

In Decline?

The German industrial sector between
perceptions and realities since 2020

Executive summary
July 2023





Scope

This study investigates the performance of all German companies across sectors since 2000 with over €500m revenue in 2021, producing a base of 594 companies

The German industrial sector failed to leverage the past ‘golden decade’ to sharpen its competitive edge

Scope and key observation



The goal of this study is to get a data-driven answer to the following questions:

1. What are the cross-sectoral patterns in long-term performance?
2. What are the industry and sector specifics?
3. What challenges and imperatives arise from that?



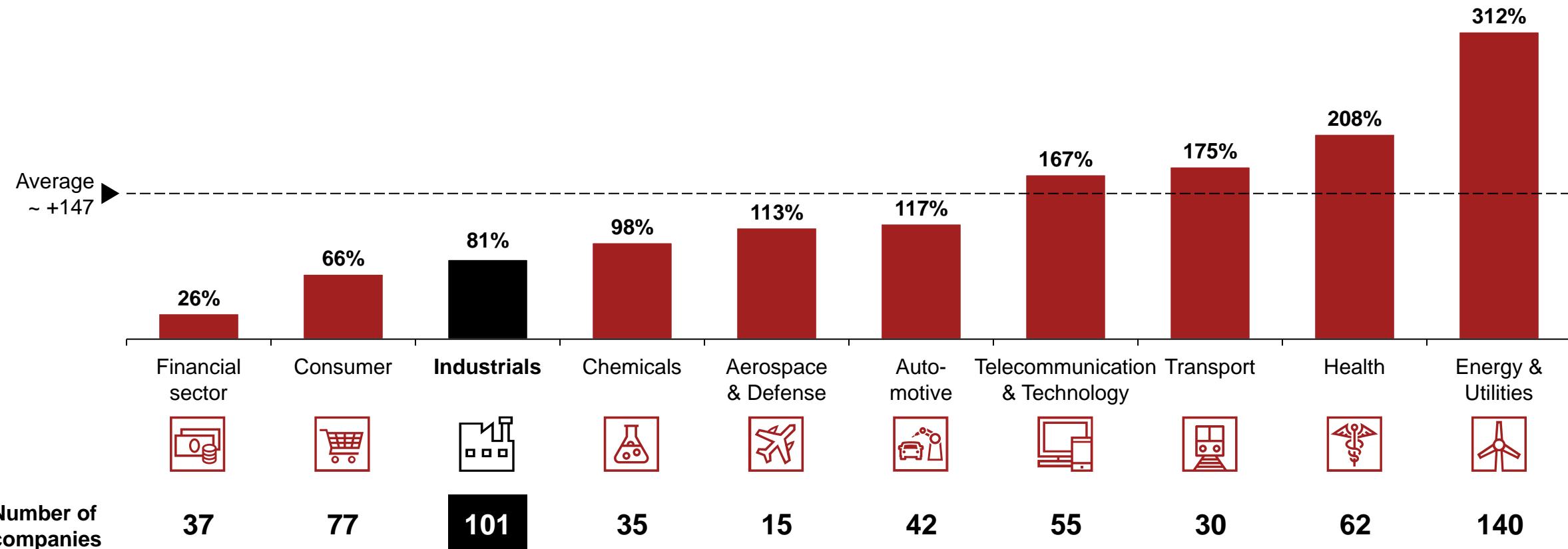
It is commonly believed that the Industrials sector is the **‘prime cut’ of the German economy**; however, in this study it stands out as having a **below-average financial recovery**, after any downturn period in the time from 2000 on

- Revenue recovery in first year 18% (24% average)
- EBITDA margin recovery in first year 103% (192% average)

This study analyzed the development of the key financials for all German companies with over €500 million revenue in 2021

A total of 594 companies is included in the analysis – ca. 80% of German private economy

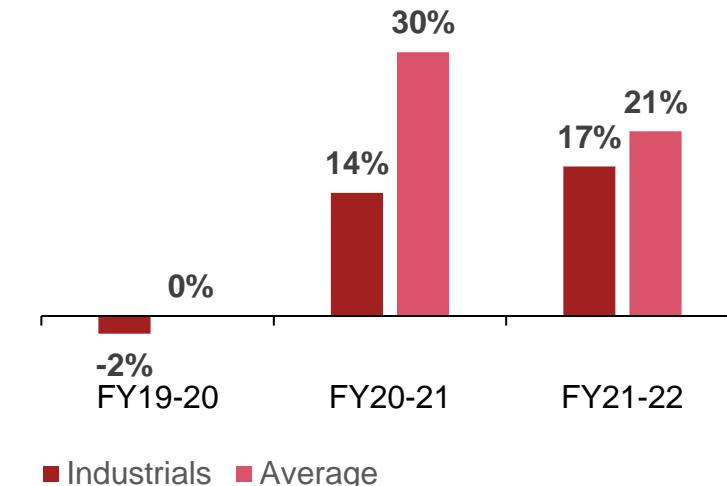
Increase in revenue across various industries (from FY00-FY22)



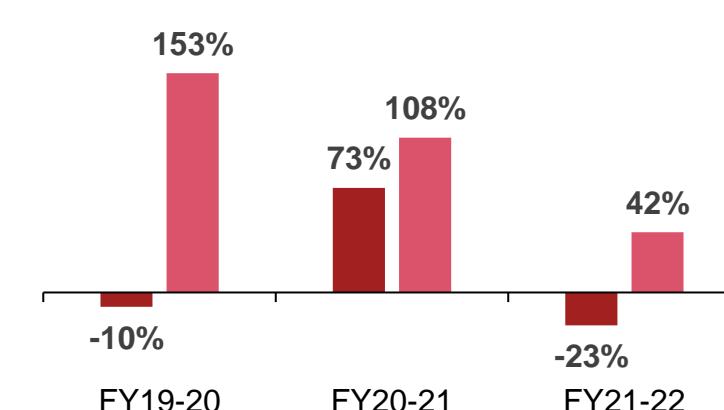
The average German company stayed on a growth path through recent crises, while the Industrials sector became the “problem child”

Based on company count – not revenue balanced

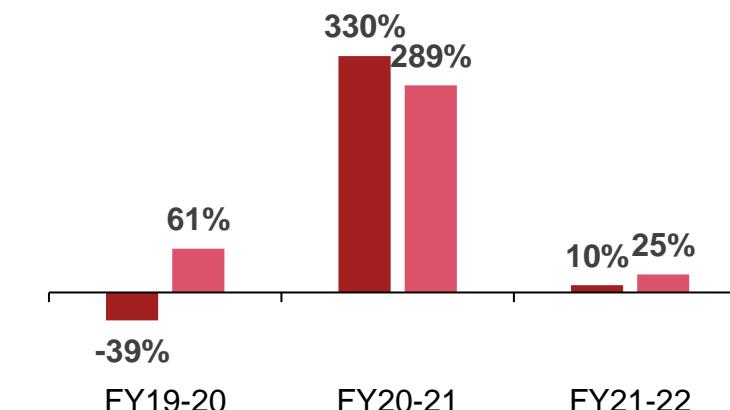
YoY trend in revenue (in %)



YoY trend in EBITDA margin (in %)



YoY trend in EBIT margin (in %)

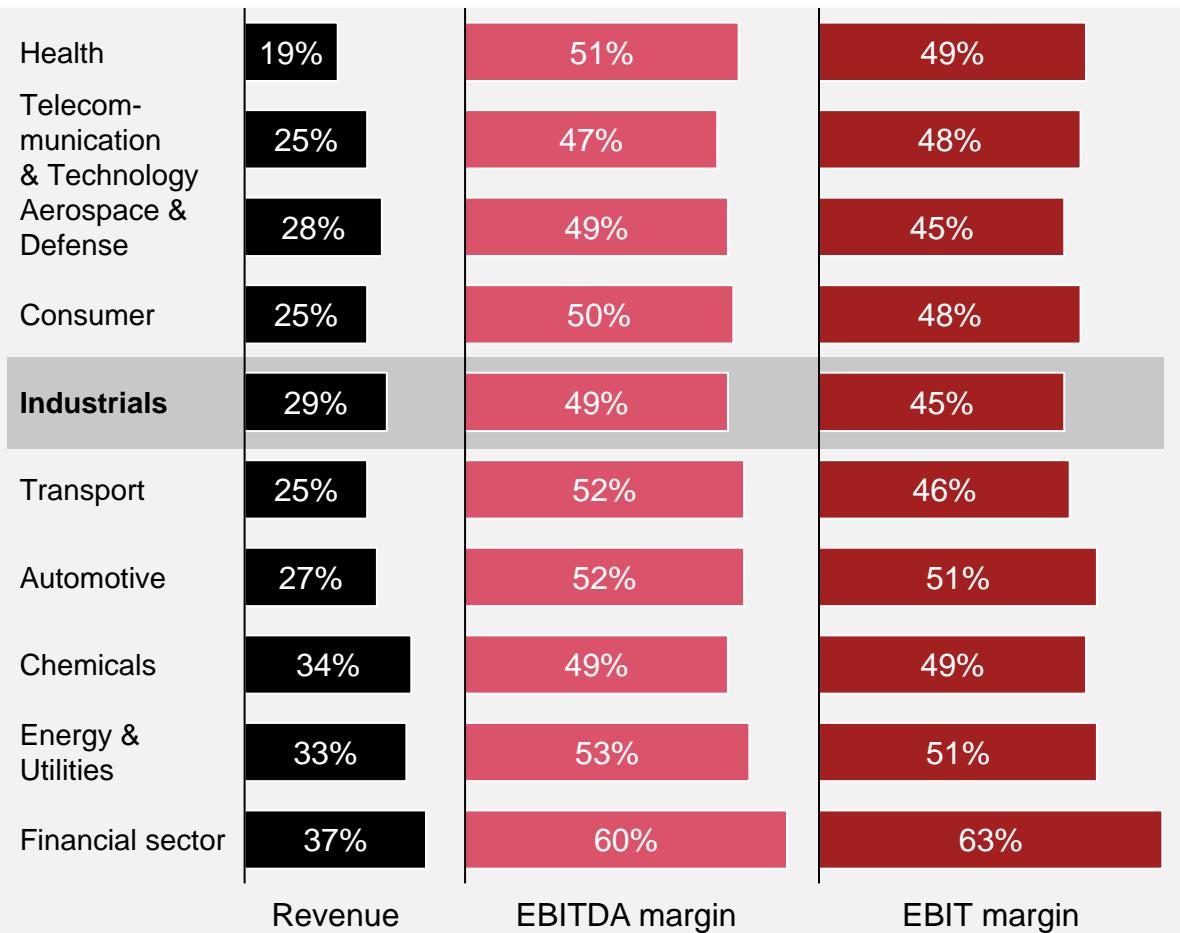


Key insights

- While the **pandemic crisis** mainly hit companies' **revenue**, the **war in Ukraine** is putting pressure on the **EBIT/EBITDA margin**
- **Industrial companies underperformed** during these crises across all financials – the sector was hit harder and recovered worse than the average German company

On average, in around 50% of the last 22 years, companies across all industries faced a decrease in margin

Share of downturn years compared to total years

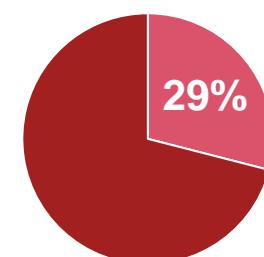


Key insights

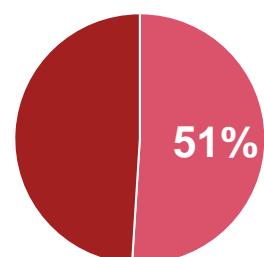
- With a 29% share of downturn years by revenue, **Industrials** positions in the cross-industry average
- Across all industries, EBITDA and EBIT margins are negatively affected by downturns for around half of the years on average
- Downturn periods hit EBITDA and EBIT margins on average one third of the time, with the trend decreasing in recent years

Average Ø

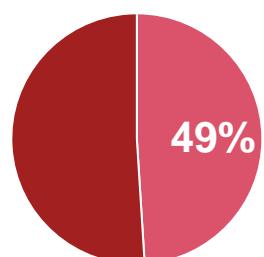
Revenue



EBITDA margin



EBIT margin

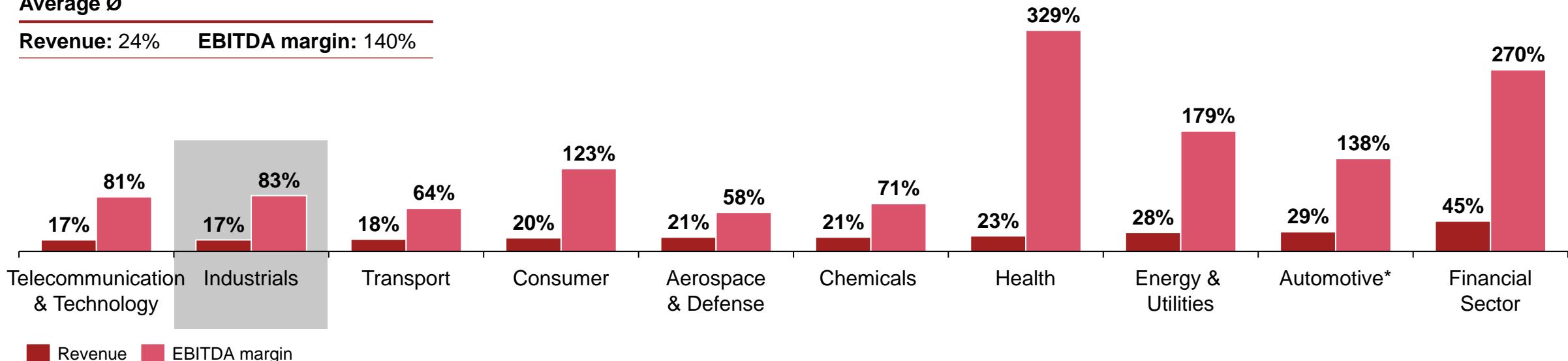


Post-2000, the Industrials sector exhibits below-average turnaround capacity after a downturn year

Average recovery in first year after downturn year (FY00-22) (in %)

Average Ø

Revenue: 24% EBITDA margin: 140%



Average downturn

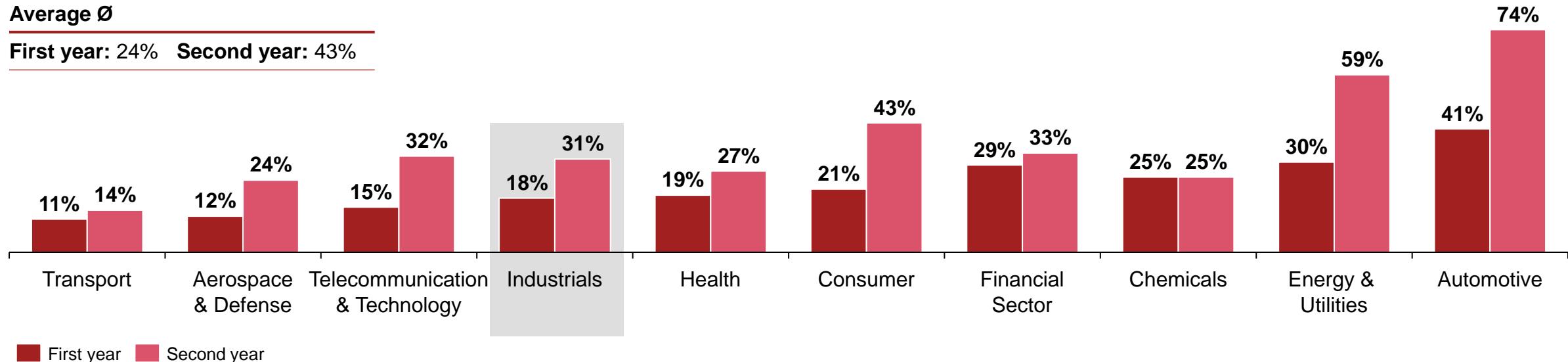
	YoY downturn	Duration in years
Revenue	-11% ($\bar{\Omega}$ -11%)	1.5 ($\bar{\Omega}$ 1.6)
EBITDA margin	-58% ($\bar{\Omega}$ -50%)	1.7 ($\bar{\Omega}$ 1.8)

Key insights

- EBITDA shows **stronger recovery rates** in the first year after a downturn year
- Industrials** has one of the lowest recovery rates for revenue across all sectors
- Industrials** exhibit low recovery, while **average YoY downturn is on average**

Even if defining a downturn as min. two consecutive negative years
Industrials still shows below-average revenue recovery

Average revenue increase in the first and second year after downturn periods* (in %)



Key insights

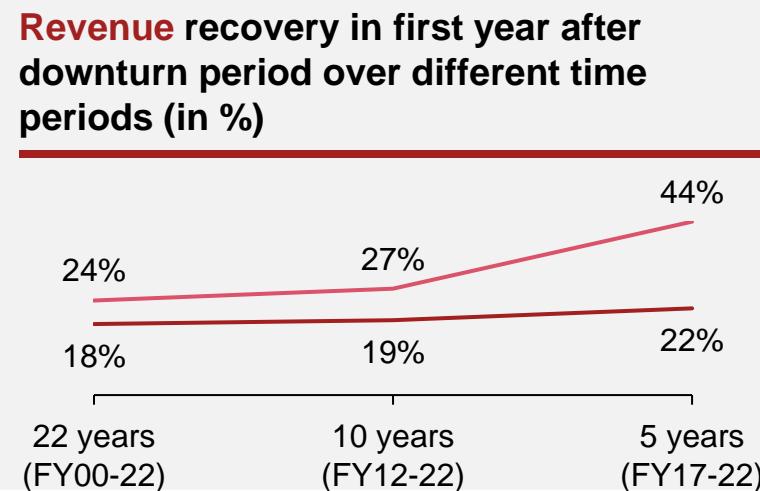
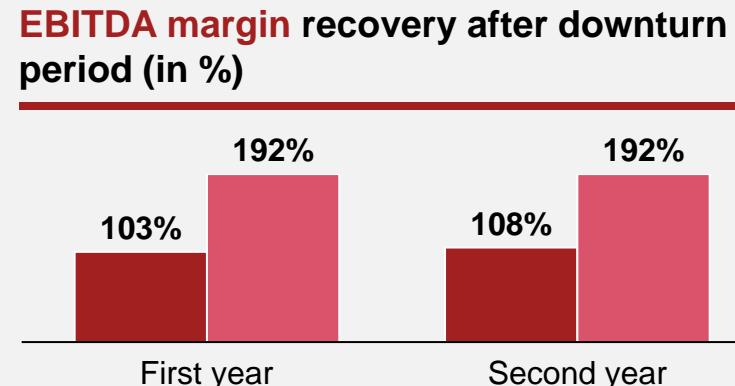
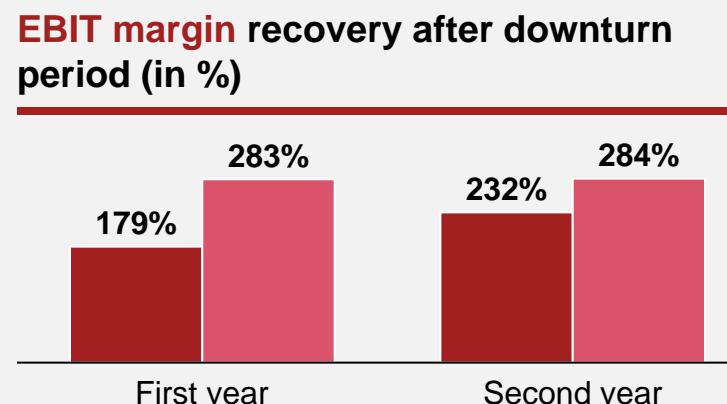
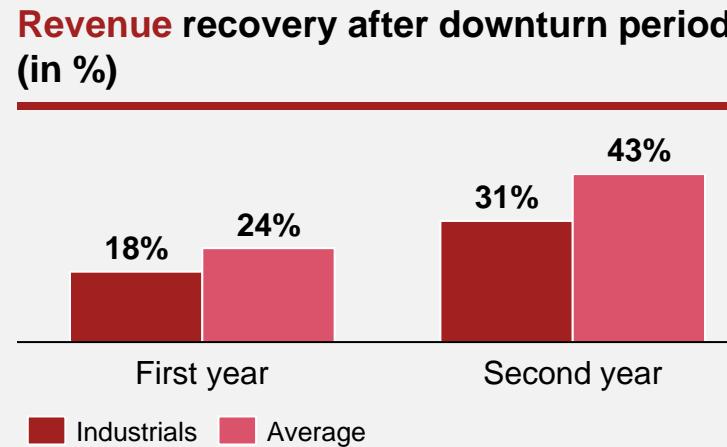
- Industrials with **below average revenue recovery through first and second year** after downturn
- However, **long recovery periods** with average duration of 3.6 years in last 22 years

Sufficient to recover and increase revenue in the long-term



But how is the performance in current multi-crisis times?

The turnaround ability of the Industrials sector is trailing behind the industry average, and the situation has worsened in recent years

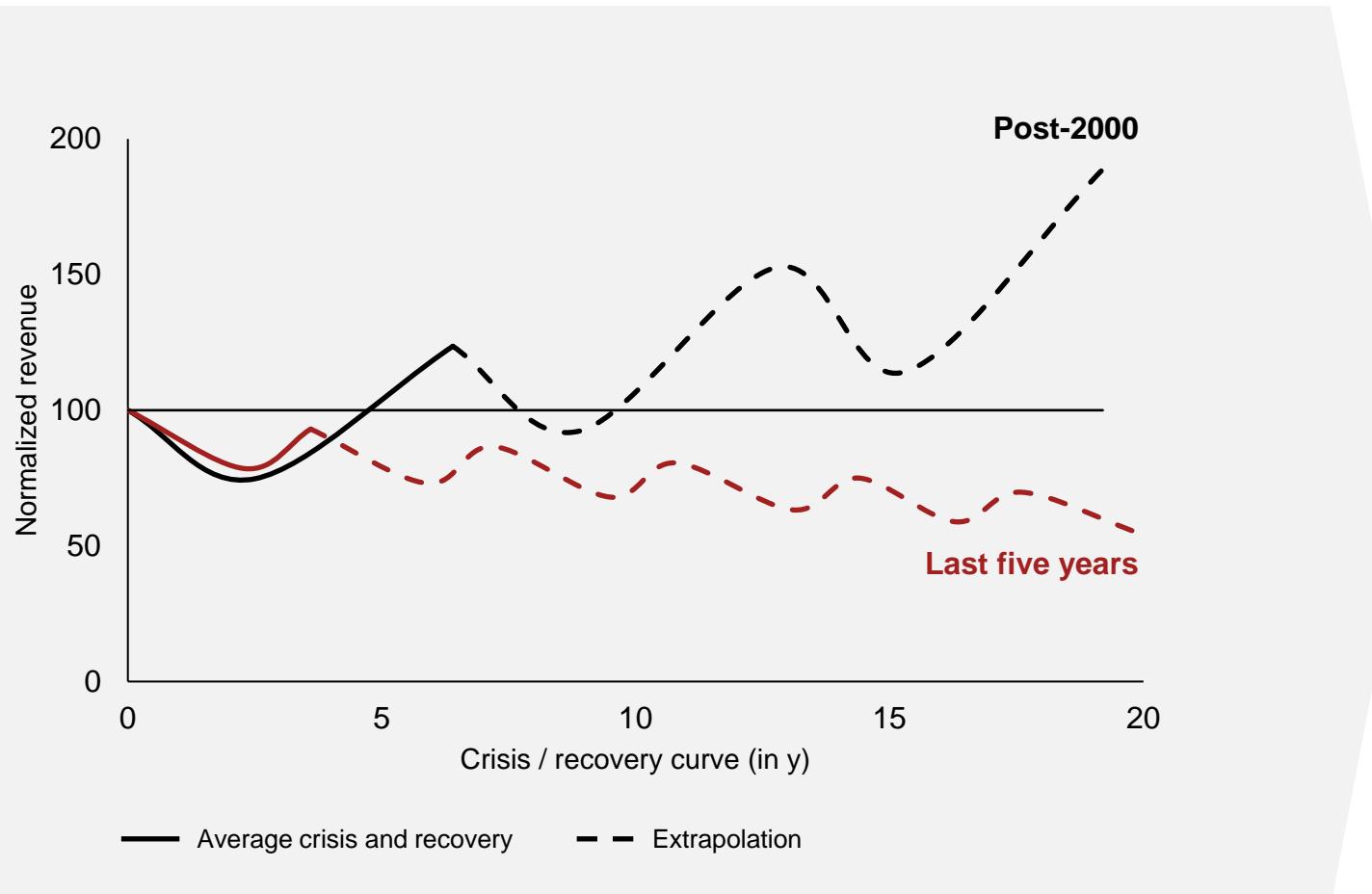


Key insights

- The **recovery of the Industrials sector is below average** in all key financials analyzed
- **Discrepancy to the Germany-wide average actually increased in recent years**
- This weak turnaround strength is accompanied by a **below-average revenue trend** from 2000 on, of just 81% ($\varnothing 147\%$) – mainly **caused by large cooperations with weak growth figures**

Is the current turnaround ability of the Industrials sector sufficient to recover and connect towards the required growth path?

Revenue through an average crisis post-2000 vs. last five years – and extended

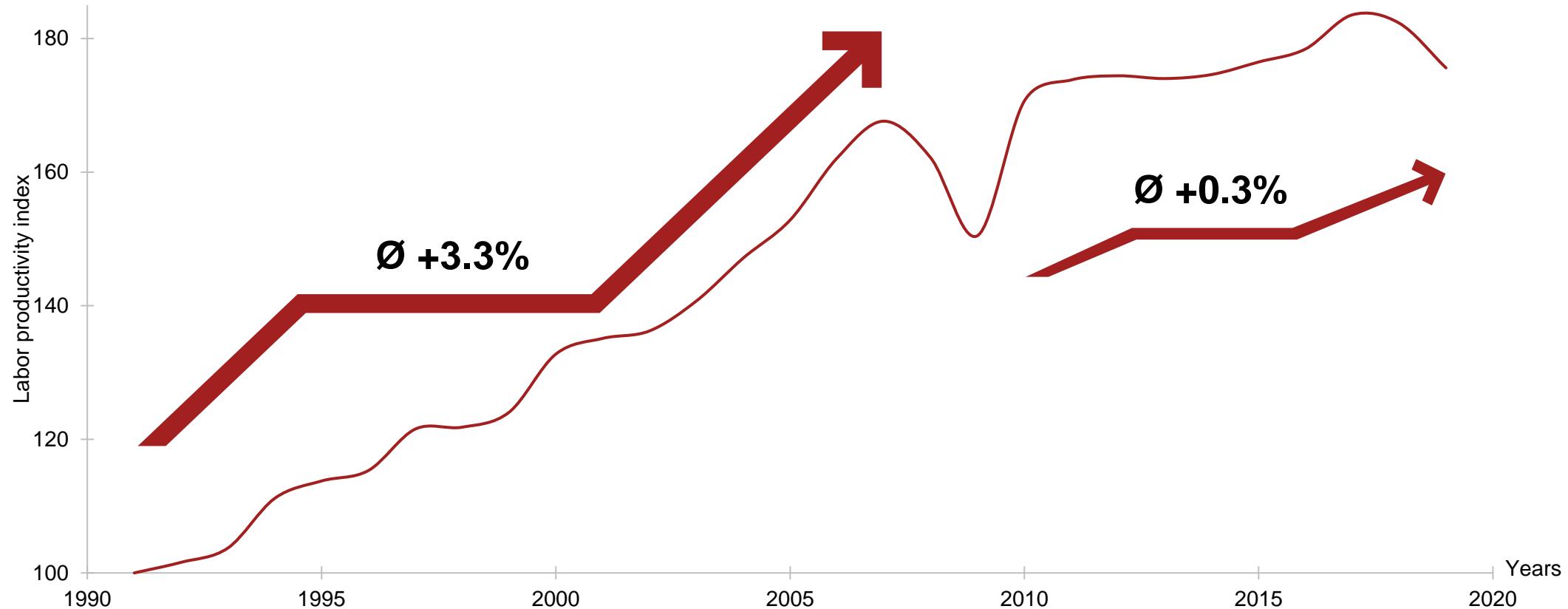


Key insights

- Maintaining the Post-2000 Turnaround Performance is not enough to sustain the business or let alone expand it
- While the average crisis duration stayed constant, **recovery periods shortened by more than half** ($3.6 \rightarrow 1.3$ years)
- **Most sectors can counter with an increase in recovery strength**, however the one of the **Industrials sector stayed constant** – first year after downturn year: 17% (post-2000) vs. 18% (last 5 years)
- Survival threatening revenue decline within a decade possible
- EBIT and EBITDA margin show comparable behavior

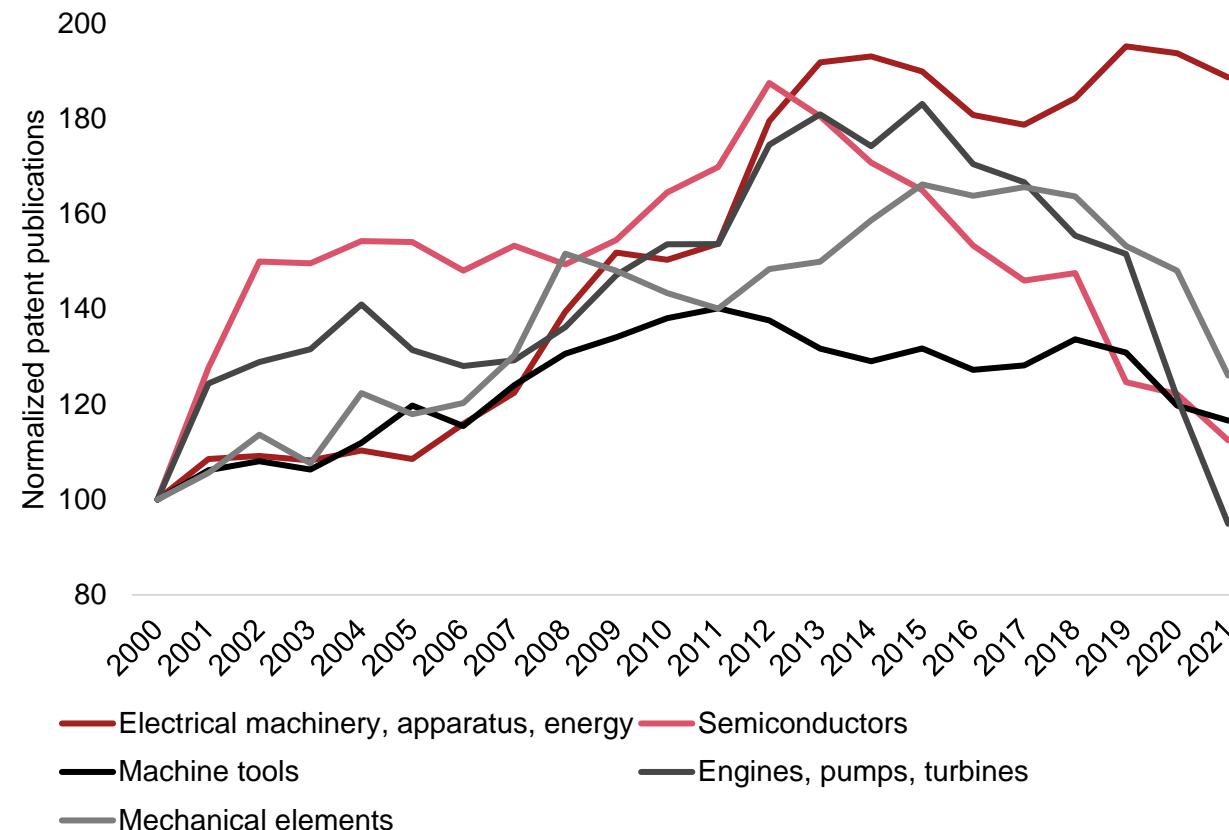
Stagnating labor productivity, while EUR billions have been invested in digital transformation and automation projects

Labor productivity index per working hour in the German Industrials sector



Visible innovation drop across all major technology categories

Patent publications per technology category FY00-21



Key insights

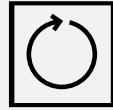
- All technology categories see drop in patent publications – that in many cases already started years ago
- Electrical machinery – boosted by current technology megatrends – is only category showing stable patent publications
- Semiconductors as a key technology category in modern economies saw a sharp increase in patents with a similarly steep decrease in the last 10 years
- Machine tools, mechanical elements and engines, pumps, turbines as core expertise of German engineering exhibit a drastic drop in innovation strength within the last five years



Depleted innovation pipeline and reserves for R&D funds after pandemic and high inflation

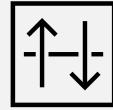
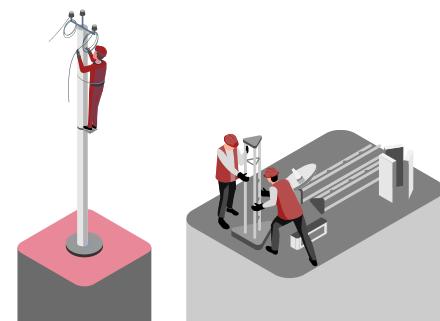
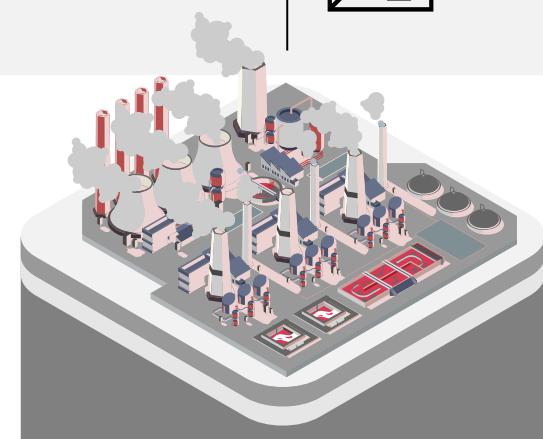
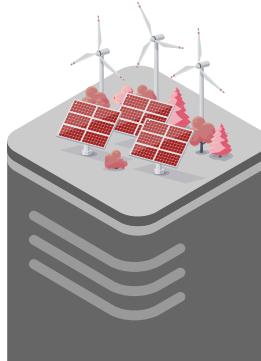
Was the golden decade a lost decade?

German industrials sector is losing pace



The obvious explanations – of high **asset intensity** and long **product innovation cycles** making it a slow-moving sector – are **not telling the full story**

- **Comparable industries** such as Automotive (41%), Energy & Utilities (30%) and Chemicals (25%) **outperform** Industrials in the first year after downturn period
- The perception of a past ‘golden decade’ is quoted as strengthening the backbone of German industry ... **but the situation has been worsening in recent years**. The discrepancy between the German average and the Industrials sector is increasing (first year EBITDA margin recovery):
 - Post-2000: 103%, versus 192% average
 - Last five years: 111%, versus 278% average



While global economies showed a fast rebound from the recent crisis, the Industrials sector is **not equipped for the multi-crisis decade** we are facing

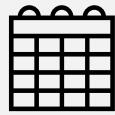
- Performance was sufficient for recent decades, with long recovery periods between crises
- But a continuation of current “**average crises**” would bring **down revenue to 70% within 10 years**, even without considering major disruptions within the sector



Worryingly, this weak performance is **independent of the specific industry** within the sector

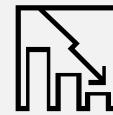
Make German industry vital again!

The sector needs to regain strength to prevail in global competition



One might expect the profits of the past golden decade to be used to fuel innovation and necessary transformations; however, the sector is characterized by a **lack of agility, innovation, and transformation**, primarily among big players

- **Smaller** companies have **over 50% higher turnaround strength** (second year EBITDA margin recovery: Big 72% vs. Small 120%)
- **Average EBIT and EBITDA margin higher for smaller companies** compared to the big players post-2000 (EBITDA margin: Big 8% vs. Small 13%, EBIT margin: Big 5% vs. Small 8%)
- **Innovation depletion** already existed **pre-pandemic** esp. in the Industrial Machinery, and Conglomerates and Specialty industries
 - Semiconductors and other **hot areas have experienced a drastic fall in innovation** (back to early 2000 levels) over the last decade – a time characterized by macroeconomic prosperity
 - **Only 25% of German industrial companies are technology leaders or disruptive innovators.** Nearly **half** the sector is characterized as an **adapter with little success in innovation**, according to a 2019 Bertelsmann/IW Consult study
 - Countries like **China** (+640% in semiconductor patents since 2010) are **taking over Germany's leading position** (-32%)



The **billions invested in digitalization and automation projects** should have boosted productivity, but the Industrials sector **failed to capitalize on those investments**, as evidenced in **stagnating labor productivity** for a decade now (+3.3% p.a. 1991-2007 versus +0.3% p.a. 2010-2019)



The **foundation** for survival in this era of multi-crises and challenges (inflation, skilled worker shortage, geopolitical uncertainties, unclear regulatory framework esp. energy and climate) **was not built up during the 'golden decade'**

- Now crises have depleted the funds needed for innovation and change to take the sector forward



New challenges for CEOs request new strategies

How German business leaders should change their mindset and habits to deal with transformation in times of ongoing crisis

- 1 Moving away from a sequential, step-by-step management mindset:** Successful leaders need to move away from the notion of a “chess player”, exploring the smartest move step by step with practically no time constraints, towards that of an orchestra conductor, potentially even able to change the program mid-performance
- 2 Switching from keeping the pace to setting the pace:** The aim is no longer to achieve “the one and only brilliant move of a mastermind”, but to switch from keeping the pace to setting the pace in the specific market environment and beyond
- 3 Reconfiguring today's value chains while safeguarding regional ecosystems:** Relocating to alternative markets, reshuffling investment budgets etc. might be the right initiative for an individual corporate player, but a broader perspective is required – looking at the long-term impact on today's existing ecosystems of established research, suppliers and customer infrastructure. Policy-makers need to re-focus on a future that delivers regional ecosystems and value chains – simply promising cheap electricity tariffs is not enough

- 4 Moving towards transformative portfolios:** In an environment where recovery phases no longer allow pre-crisis levels to be reached within a critical time, where risk evaluations by portfolio are fluctuating, and talent pools are relatively fluid, the ability to run transformative portfolios is key. Exploring inorganic growth or exit options is no longer a luxury option once everything else has been done, but a key element in driving and shaping ... even for so-called defensive portfolios
- 5 Addressing Time To Impact (TTI) across the business model and global markets:** While industrial manufacturing is not falling short on addressing new ideas and celebrating technical innovations, our analysis shows that most companies are just too late in getting the most relevant topics implemented to the required degree of scale and impact. Successful companies drive their teams more rigorously on TTI criteria, and outperform even their bigger competitors on other restrictions (e.g. scale)
- 6 Restructuring for growth:** Restructuring for growth is no longer an empty phrase, but essential in order to avoid negative spillover effects to the healthy part of the business. The infection starts right from the budgeting process: operative cash-burns and margin leakage, if not rigorously addressed, will dilute the value of other parts of the business unnecessarily. “It's just a bad year” ... is no longer a tenable attitude; instead, it reflects a myopic view not in line with the new market realities

We are happy to discuss ideas and opportunities from strategy to execution



Bernd Jung

Partner



Michael Weiss

Partner



Dr. Hans-Jörg Kutschera

Partner

Relevant expertise

- Over 20 years in consulting, seven years in industry
- Industrials Practice Lead Europe
- Transport and Logistics lead
- Focus on operations and transformations
- Over 20 years of consulting and industry experience
- Industrial Products Practice with focus on strategic repositioning, top line optimization and large scale transformation/restructuring
- Strategic value enhancement along the M&A life cycle
- Over 20 years management consulting experience
- Focus on Aerospace, Defense and Security, and Industrial Manufacturing industry
- Strategic transformation, sustainability, operational excellence, offshoring
- Supply Chain and Logistics (Digital operations, manufacturing network, structural and planning)

Thank you

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