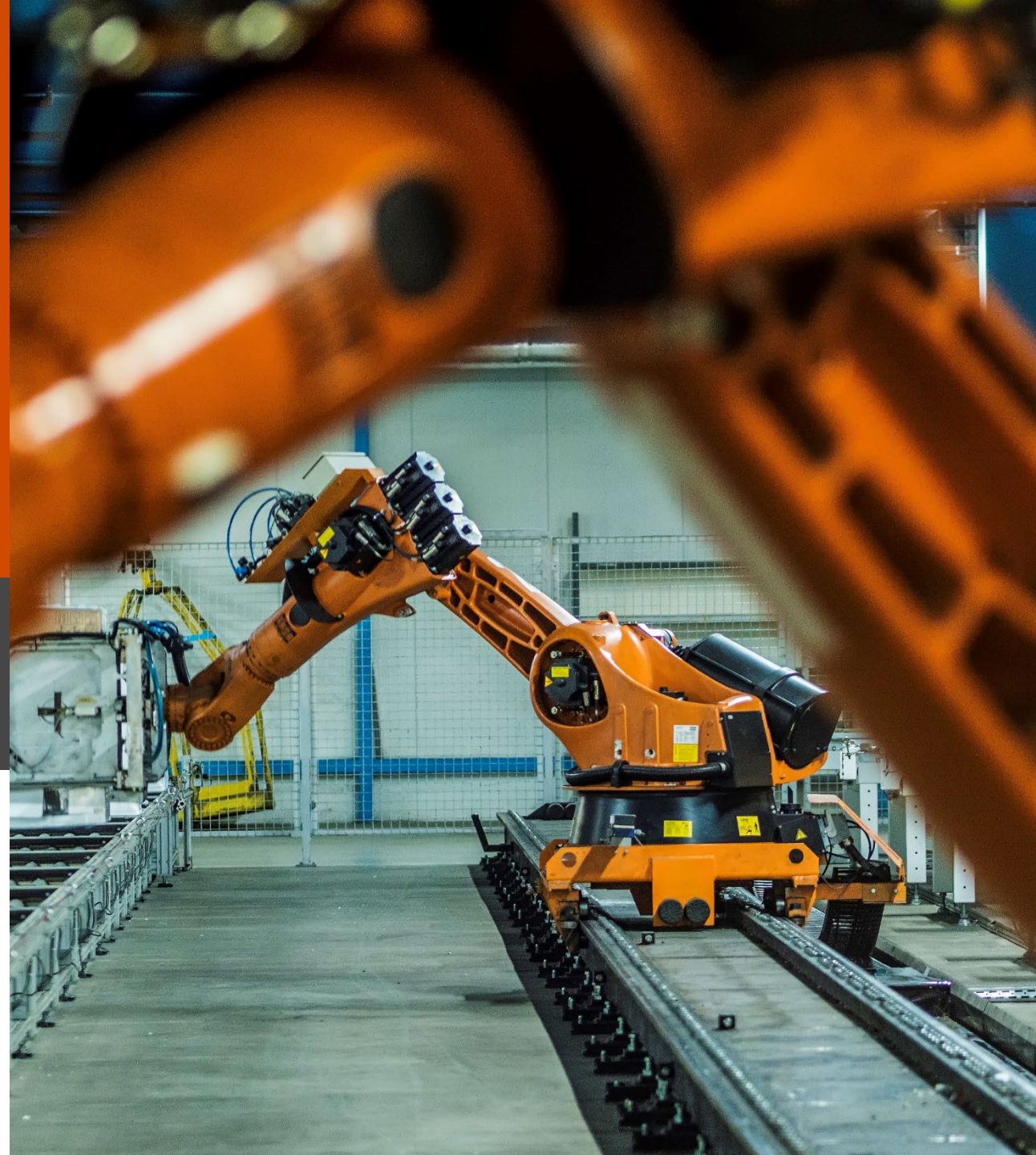


# German Manufacturing Barometer

Focus topics: investment and corporate finance

April 2024

[www.pwc.de/en/industrial-products.html](https://www.pwc.de/en/industrial-products.html)





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# 1

## Executive summary





**Bernd Jung**

Partner  
Head of Industrial Manufacturing  
Practice Group

# At a glance

## PwC German Manufacturing Barometer

The German mechanical engineering industry is experiencing a downturn, with pessimism among decision-makers and a lack of confidence in economic recovery. According to the PwC German Manufacturing Barometer, only 10% of respondents expect an economic upturn, which is a record low. The industry is deeply unsettled, with a level of pessimism not seen even during the Covid-19 pandemic.

The industry's overall turnover is forecast to decline by 5.1%, the worst figure since 2020. In addition, turnover forecasts for individual companies have been revised downwards significantly, by an average of 1.1%. Capacity utilisation in the industry is at a record low of 85.1%, with only a third of companies operating at full capacity. Rising costs, political situations abroad and a shortage of qualified labour are cited as major challenges.

Despite these challenges, investment plans remain stable, with a focus on employee training and the use of new technologies and production processes. Investment in AI has almost doubled since last year, with 31% of managers looking to invest in AI. This makes perfect sense: the sector needs to maintain a high level of innovation and R&D to compete with manufacturers all over the world. "Made in Germany" is a successful brand – it must be secured for the future of the industry as a whole.



# Current situation in mechanical engineering

## Key findings of the PwC German Manufacturing Barometer



The majority of mechanical and plant engineering companies surveyed (56%) are pessimistic about the development of the German economy over the next twelve months. In contrast, the industry is once again looking to the global economy with more hope: 39% are now optimistic.



Average sales for the industry as a whole in 2024 are expected to fall by 5.1%, a negative record surpassed only by the exceptional values of the pandemic.



For the first time since the pandemic, forecasts for companies' own sales are back in negative territory (−1.1%) – a significant decline compared to last year's survey (+2.9%).



Political uncertainty is growing: 72% of respondents cite political developments abroad as the biggest challenge for company growth. 88% cite increasing cost pressure. Challenges posed by the shortage of skilled labour also remain significant (70%).



Investment activity in the sector is showing signs of a slight upward trend. 79% of respondents are now planning investments in 2024 – an increase of 11 percentage points compared to the beginning of last year.



For the first time, companies' capacity utilisation has fallen sharply, averaging 85.1%. The proportion of those working at close to full capacity has shrunk to 32% (−15%).





# 2

## Methodology



# About the study



150 companies in Germany

PwC's **German Manufacturing Barometer** is an analysis of a quarterly panel survey of managers in the German mechanical and plant engineering sector. In addition to an assessment of general economic developments, the study provides an overview of companies' expectations with regard to key performance indicators such as margins, prices and investments. This time, we also asked about investment plans and corporate financing.



# Methodology



## Survey method

Computer-assisted telephone interviewing (CATI)



## Market research

Verian Germany



## Group of respondents

Managers from the mechanical engineering industry



## Survey period

5 February to 14 March 2024



## Sample size

n = 150



**Results are rounded to whole numbers.**



# 3

## Results

Economic expectations and  
sector growth



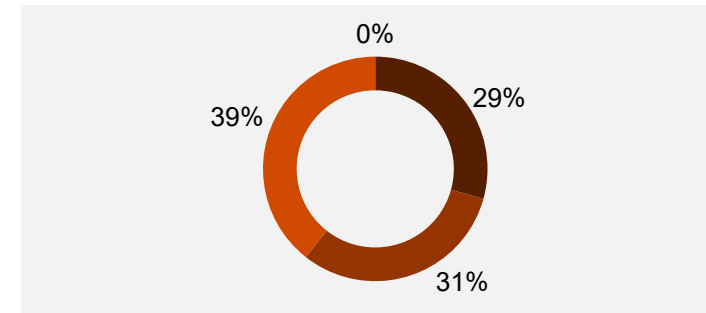
# No signs of recovery: pessimistic outlook for the German economy

Sentiment in the German mechanical and plant engineering sector is gloomy, and it deteriorated even further in the first quarter of 2024. Only one out of every ten companies surveyed still expects German economy to develop positively in the next twelve months. This means that the proportion of optimists in the industry has fallen by 25 percentage points compared to last year. A clear majority of respondents (56%) are sceptical about economic development in Germany. This is the highest figure since the beginning of the Russia-Ukraine war.

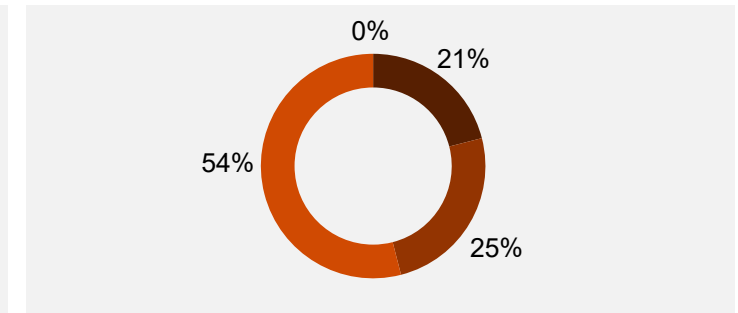


Looking ahead to the next twelve months, how do you rate the development of the German economy?

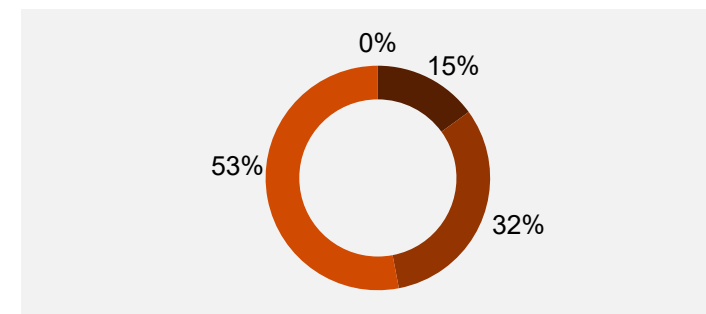
■ Optimistic ■ Undecided ■ Pessimistic ■ Not specified



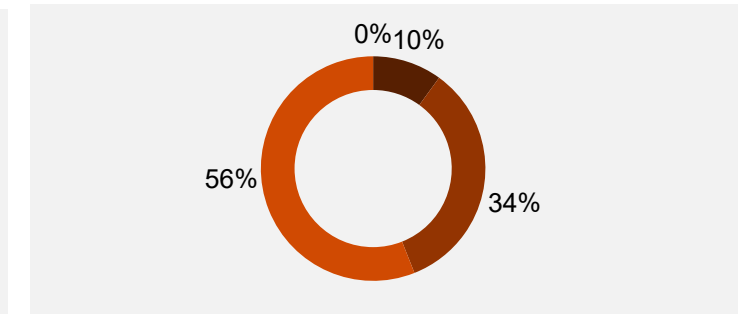
Q2 2023



Q3 2023



Q4 2023



Q1 2024



# Silver lining? Global economic forecast more positive again

The industry is looking to the future with more hope

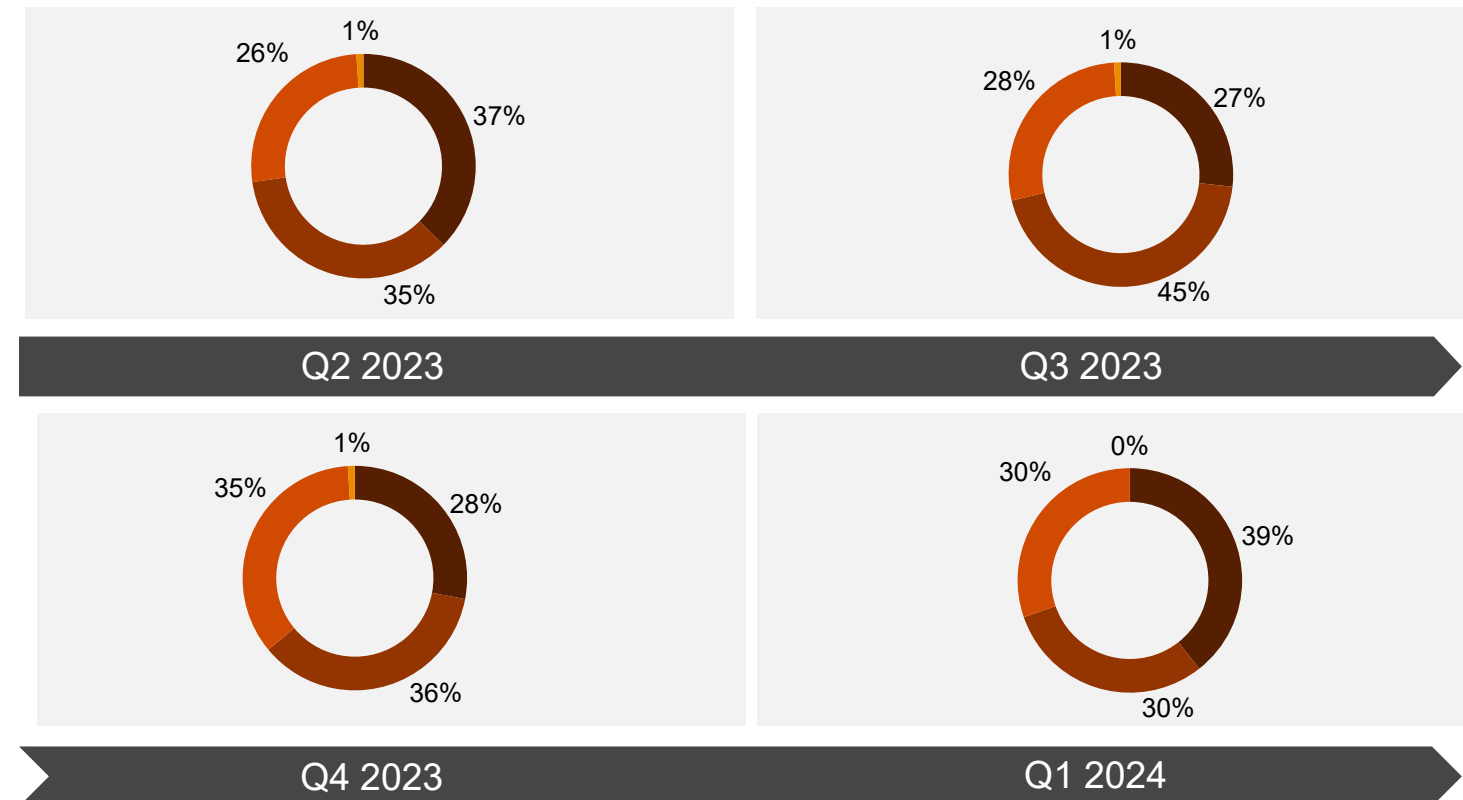
39% of decision-makers in German manufacturing are optimistic about the development of the global economy – an increase of 11 percentage points compared to the previous quarter. After a phase of uncertainty and a loss of market traction in recent years, global demand for machinery and equipment is showing signs of recovery. This could give the heavily export-oriented sector in Germany something of a boost. Accordingly, the proportion of pessimists in the sector has fallen slightly, to 30%.



Economic  
expectations  
(world)

Looking ahead to the next twelve months, how do you rate the development of the global economy?

■ Optimistic ■ Undecided ■ Pessimistic ■ Not specified



# Sales prospects for the industry continue to fall

The majority of respondents expect a recession

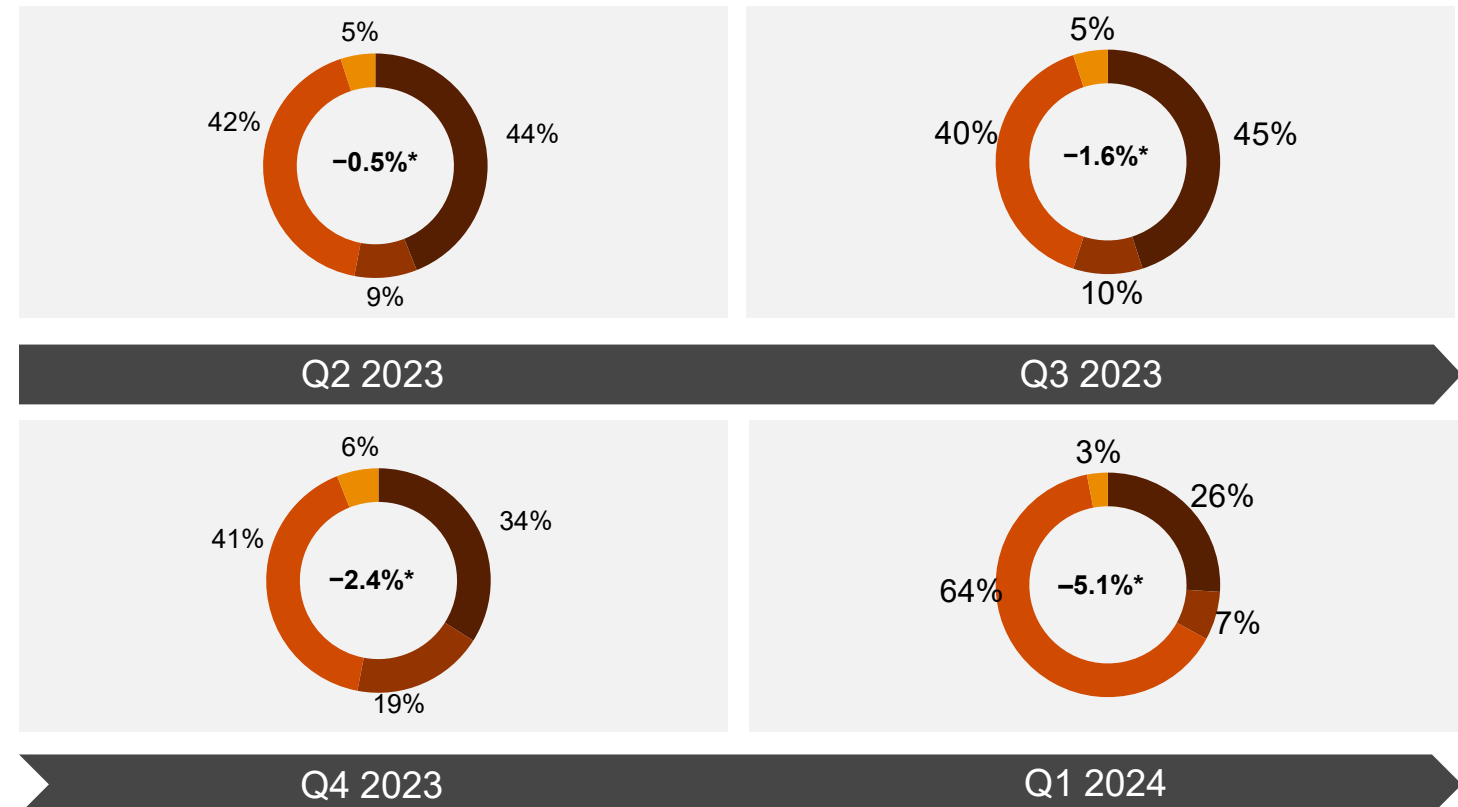
Average forecast turnover for the mechanical engineering sector in 2024 is now 5.1% lower than last year. This negative record is only surpassed by the exceptional values of the pandemic years. The overwhelming majority (64%) of respondents now expect a negative trend for the industry as a whole. The mechanical engineering sector is clearly in a crisis. Only one in four managers still expects the industry to grow this year – a decline of 31 percentage points compared to the same period last year.



Sector development

How do you expect turnover to develop in your industry as a whole for 2024 compared to the previous year?

■ Growth ■ Constant ■ Negative ■ Not specified \*Average expected turnover





# Results

Corporate development  
in 2024

# Companies' own turnover forecasts are going negative

Sales forecasts in negative territory for the first time since the pandemic

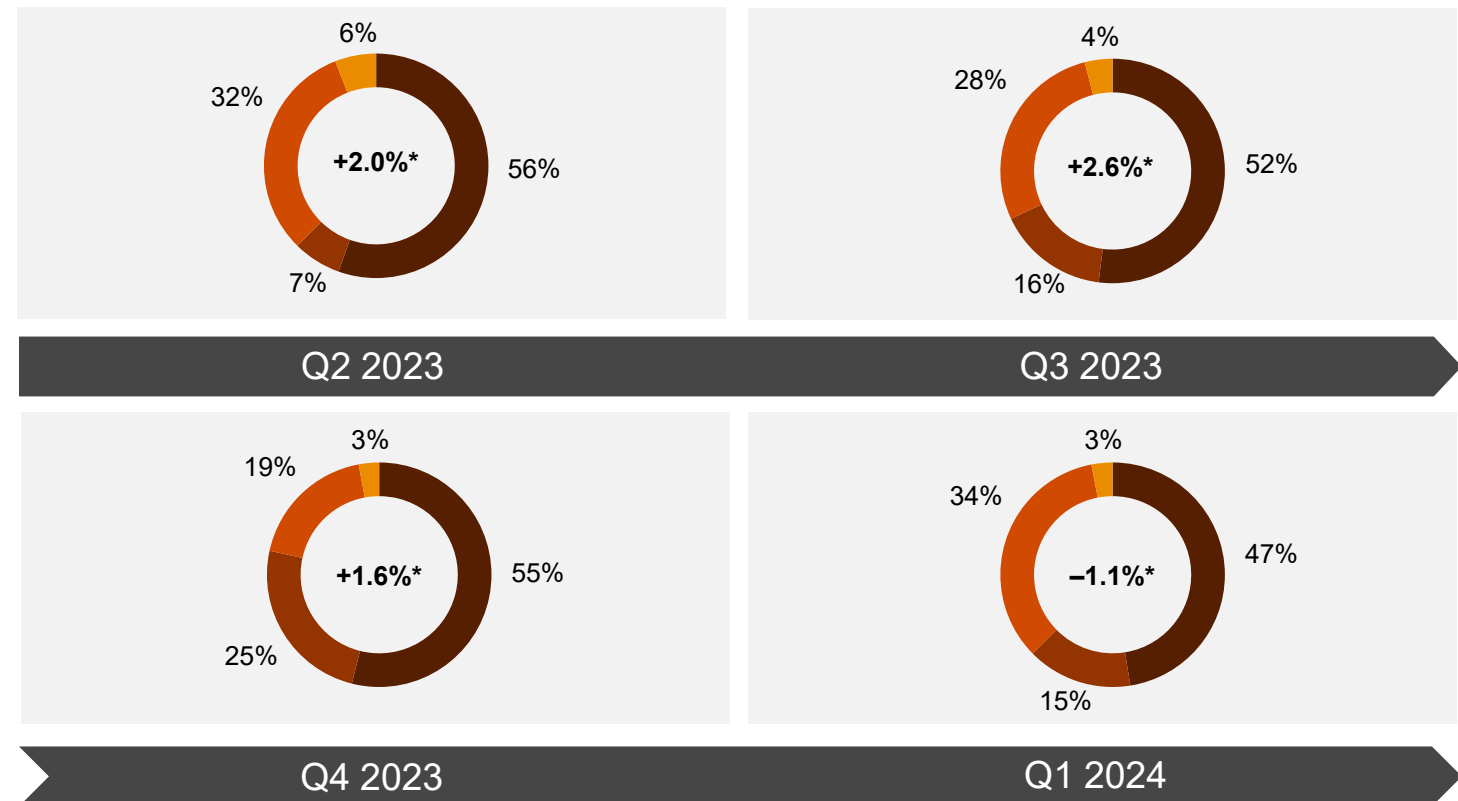
Companies' average forecast change in turnover in 2024 is negative (−1.1%) for the first time since autumn 2020. A relative majority of managers no longer believe that their own company will grow. In the last three quarters, growth forecasts have fallen continuously and are now four percentage points below last year. Only 27% of the companies surveyed share the view that growth of at least 5% is possible in 2024. This is the lowest figure in the last four years.



Turnover

## How do you expect your company's turnover to develop in 2024?

■ Positive ■ Constant ■ Negative ■ Not specified \*Average expected turnover





# Results

Investment in 2024



# Investment remains constant

The industry's investment climate is resilient: the proportion of decision-makers planning to invest in 2024 is 79%, an increase of 11 percentage points compared to last year. Overall, respondents plan to invest an average of 5.9% of their total turnover in 2024, keeping this proportion constant – in 2023, an average of 5.8% of turnover was invested.

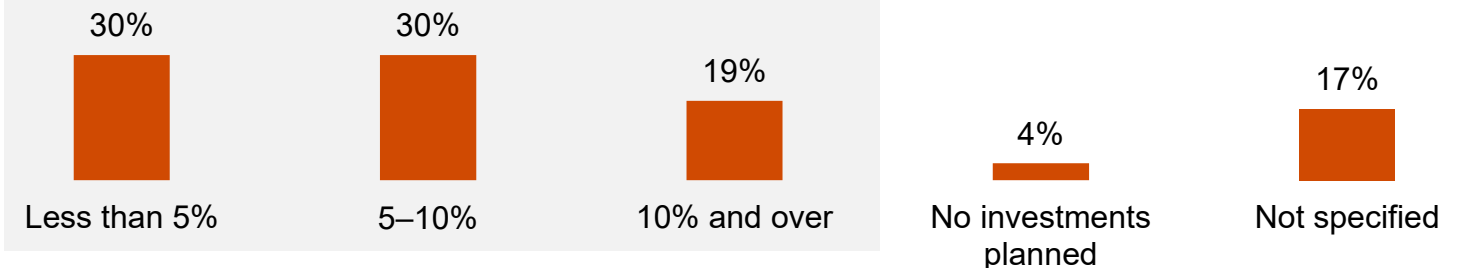


## Investments

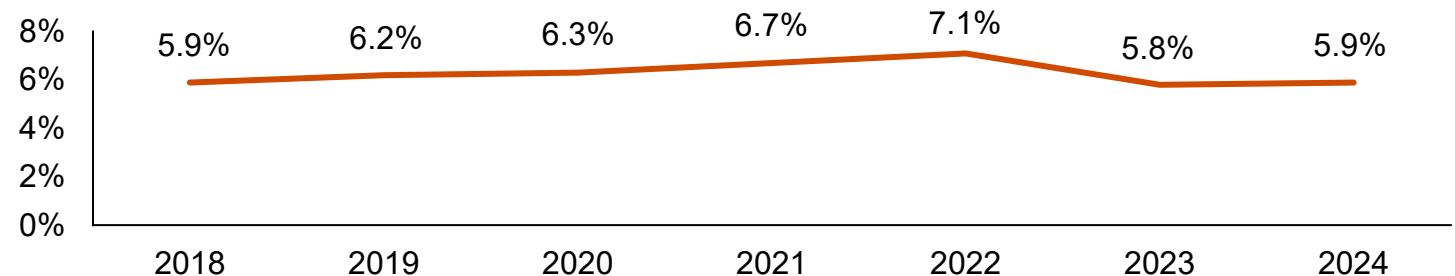
### What proportion of your total turnover are you planning to invest in 2024?

**79% of companies plan to invest in 2024**

**Average proportion of turnover invested: 5.9%**



### Proportion of total turnover invested over time





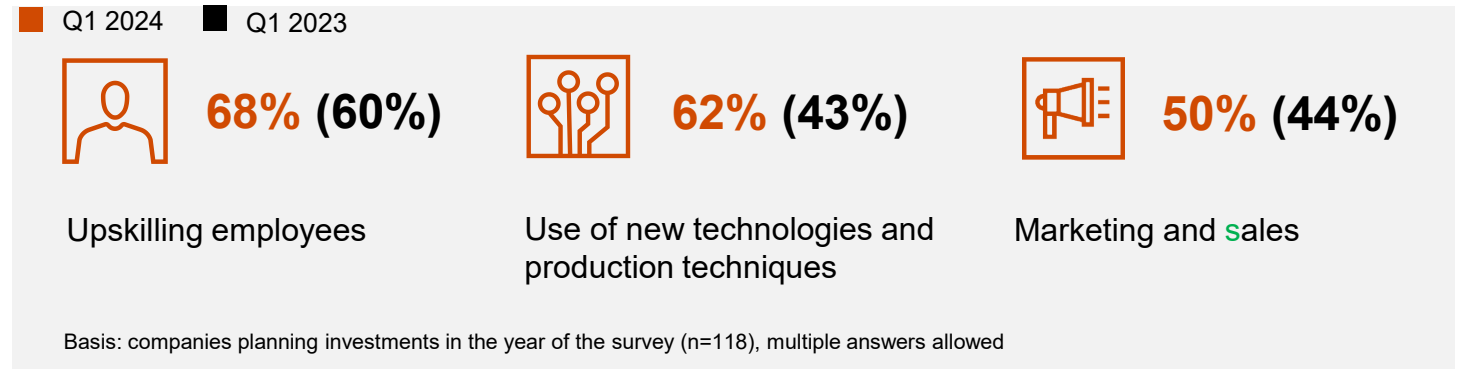
# Upskilling is a top priority

## Remarkable rise in investment in new technologies

More than two thirds of all companies are set to invest in employee training in 2024. 62% of decision-makers are also focusing on the use of new technologies and production techniques – a remarkable increase of 19 percentage points compared to last year. Investments in digitalisation of business models, on the other hand, have fallen to 42%, down from 52% in Q1 2023. This may indicate that some companies have already successfully invested in digitalisation and are now moving their investment focus into other areas.



## In which of the following areas are you planning significant investments in 2024?



### “Yes” answers

	Q1 2024		Q1 2023
Increasing IT security and cybersecurity	50%	↘	52%
Research and development	48%	↔	48%
Increasing sustainability in the company	48%	↘	49%
Digitalisation of the business model	42%	↘	52%
Expansion into new markets abroad	35%	↔	35%
Development of new services	26%	↗	22%
Co-operation with third parties	23%	↘	25%

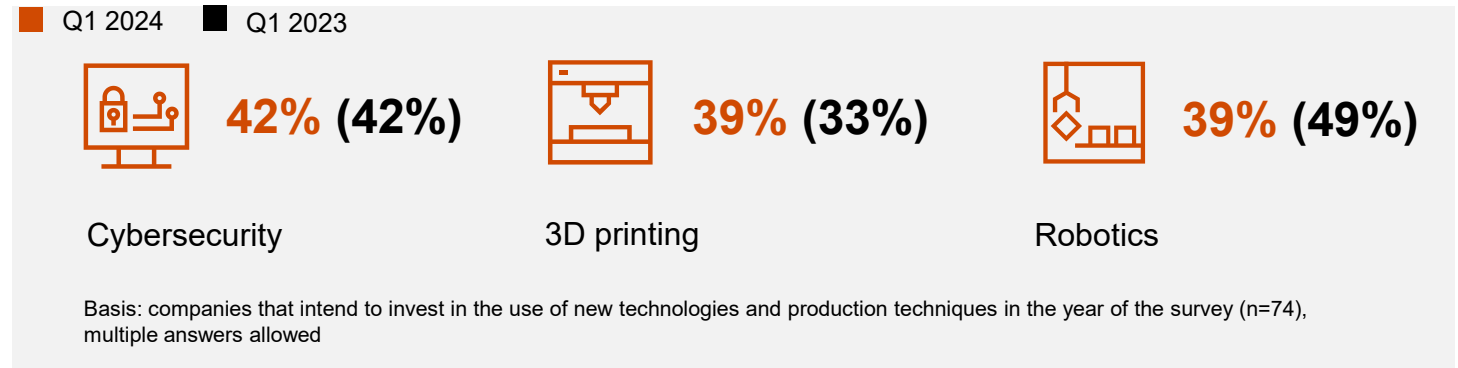
# AI on the rise

## Investments in robotics are declining

In terms of new technologies and production techniques, investments in cybersecurity (42% of companies), 3D printing (39%) and robotics (39%) are in the lead. Compared to last year, however, there is a downward trend in investment in robotics: in the survey at the beginning of 2023, 49% of companies were planning to invest in this area. What is striking, however, is the remarkable increase in investment in AI, which now stands at 31%, the highest figure of all surveys to date. Machine manufacturers have recognised the potential of technology to increase efficiency, improve product quality and gain a competitive advantage.



## If your company wants to invest in new technologies and production techniques, what exactly are they?



	“Yes” answers		
	Q1 2024		Q1 2023
AI	31%	↗	16%
Big data and data analysis	27%	↗	23%
Cloud	24%	↘	32%
Internet of things	21%	↗	20%
Digital twins	12%	↘	17%
Virtual reality and augmented reality	9%	↘	13%
Blockchain	2%	↘	5%
Drones	1%	↘	7%



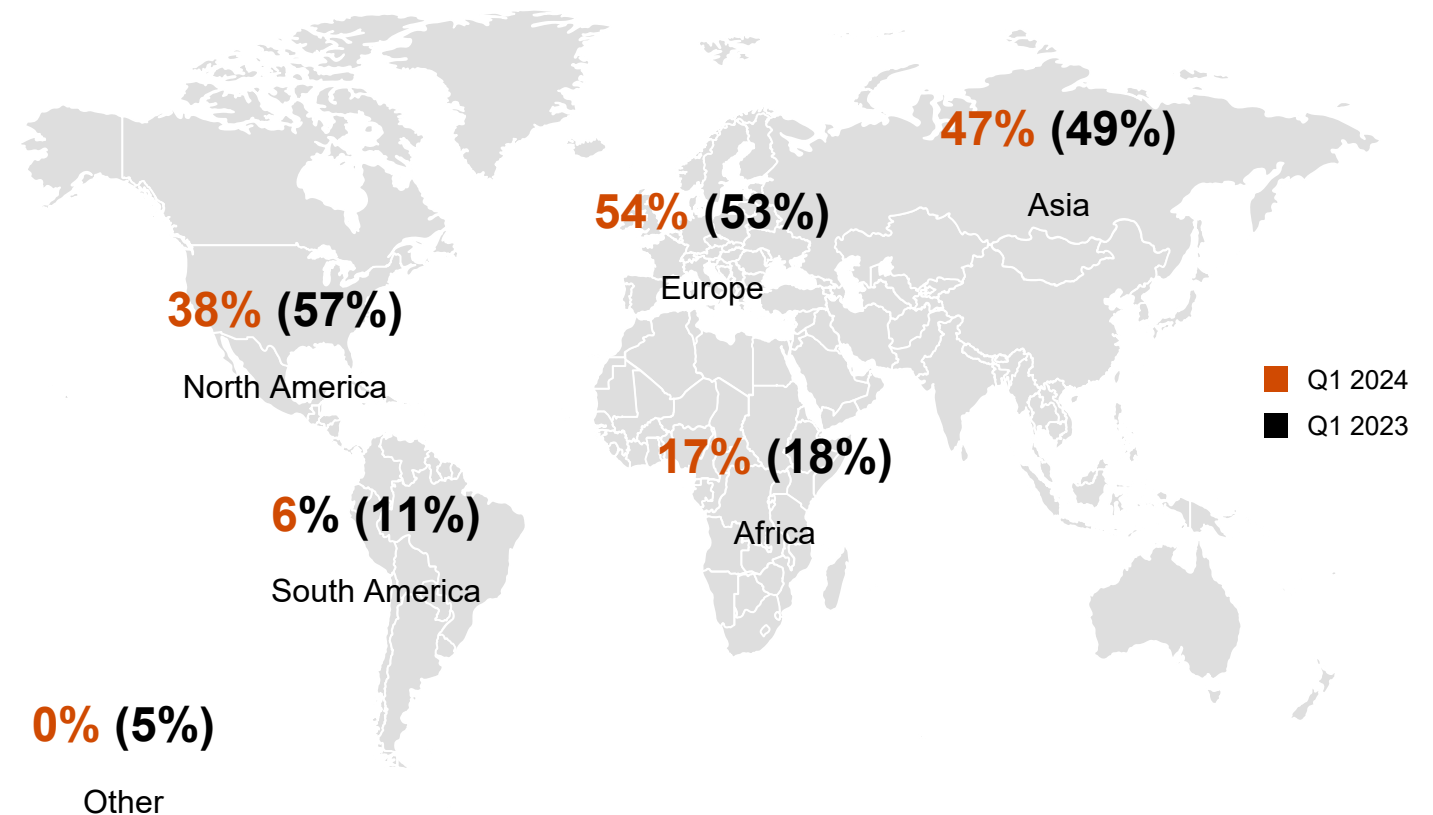
# Withdrawal from North America?

The majority of respondents are expanding into European countries

Most of the companies in this survey are planning to expand on the European market (54%). Compared to last year's survey, willingness to invest in markets in North America has fallen significantly – from 57% to 38%. This could be due to the fact that machine manufacturers are hesitant to push ahead with expansion into America or Asia because of the uncertain political situation worldwide. It seems easier and less expensive for German manufacturers to relocate some of their production to neighbouring countries than to build up capacity further afield.



If your company wants to expand into new markets abroad, which specific regions do you want to invest in?



Basis: companies that intend to invest in expansion into new markets abroad in the year of the survey (n=42), multiple answers allowed

# Results

Current capacity utilisation  
and challenges





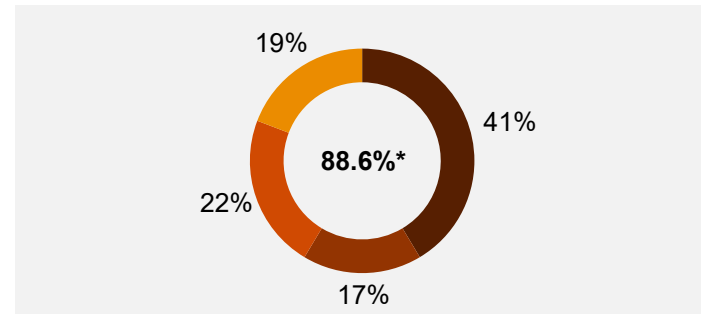
# Capacity utilisation falling sharply – a warning sign?

The average capacity utilisation of companies in the mechanical engineering sector is currently 85.1% – the lowest level in three years. We are observing a strong downward trend: 32% of companies are currently working at full capacity – a decrease of 15 percentage points compared to the previous quarter. There are many causes of this situation: an economic slowdown, declining orders and high costs coupled with uncertain political conditions on the global market.

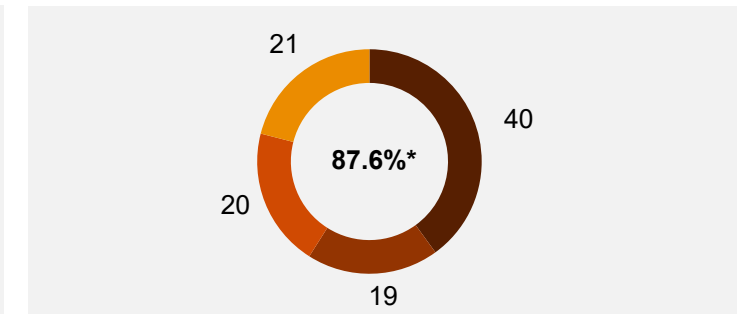


**If you think about your company's capacity in general, how high would you estimate your company's current capacity utilisation to be?**

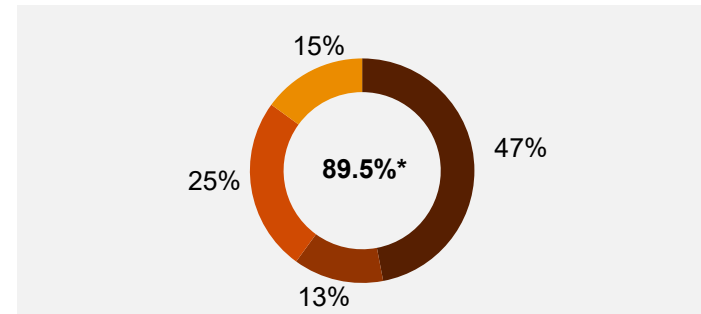
■ 95–100% 
 ■ 90–95% 
 ■ 80–90% 
 ■ Less than 80% 
 \*Average capacity utilisation



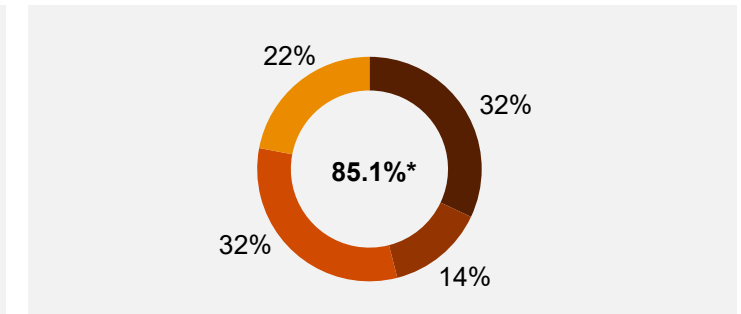
Q2 2023



Q3 2023



Q4 2023



Q1 2024

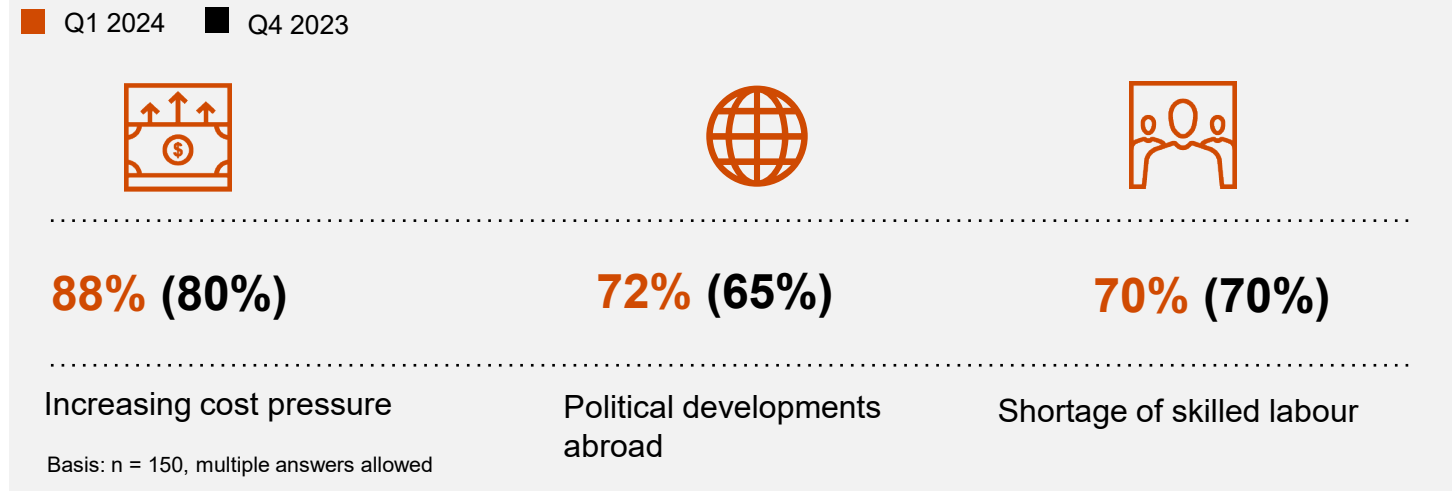
# Growing political uncertainty

The three biggest challenges for the German mechanical and plant engineering sector remain unchanged. 88% of decision-makers cited increasing cost pressure as an obstacle to their company's growth. Political uncertainty in the industry is also growing: the proportion of those who see political developments abroad as a challenge has risen by a further 7 percentage points since the previous quarter. The difficult regulatory environment (59%), a challenge which has remained at a consistently high level since summer 2023, should not be ignored. Concerns about weak demand are equally persistent (51%).



## Challenges

Please tell me whether or not you currently see the following points as obstacles to your company's growth.



	"Yes" answers	
	Q1 2024	Q4 2023
Difficult regulatory environment	59%	57%
Weak demand	51%	50%
More intense competition	46%	45%
Difficult financing environment	34%	36%
Climate change	16%	27%



# Results

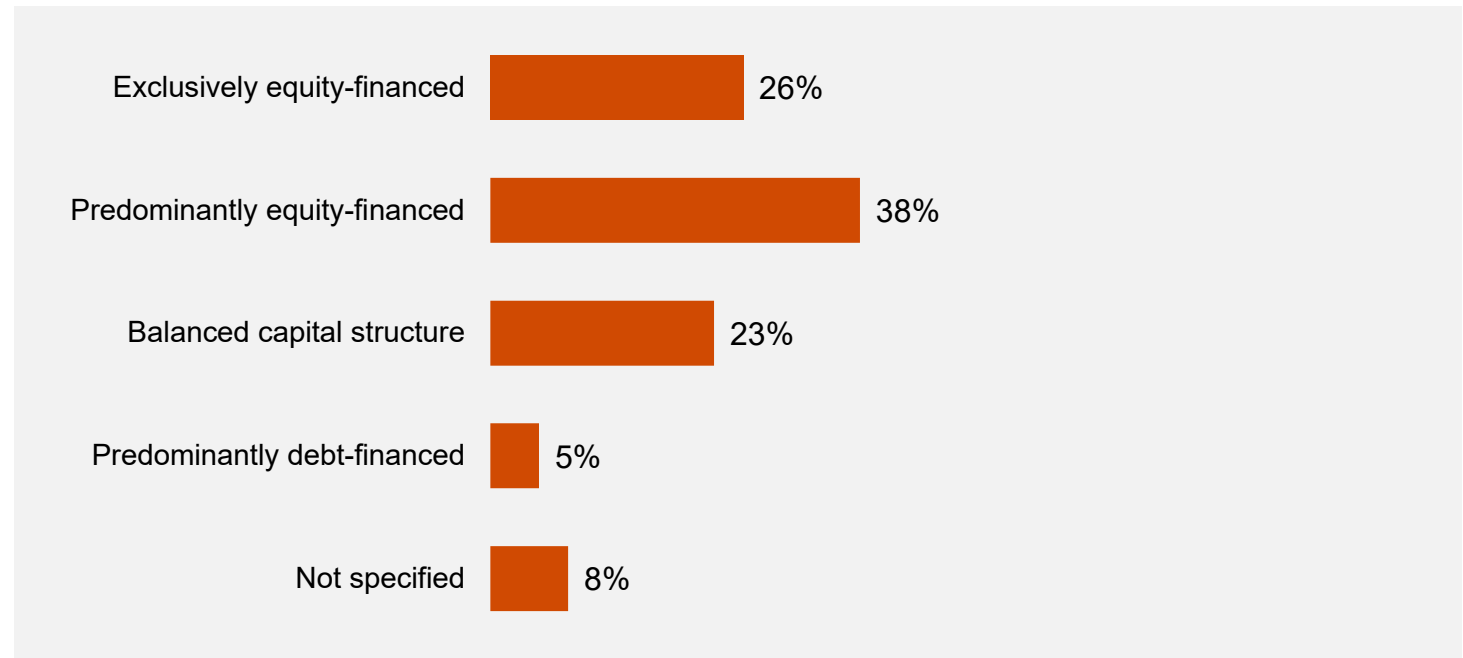
## Corporate financing

# Equity financing for risk avoidance



Corporate  
financing

## How is your company financed?



Nearly a quarter of the companies surveyed have a balanced capital structure.

However, the majority of the companies surveyed are either exclusively or predominantly equity-financed (64% in total). It is worth noting that as many as 26% rely exclusively on equity financing, which indicates that many companies – especially SMEs – wish to retain control and avoid any risks arising from debt obligations.

These results emphasise the importance of strategic financing decisions to unlock growth potential and long-term sustainability in the mechanical engineering sector.



# Local banks are the preferred source of debt capital

The survey results show that local banks are the main source of debt financing. Companies obviously benefit from close ties to regional financial institutions and their credit offers.

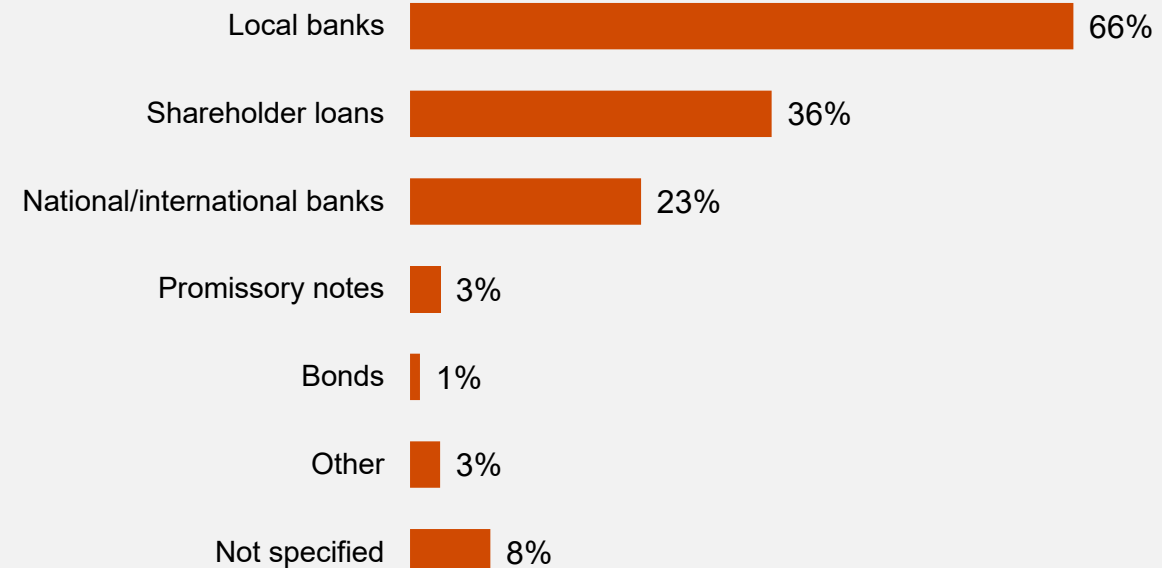
Interestingly, 36% of companies finance themselves through shareholder loans, which are also frequently used by owner-managed companies, emphasising the close relationship between owners and companies.

Promissory notes and capital market financing, on the other hand, are almost completely irrelevant in this sector.



Sources of financing

## If external financing is available, where do you obtain it?



Basis: partially and fully debt-financed companies (n=99), multiple answers allowed

# Focus on collateralisation

Land charges and mortgages are frequently used as collateral to finance business properties.

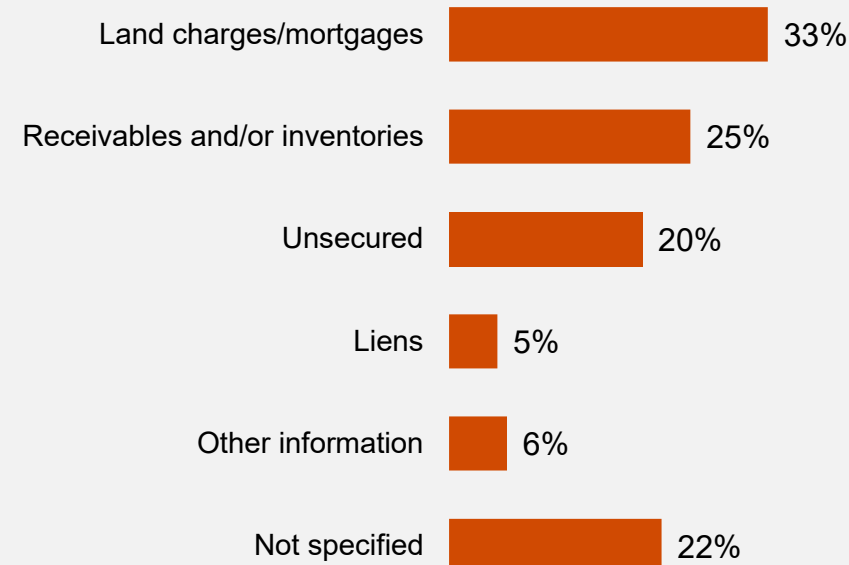
However, the widespread use of collateralisation through receivables and inventories also indicates the frequent use of working capital lines of credit for working capital financing.

As very few banks currently provide unsecured financing, most of the unsecured financing is probably in the form of shareholder loans.

Other forms of collateral, such as liens, only appear to play a minor role.



## How is your debt financing collateralised?



Basis: partially and fully externally financed companies (n=97), multiple answers allowed



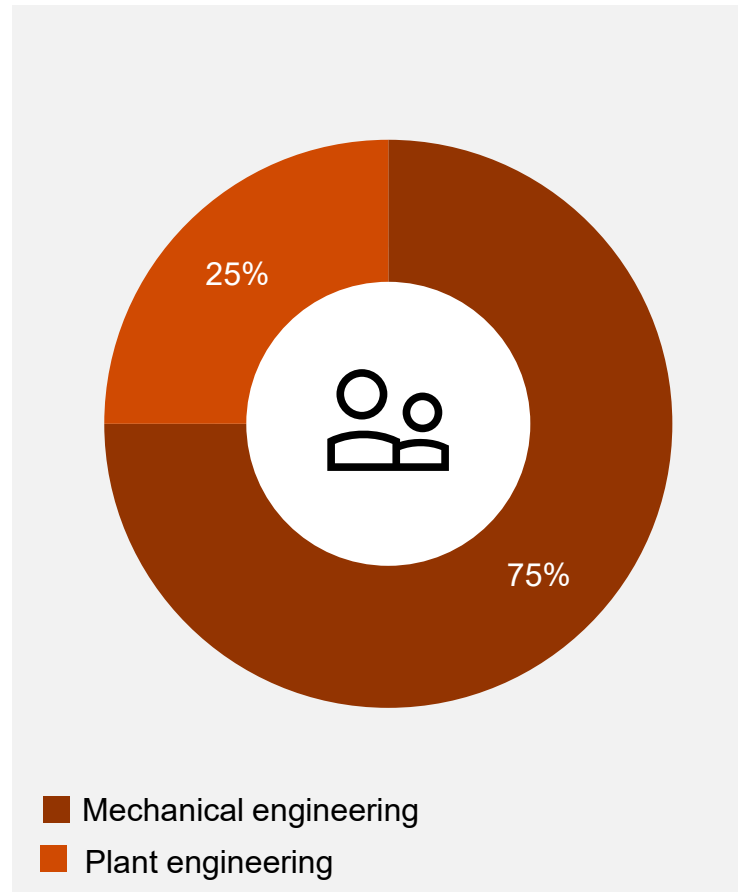
# 4

## Survey statistics

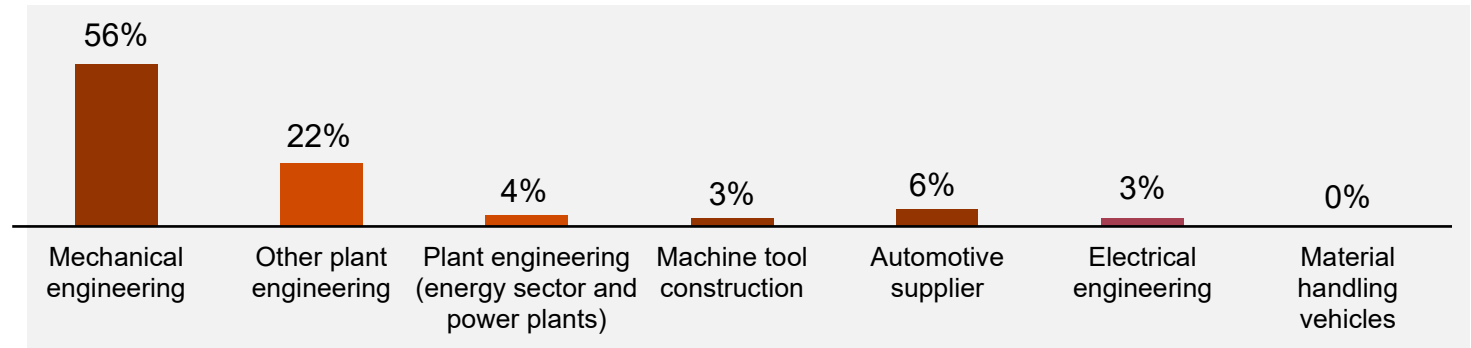


# Survey statistics

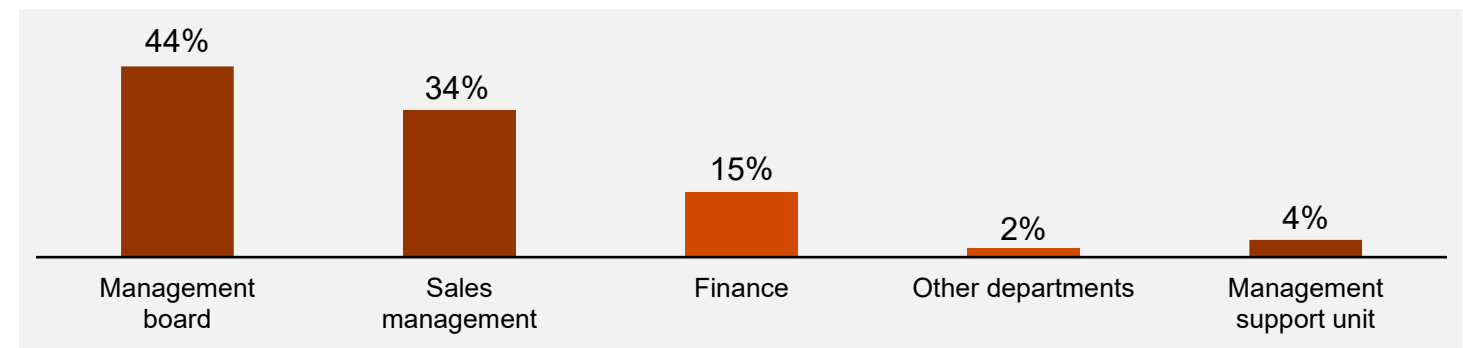
## Industry affiliation



## Industry affiliation in detail



## Function of the interviewees





# 5

## Contact us

# Contact us

Industry: Industrial Manufacturing



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# Thank you.

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