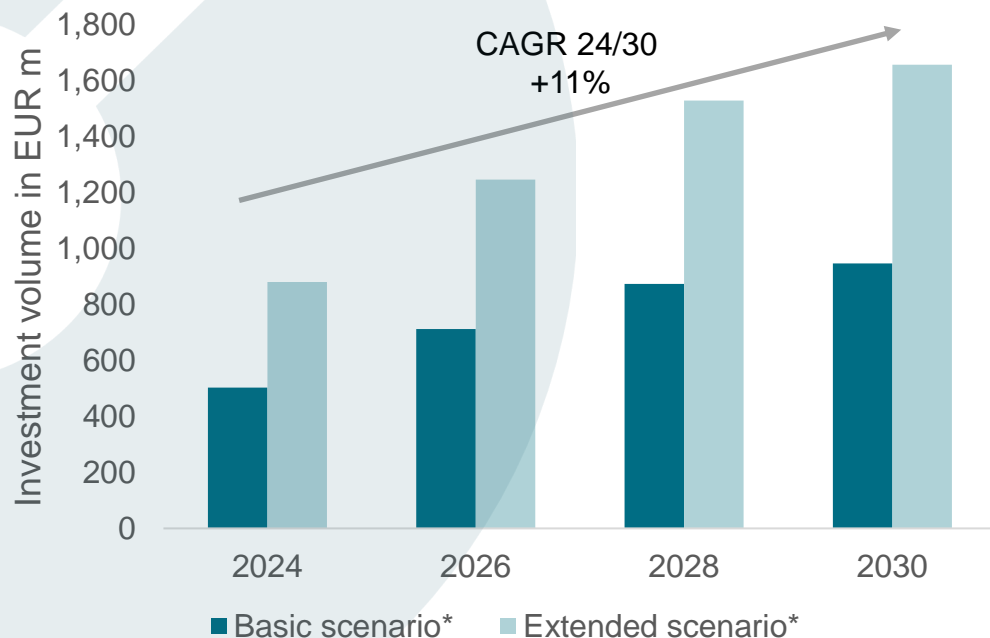
Our automation solutions ensure:

- » Improved process and resource efficiency
- » Complete traceability
- » Optimized process precision
- » Investment security
- » Shorter time to market

GROWTH POTENTIALS INDUSTRY SOLUTIONS

- » Increasing demand from automotive market for **electric powertrain components**, such as cell contacting systems and inverters
 - » Promising growth market for *LightAssembly* platform with OEM / TIER customers
- » Ongoing strong demand for assembly solutions from non-automotive market, e.g., for **production of power electronics**
- » Various new applications for **digital printing** technology
 - » Entering semiconductor market with innovative inkjet solutions for **functional printing**
- » Excellent market position in growth market for plating processes for **FOPLP** and **IC substrates**

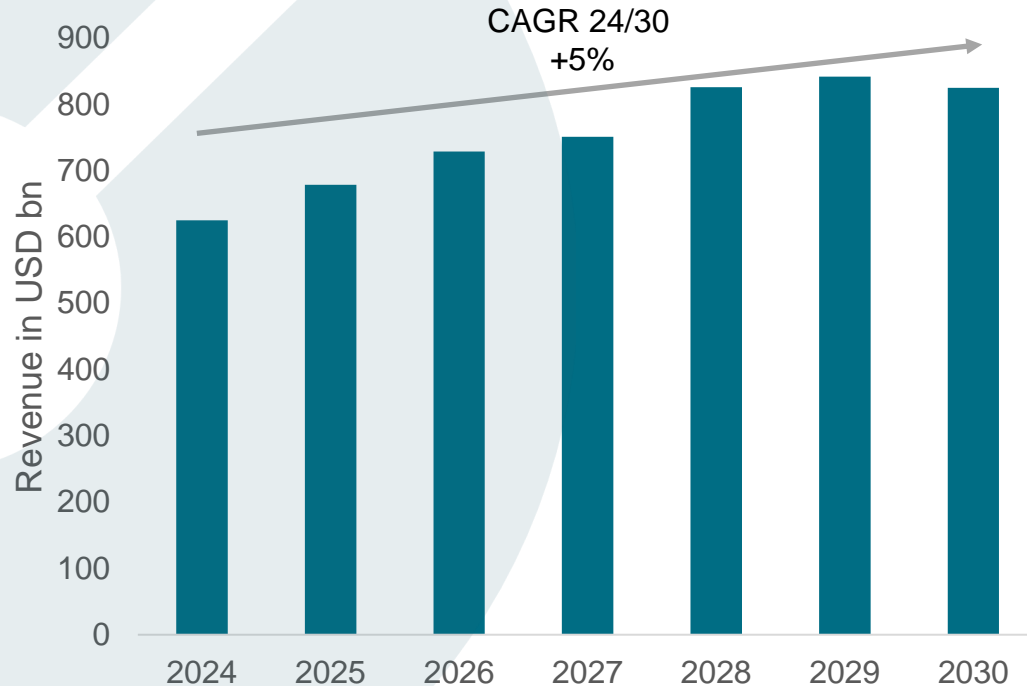
MARKET OUTLOOK FOR EV INVERTER ASSEMBLY LINES – EUROPE/N. AMERICA



- » By 2030 investment volume for EV inverter assembly lines to range from approx. 950 to 1.650 million EUR*
- » Output of 1 Manz line: up to 375.000 pieces/year
- » Several inverter assembly line projects ongoing/delivered successfully
- » Further market potential coming from other industries using inverters (e.g., solar)

*depending on processes covered and complexity of the line
Source: Manz Market Intelligence based on IHS Markit

MARKET OUTLOOK GLOBAL SEMICONDUCTOR INDUSTRY

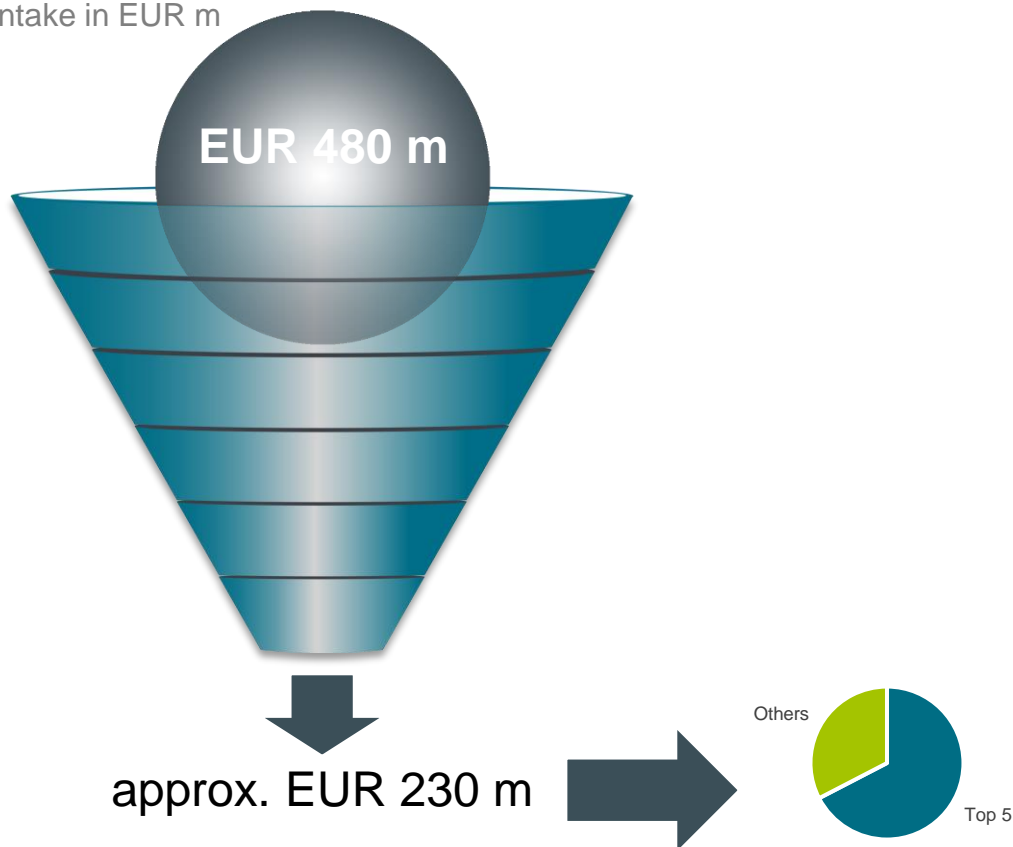


Source: IDC

- » Approximately 30% of demand to come from Automotive and Industrial Electronics markets
- » FOPLP technologies boost productivity and reduce costs
- » Major growth drivers are digitalization of manufacturing & supply chain

SALES OPPORTUNITIES INDUSTRY SOLUTIONS

Expected order intake in EUR m



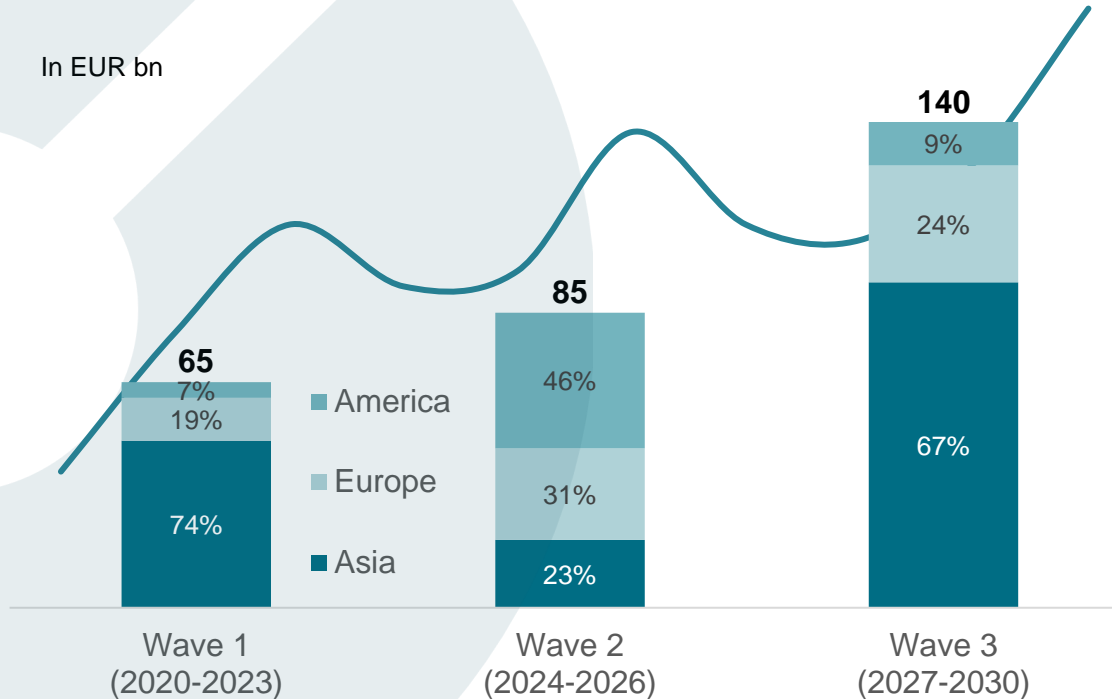
- » Sales funnel of industry solutions division contains a total amount of EUR 480 m
- » Thereof almost half (EUR 230 m) is expected with a high probability
- » Top 5 customers account for approx. two-thirds of this volume

GROWTH POTENTIALS MOBILITY & BATTERY SOLUTIONS

- » Significant growth of demand for Lithium-Ion battery cells
 - » Worldwide market for battery cell assembly equipment forecast to reach almost 9 bn USD by 2026 (CAGR 22/26: 21.8 %)
- » Together with strong partner-network Manz is only European turnkey supplier utilizing a “true European” supply chain
 - » **Majority** of necessary **machine and plant technology** available to cover the **entire process chain** from electrode production, cell assembly and module up to pack assembly
- » Taking advantage of growth momentum in North-America triggered by Inflation Reduction Act (IRA)
- » Focus of R&D and business activities on integrated **cell assembly lines**
- » Increase of business with **modularized anchor products**
- » Growing **service business** share

INVESTMENTS* IN MACHINERY FOR BATTERY CELL PRODUCTION

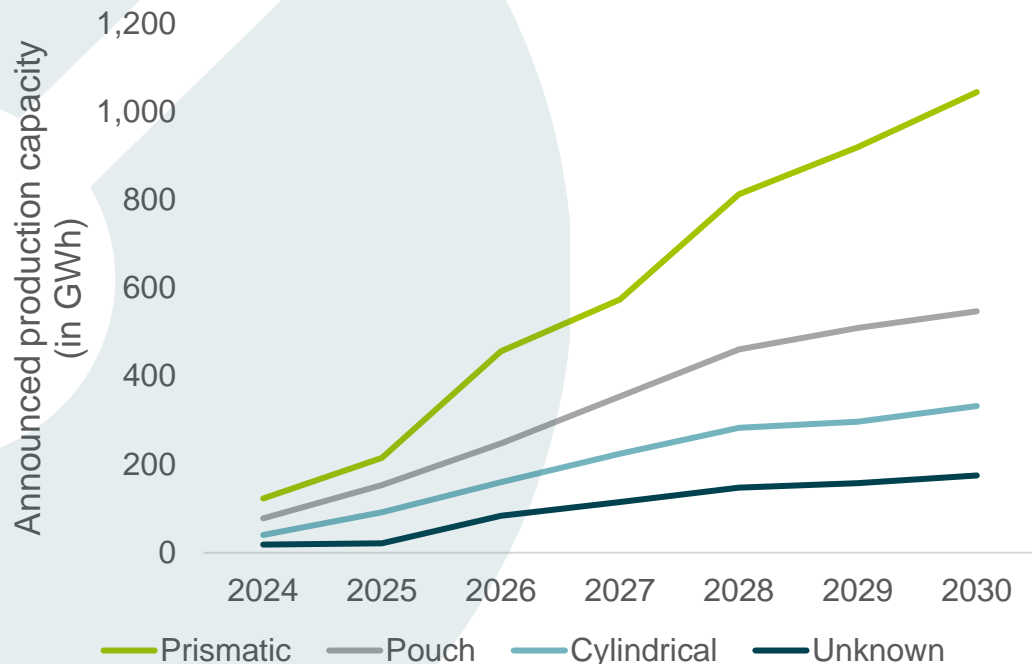
In EUR bn



- » Expansion of production capacities carried out in 3 waves
- » Due to ramp-up phase demand for machinery around 1 year earlier
- » Currently wave 2 ongoing with about 60 factories worldwide
- » Approximately 75% of all battery cell factories in wave 2 to be built in America and Europe

BATTERY CELL PRODUCTION BY FORMAT – EUROPE

Cell formats between standardization and diversification



Actions towards standardization

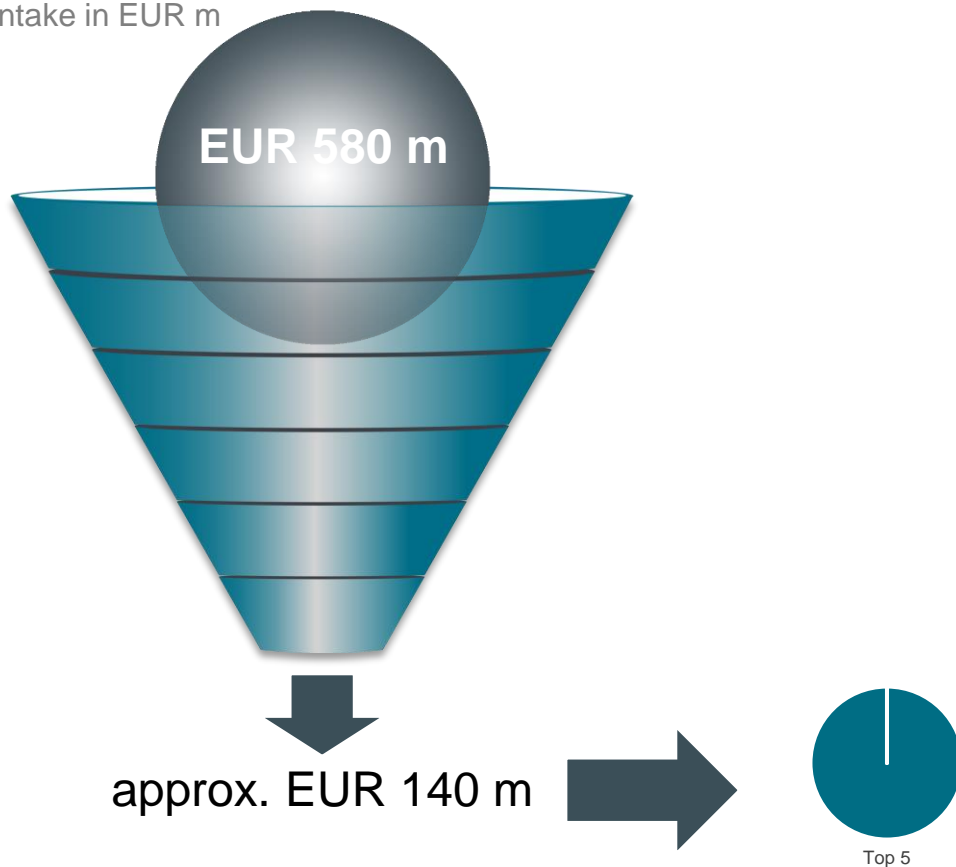
- » Cylindrical cells, 46XX
- » PowerCo Unified cell

Actions towards diversification

- » Mix of cylindrical, prismatic, pouch cells
- » Innovative (often larger) cell formats
 - » Relatively high degree of unsharpness due to volatile market

SALES OPPORTUNITIES MOBILITY & BATTERY SOLUTIONS

Expected order intake in EUR m



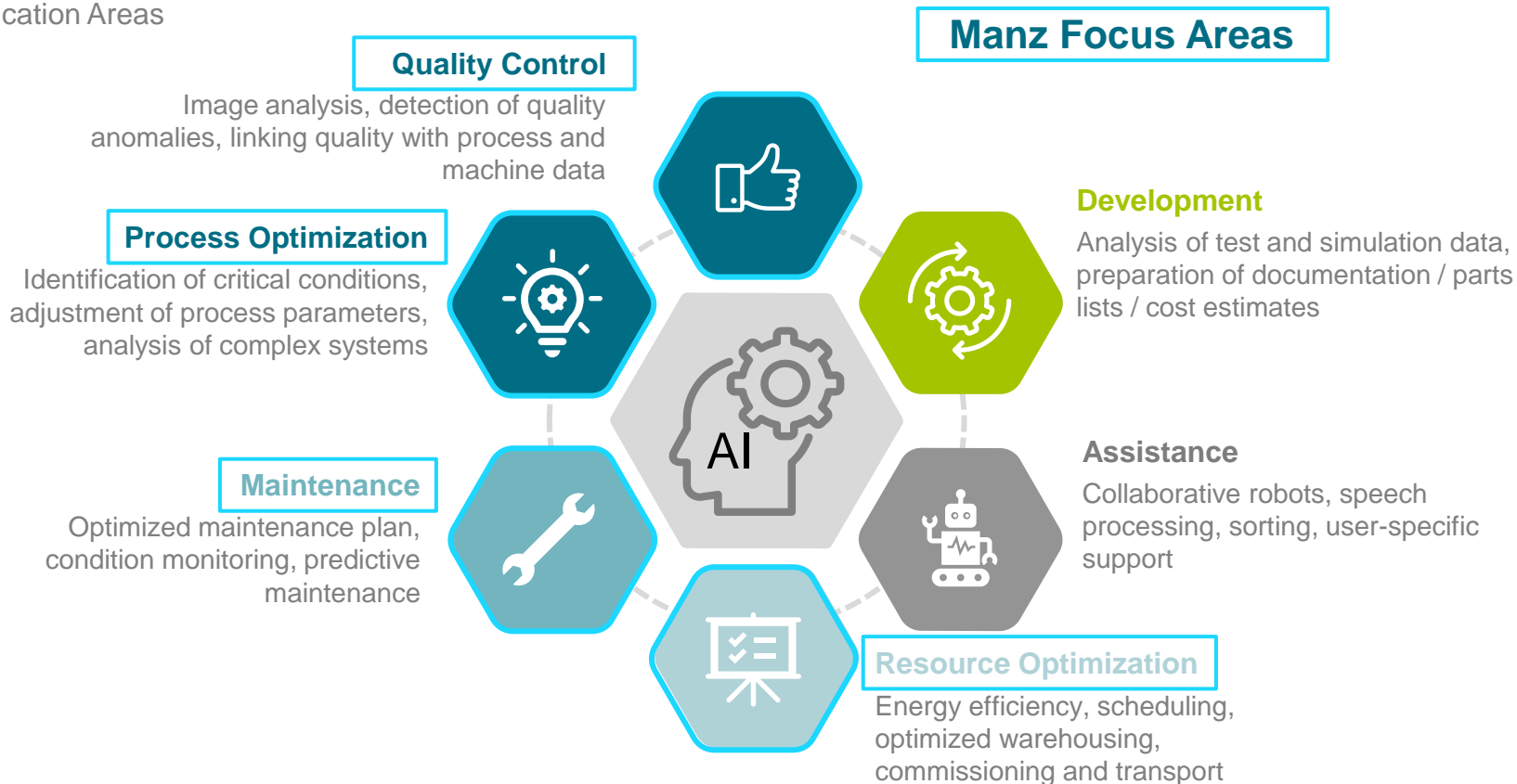
- » Sales funnel of mobility & battery solutions division contains a total amount of almost EUR 580 m
- » Thereof approx. one quarter (EUR 140 m) is expected with a high probability
- » This volume is distributed across 5 customers



ARTIFICIAL INTELLIGENCE @MANZ

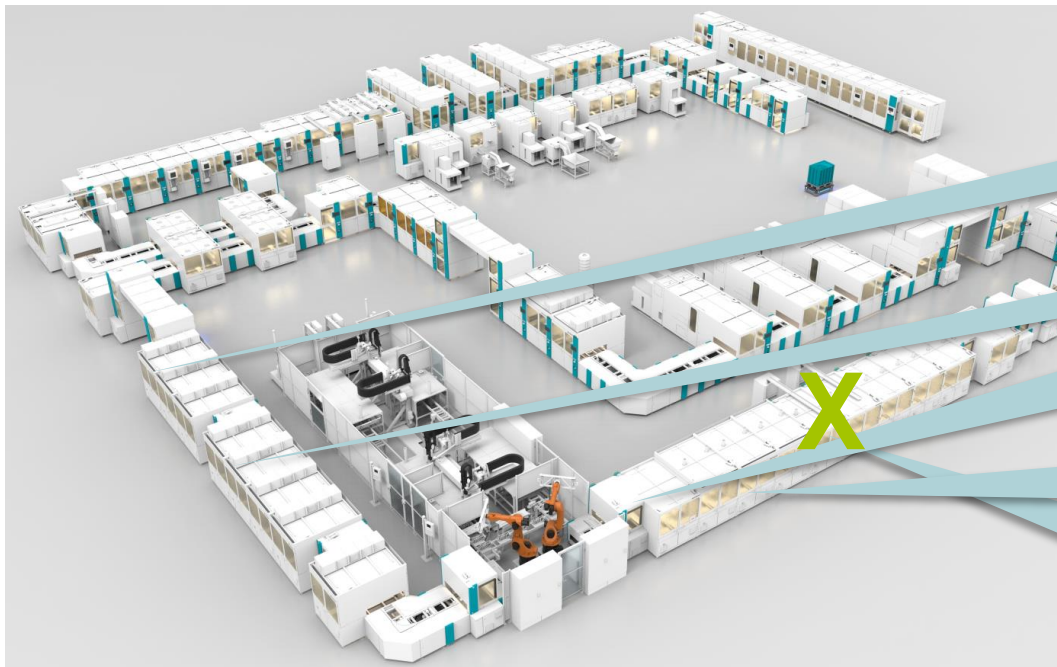
MACHINE LEARNING IN PRODUCTION

Application Areas



REFERENCE APPLICATIONS @ MANZ

Production line for cell contacting systems



Welding parameter optimization

Throughput + 5%
Scrap rate - 50%



Optimization parts positioning

Throughput +10%



Quality Control NTC Soldering


Decrease of Quality Slip
120ppm ⇒ 0 ppm



QC Soldering AOI

Scrap rate - 70%

AOI obsolete
CAPEX Reduction

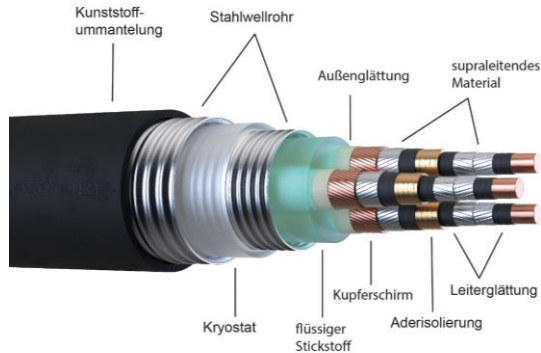


MERGERS & ACQUISITIONS
FUTURE GROWTH OPPORTUNITIES

METOX

US-based Manufacturer of High Temperature Superconducting (HTS) wires

Manz will be the key supplier for superconductor production equipment



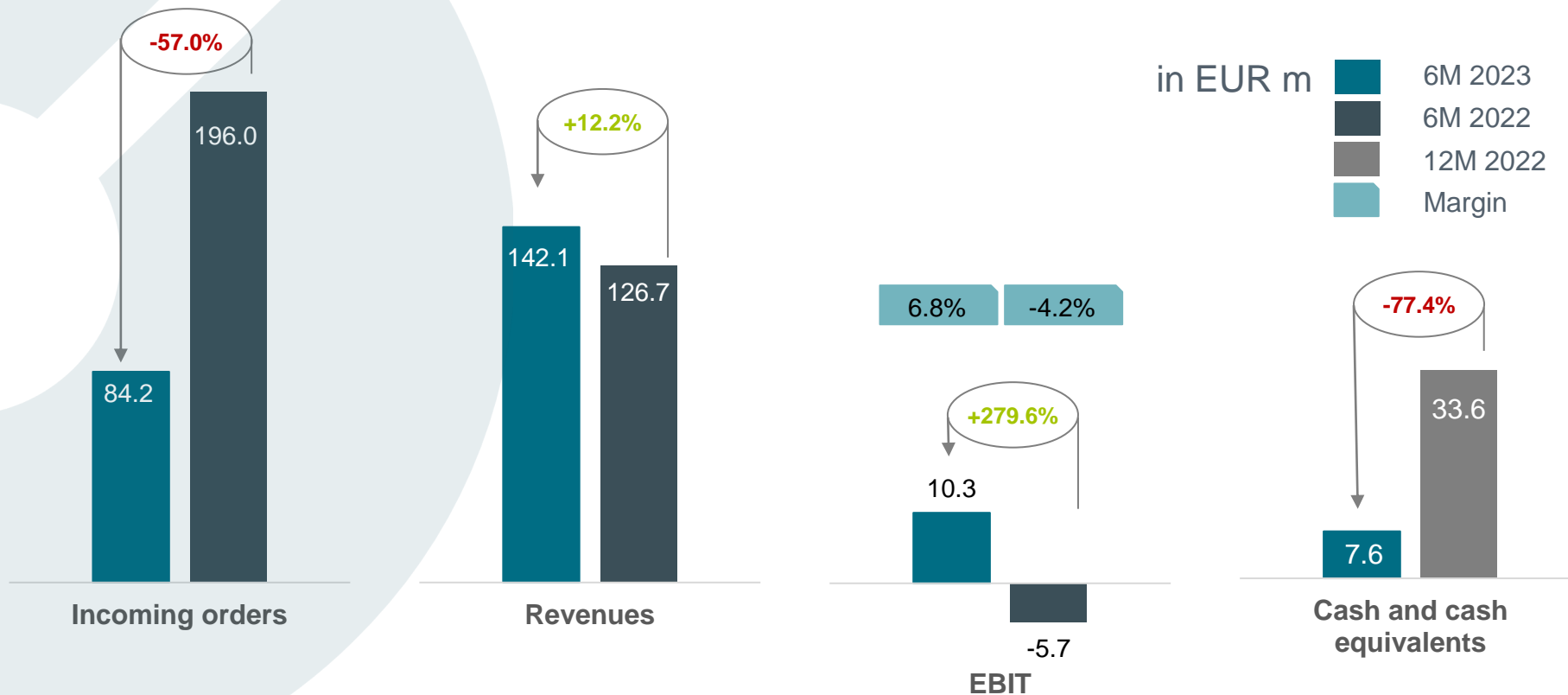
- » Main markets: fusion reactor magnets, grid cables, transformers, fault current limiters, medical equipment like MRI, etc.
- » Grid market → biggest future market e.g., for the realization of the mobility transition - among other things for commercial vehicles
 - » Substitution of existing infrastructure by super conductor cables (1m cable requires 50-100m HTS)
 - » Cost savings in infrastructure
 - » Cost savings in material (significantly cheaper than copper cables)
- » Current demand on superconductor (SC) wires is exceeding the worldwide production capability by far
- » Expected order intake potential in 2024 of > EUR 12 million, revenue potential until 2030 of > EUR 100 million



FINANCIAL FIGURES 6M 2023

KPI DEVELOPMENT 6M 2023 VERSUS 6M 2022

Revenue development on track; order intake needs to be improved; Cash position needs to be strengthened



SEGMENT MOBILITY & BATTERY SOLUTIONS

In EUR m	6M/2023	6M/2022	Change in %
Revenues	58.6	49.7	+18.0
EBIT	5.6	-9.0	+162.9

- » Growth in revenues of 18.0% due to progressive processing of order backlog from previous year
- » Successful termination of initial order from Power by Britishvolt Ltd.
- » First RFQ's processed and offered to OEM within DGM-cooperation
- » Order intake currently below expectations
 - » Postponements of investment decisions mainly as a result of uncertainties regarding the impact of different subsidy programs
 - » Sales funnel contains project volume of > EUR 500 million for battery production equipment
 - » Good prospects for strong order intake in the 2nd half of the year

SEGMENT INDUSTRY SOLUTIONS

In EUR m	6M/2023	6M/2022*	Change in %
Revenues	83.4	77.0	+8.4
EBIT	4.7	3.2	+44.8

- » Year-on-year revenue growth of 8.4 % primarily attributable to the Industrial Automation business area
 - » Strong demand for highly integrated assembly solutions based on proven *LightAssembly* platform
 - » Moderate business development in the Electronics business area caused by temporary weak dynamics in the display and semiconductor market
- » Strong EBIT reflects successful execution of ongoing customer projects as well as significantly lower material cost ratio

* Adjustment after restatement due to impairment of prepayment made for inventories in 2021



OUTLOOK

ORDER INTAKE AND ORDER BACKLOG BY SEGMENT

Order intake

In EUR m	6M 2023	6M 2022	Change in %
Mobility & Battery Solutions	42.3	52.6	-19.6
Industry Solutions	42.0	143.4	-70.7
Total Group	84.2	196.0	-57.0

Order backlog

In EUR m	June 30, 2023	June 30, 2022	Change in %
Mobility & Battery Solutions	118.6	172.5	-31.2
Industry Solutions	102.7	126.9	-19.0
Total Group	221.3	299.3	-26.1

GUIDANCE 2023

- » Increase in revenues in the lower double-digit percentage range
- » EBITDA margin in the mid positive single-digit percentage range
- » EBIT margin in the low positive single-digit percentage range

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