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New risks for the supply chain and the industry location Germany

Supply Chain Pulse Check

Spring 2023

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Supply Chain Pulse Check
Spring 2023

We conducted this survey between January 17 and February 6, 2023. The 121 participants comprised supply chain managers from large companies as well as small to medium-sized enterprises (SMEs) in Germany, operating primarily in the machinery and industrial products, automotive and chemical industries.

Company size is based on headcount: SME = 1 to 249 employees, large company = 250 or more. 79 percent of the supply chain managers that took part in our survey worked at large companies, while 21 percent were from SMEs. Four fifths of these companies offer comprehensive customer and after-sales service and spare parts supply as part of their businesses.

Percentage figures are rounded to add up to 100.

Foreword

Dear readers,
As 2022 drew to a close, we had the first indications of continued stabilization in global supply chains – and yet all signs still point to supply chain issues as an ongoing topic for Germany's economy in 2023 and beyond.

How will energy and raw material prices impact industry? What can we do to stabilize the supply chain for today's challenges and in the future? What does this mean for customer and after-sales service? And perhaps most important of all: Will this have a lasting impact on Germany's status as a top location for business?

Deloitte and the Federation of German Industries (BDI), in collaboration with the International Service Logistics Association (ISLA), developed the new Supply Chain Pulse Check – a regular survey of key German supply chain managers designed to systematically collect data on these issues and trends as well as their root causes.

We are delighted to present to you our first edition of the Supply Chain Pulse Check for the first half of 2023. We are grateful to the 121 supply chain experts who participated in the survey and provided their perspectives. The survey results allow us – as well as you – to analyze how global supply chains will evolve over time in a world shaped by technological and geopolitical change. The findings will help to develop a reliable compass for future initiatives to strengthen supply chain resilience.

We hope that the Supply Chain Pulse Check will enrich the discussion about the resilience of supply chains and that its insights will help to reduce or even avoid current or future supply chain disruptions.

We wish you an exciting read and look forward to your constructive feedback and suggestions.

Florian Ploner
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Lead Industrial Products & Construction
Deloitte

Dr. Jürgen Sandau
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Deloitte

Matthias Krämer
Head of Department External Economic Policy
Federation of German Industries
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Executive summary

53%

of the surveyed companies report that supply chain disruptions are having a strong to very strong impact on their business.

52%

say current supply chain pressures are hurting profitability.

78%

report that energy policies are having a strong to very strong impact on supply chains.

Impact of supply chain disruption remains strong
Though global supply chain pressures have eased somewhat over previous years (e.g., during the COVID-19 pandemic), the Supply Chain Pulse Check Spring 2023 makes it clear that disruption is still impacting Germany's businesses in early 2023. More than half of our respondents (53%) report that their supply chains are still experiencing disruption, while the risk of supply chain failure is a concern for almost half (46%). Germany's supply chain issues are clearly far from over, despite the slight trend toward normalization. The challenge is merely shifting from one of scarcity to one of rising prices and expenses.

Rising costs hurt performance
Rising prices are the biggest concern among respondents, with a large majority (77%) reporting a noticeable increase in purchasing prices. For more than a quarter of the surveyed companies (27%), revenue has gone down due to current supply chain issues, while around half (52%) report a decrease in profit. Declining revenues are not only an issue on the product side; one in two of the manufacturers surveyed expect losses in after-sales service as well.

High inflation, raw material prices and energy costs add to the challenge
More than three quarters of the manufacturers in our survey say their supply chain issues are severely impacted by energy policies or continuing high inflation and commodity prices. Another three fifths are feeling the effect of the skilled labor shortage in their supply chains. The negative implications of the war in Ukraine and stricter regulatory requirements are a concern for more than half of respondents.

52%

worry that Germany is at risk of losing its status as a top location for business.

56%

expect the pressure on supply chains to remain high.

Decline in Germany's attractiveness as an industry location

More than half of the companies surveyed (52%) feel that the attractiveness of Germany as an industry location may be declining, due at least in part to the issues outlined above – and almost half (45%) say Germany runs a high risk of deindustrialization. Among the most urgent measures to make the country more attractive as a location for business, the respondents cite passing more business-friendly energy and tax policies, improving access to skilled specialists, promoting key technologies, investing in education, infrastructure and digitalization as well as reducing bureaucracy, directives and regulation.

Continued uncertainty calls for radical rethinking

Chances are high that this diverse range of challenges will continue in the future, and that uncertainty will become our "new normal". More than one fifth of respondents (22%) worry that supply chain disruption will become either slightly or significantly worse over the medium to long term. To combat growing uncertainty, the demand for novel initiatives and strategies are particularly urgent when it comes to strengthening cost management, driving digitalization and exploring nearshoring/friendshoring as part of the plan to increase future resilience and competitiveness.

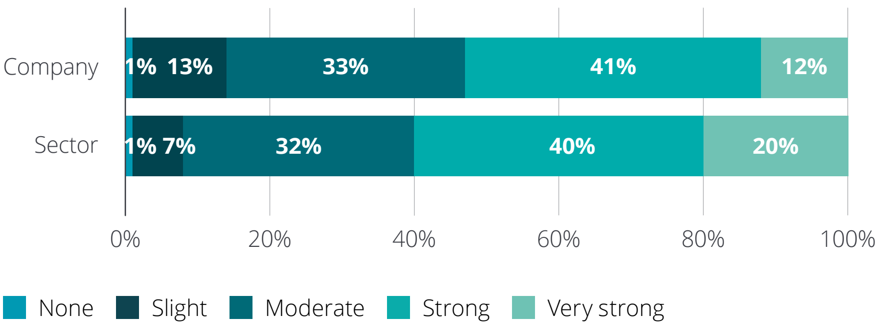
The survey results in detail

Impact of supply chain disruption remains strong

Over the past few years, we have seen supply chains under enormous pressure due to a wide variety of issues, among them the COVID-19 pandemic, the war in Ukraine and serious unforeseen events such as the blocking of the Suez Canal by the cargo ship Ever Given. Things have since normalized to a certain extent, though Germany's manufacturers are being confronted with the obvious vulnerabilities of a just-in-time manufacturing system, which is very efficient yet also susceptible to disruption.

More than half of the German manufacturing companies in our survey (53%) say supply chain disruptions are having a strong (41%) to very strong (12%) impact on their performance (see fig. 1). The vast majority (60%) also believes that disruption is an even bigger problem for the sector as a whole.

Fig. 1 – The impact of supply chain disruption
Question: On a scale of 1 to 5 – to what extent is supply chain disruption impacting your company and your sector?



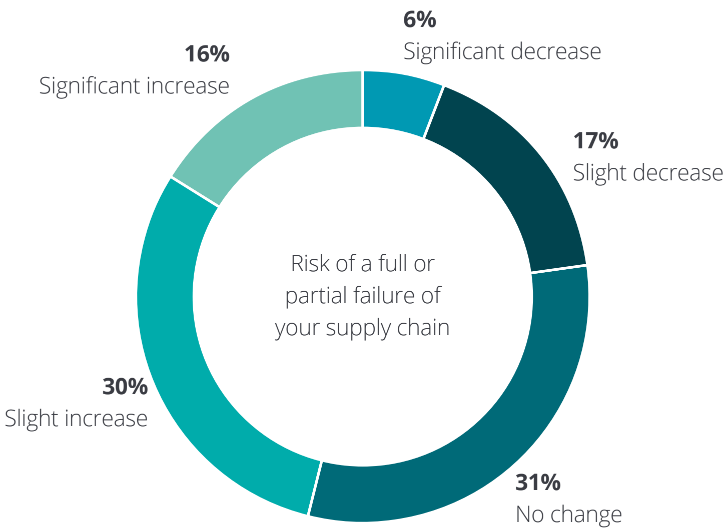
What do we mean by "supply chain" and "supply chain disruption"?

The supply chain is defined as the entire series of processes involved in manufacturing from procurement to distribution and from suppliers to end customers – in other words, the entire network from supplier to consumer. It comprises everything from placing and processing orders to payment and delivery of goods, including after-sales service.

Supply chain disruption refers to failures within the network or material flows caused by stoppages, shortages, production downtime or changes in the flow of data, funds or materials and/or goods.

Demonstrating just how significant these supply chain problems are – and how bad they could potentially become – almost half of the respondents (46%) say they are currently concerned about a slight (30%) to significant (16%) increase in the risk of full or partial supply chain failure (see fig. 2). This is a far larger group than those that see this risk decreasing slightly or significantly (23%). Small to medium-sized enterprises appear to be much more concerned about the disruption and failure of their supply chains than their counterparts at large companies.

Fig. 2 – Current risk of failure
Question: Given the current disruptions, how do you expect the risk of full or partial supply chain failure to evolve?



Rising costs hurt performance

According to the manufacturing companies we surveyed, the key factor in the risk of supply chain failure is not the scarcity of raw materials, but rather shortages in components or component groups – for example, electronics. Rising prices are an additional major concern, with 77 percent of the respondents reporting a slight (30%) to significant (47%) increase in purchase price levels (see fig. 3). Production stoppages at suppliers demand that outstrips supply as well as transportation issues can lead to a sharp rise in prices across all sectors and make supply chain problems worse.

Our survey results clearly show the impact rising prices are having on today's manufacturers. For more than a quarter of the respondents (27%), revenues have fallen either slightly or significantly, while just over half (52%) report a slight or significant decrease in profit (see fig. 4). Here, too, the effect on small to medium-sized enterprises is greater than on their larger counterparts.

The decline in revenue is not only an issue on the product side, but also extends to after-sales service, as reported by more than one-half of the companies we surveyed (55%). For example, 73 percent of the respondents report a slight to significant increase in shipping costs for spare parts and transportation costs for technician call-outs. Penalty payments or a lack of supply in spare parts and components can lead to additional losses in the customer and after-sales service business.

Fig. 3 – Current problem areas

Question: What does supply chain disruption mean for your company in terms of the scarcity of raw materials, shortages in components/component groups and purchase price levels?

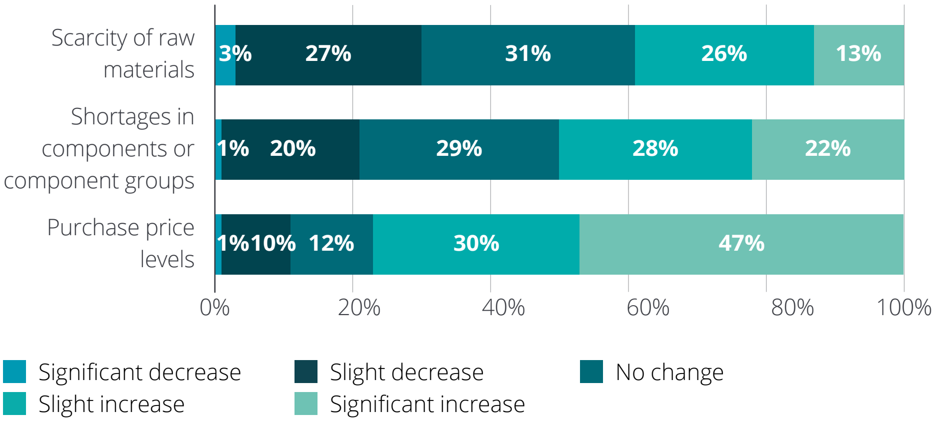
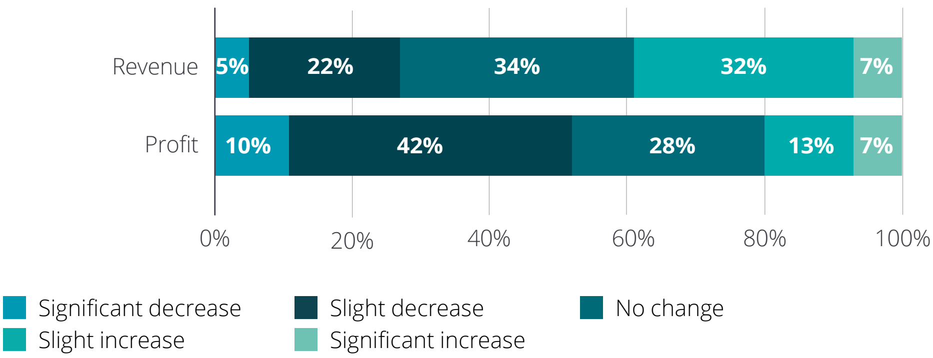


Fig. 4 – Impact on revenue and profit

Question: What impact has supply chain disruption had on your revenue and profit?



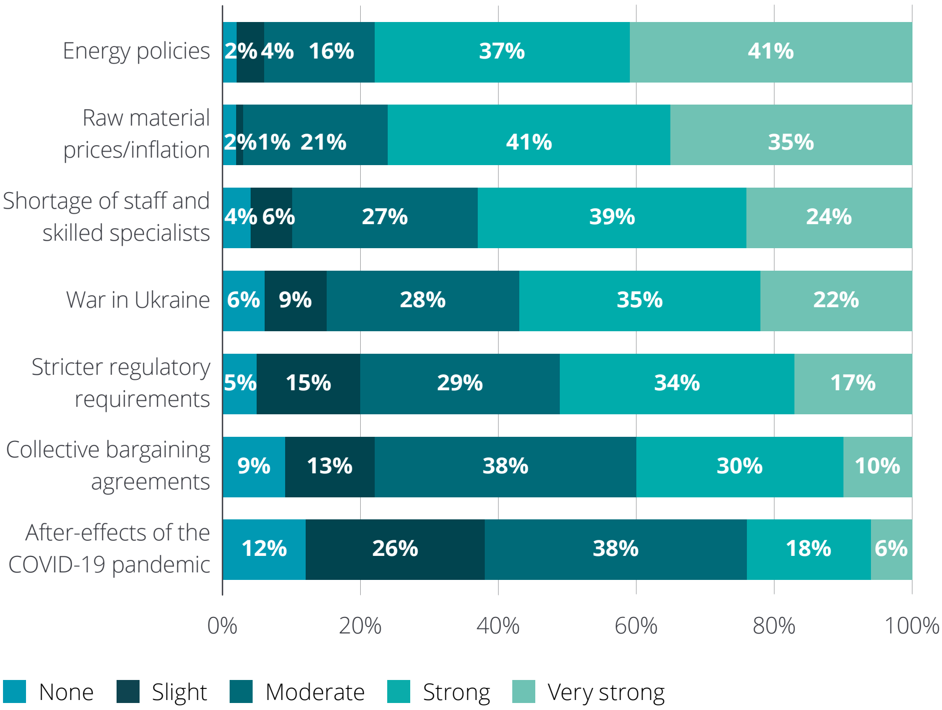
High inflation, raw material prices and energy costs add to the challenge

The current supply chain issues and the associated increase in costs are further exacerbated by energy policies as well as persistently high inflation and rising raw material prices (see fig. 5).

More than three quarters of the surveyed companies are feeling a strong (37%) to very strong (41%) effect from energy policies, while the impact of rising raw material prices and inflation is also felt strongly (41%) or very strongly (35%) by many. The shortage of staff in general and skilled specialists in particular is also having a strong (39%) or very strong (24%) effect on the supply chains of our respondents. Disruptions in gas supply, for example, could have a devastating impact not only on production but also on sales, while the lack of skilled talent in warehouse logistics, shipping and transportation may add further constraints on the flow of materials.

Just over half of our respondents report adverse implications from the war in Ukraine and stricter regulations – for example – the Supply Chain Due Diligence Act (Lieferkettensorgfaltspflichtengesetz or LkSG). The after-effects of the COVID-19 pandemic, by contrast, play only a minor role as pandemic-related delays continue to ease. Likewise, respondents say collective bargaining is not having as strong an impact as that of other factors.

Fig. 5 – Adverse impact of current events
Question: What are the implications of the following issues/events for your company in terms of supply chain management?



"Although many companies see the need for structural changes and new technologies in their supply chain, they are reluctant to take long-term and effective measures in times of uncertainty – for example, the implementation of a digital supply chain control tower."

Dr. Jürgen Sandau, Partner, Lead Supply Chain & Network Operations, Deloitte

Decline in Germany's attractiveness as an industry location

Not least because of the problems outlined above, the companies we surveyed are concerned that Germany's attractiveness as an industry location may be declining. More than half of the respondents (52%) say Germany is currently running the risk of losing its attractiveness as a location for business (see fig. 6). 58 percent expect the downward trend to continue over the long term – in other words they believe Germany's attractiveness relative to other industry locations will decline over the next three years. Based on our index score (i.e., the net balance of positive and negative opinions) the result is overwhelmingly negative at -35 percent for the current attractiveness and -41 percent for the future attractiveness of the country as an industry location.

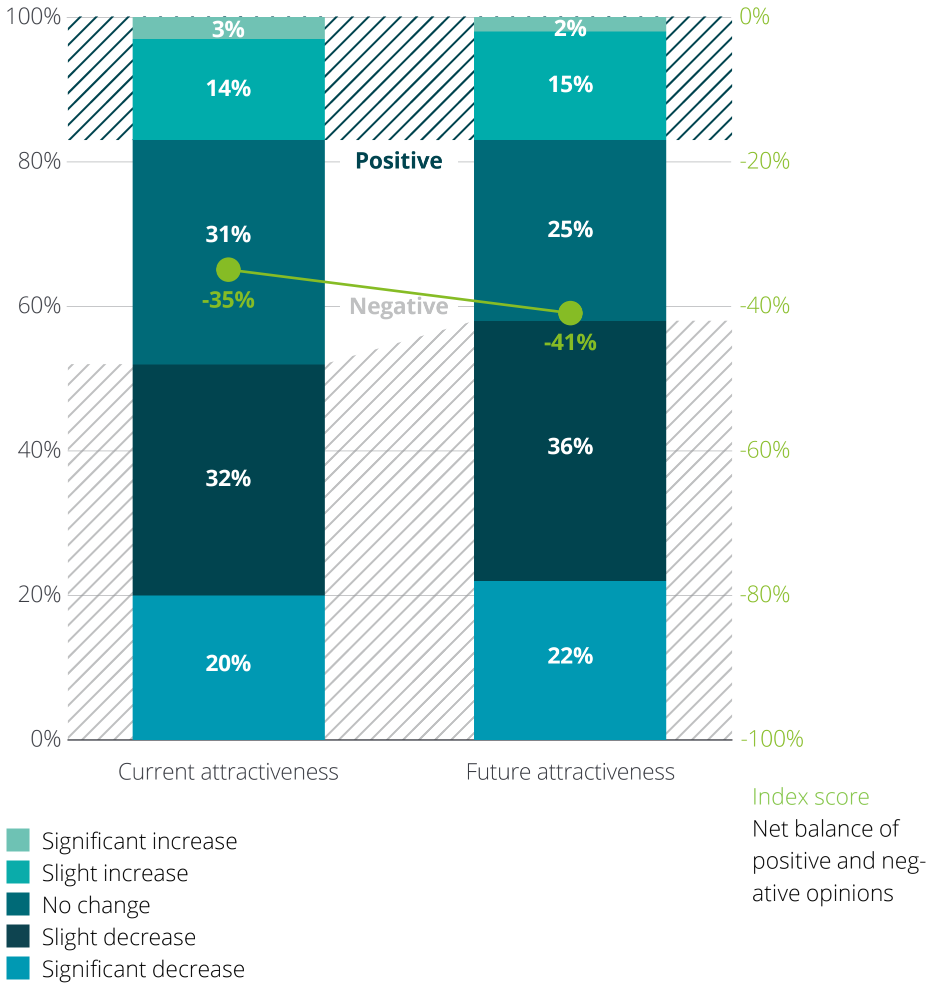
According to the companies we surveyed, the following initiatives have the greatest promise when it comes to making Germany more attractive as an industry location:

- better energy security
- more competitive prices for energy/industrial electricity
- tax cuts or relief
- streamlined immigration process for skilled professionals
- state support for key technologies
- more investment in education, infrastructure and digitalization
- streamlined planning and approval processes for new developments
- less bureaucracy overall as well as fewer directives and regulation

Fig. 6 – Attractiveness of Germany as an industry location

Question A: How has the attractiveness of Germany as an industry location changed for your company in recent years compared to other leading industry locations?

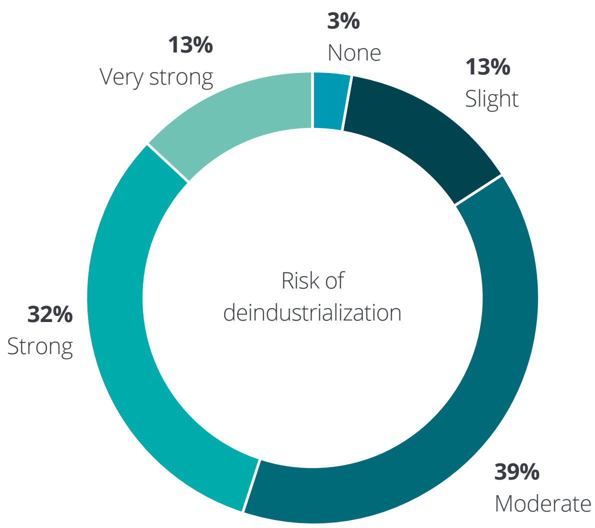
Question B: How will Germany's attractiveness as an industry location change over the next three years compared to other leading industry locations?



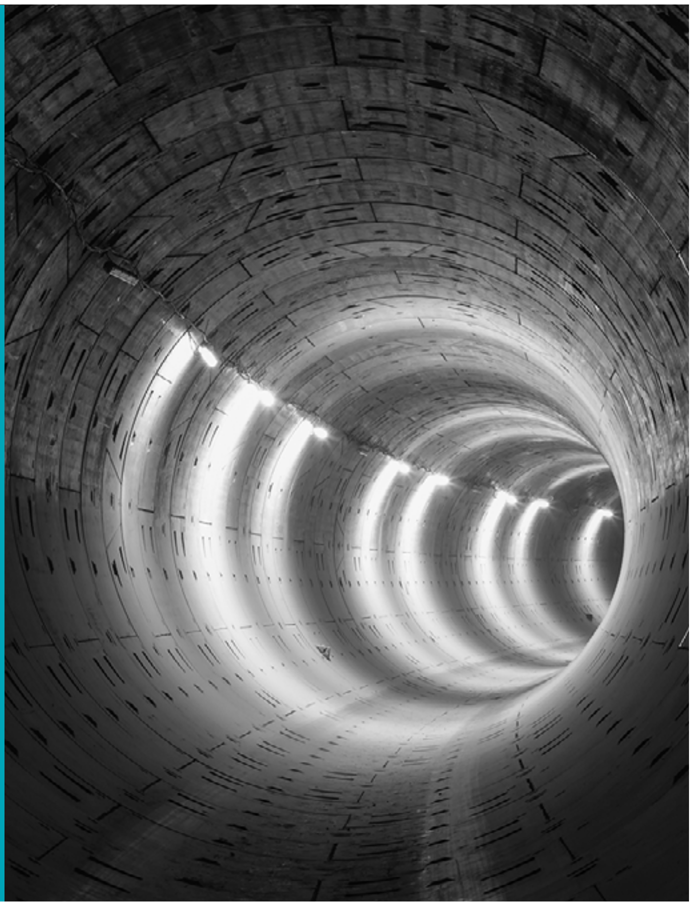
The fact that these initiatives have not been pursued in the past has, based on the survey results, had an adverse effect on the country's attractiveness as an industry location. Almost half of the respondents (45%) rate the risk of deindustrialization in Germany as strong (32%) or very strong (13%), given the current status and trends (see fig. 7). Interestingly, the surveyed companies shared this rather pessimistic view across the board, regardless of their size or whether their profits increased or decreased last year.

Fig. 7 – Deindustrialization in Germany

Question: On a scale of 1 to 5 – what is the risk that Germany will "deindustrialize" in the future?



At the current status and trend, almost half of the participants assess the risk of Germany actually deindustrializing as high or very high.

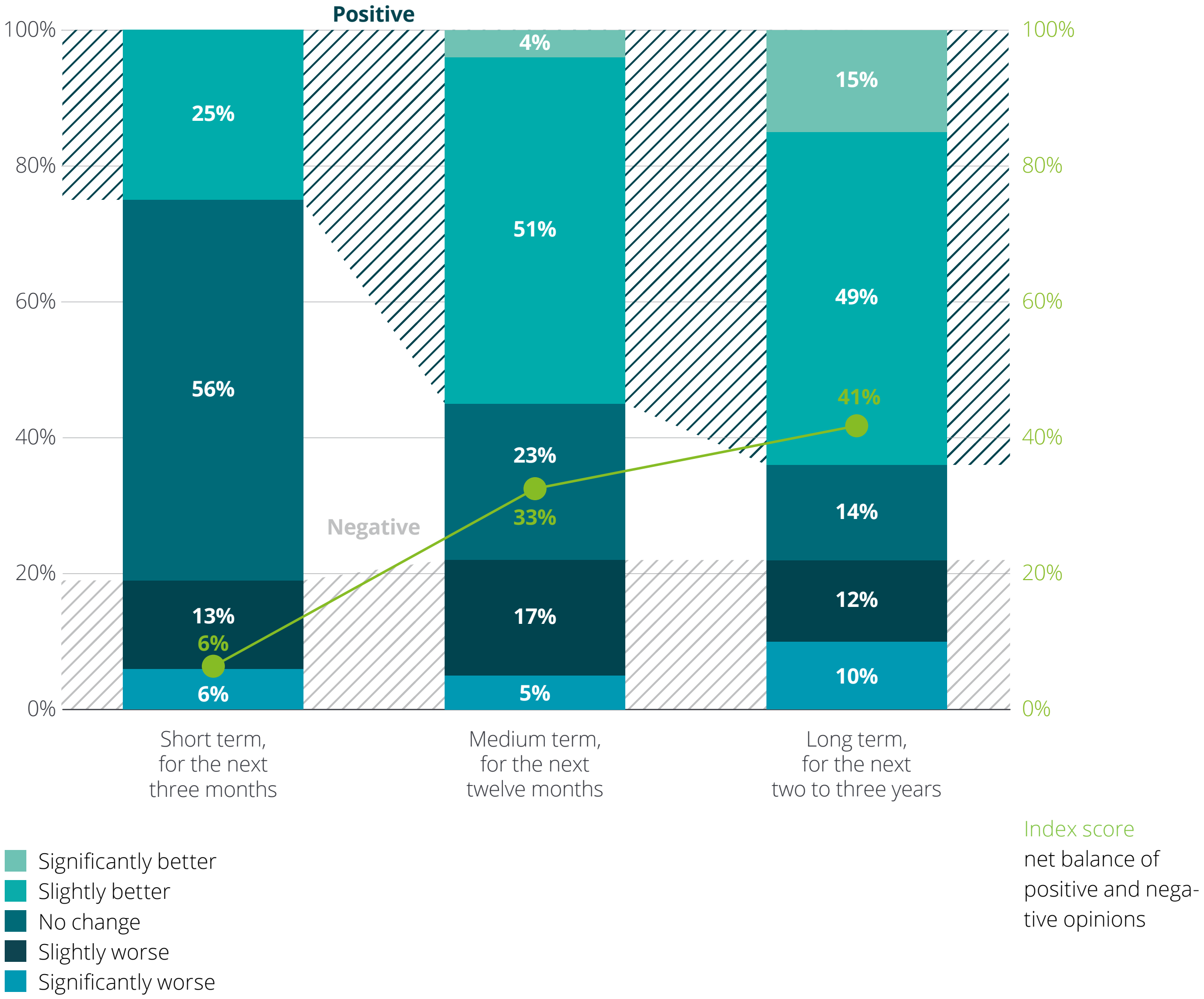


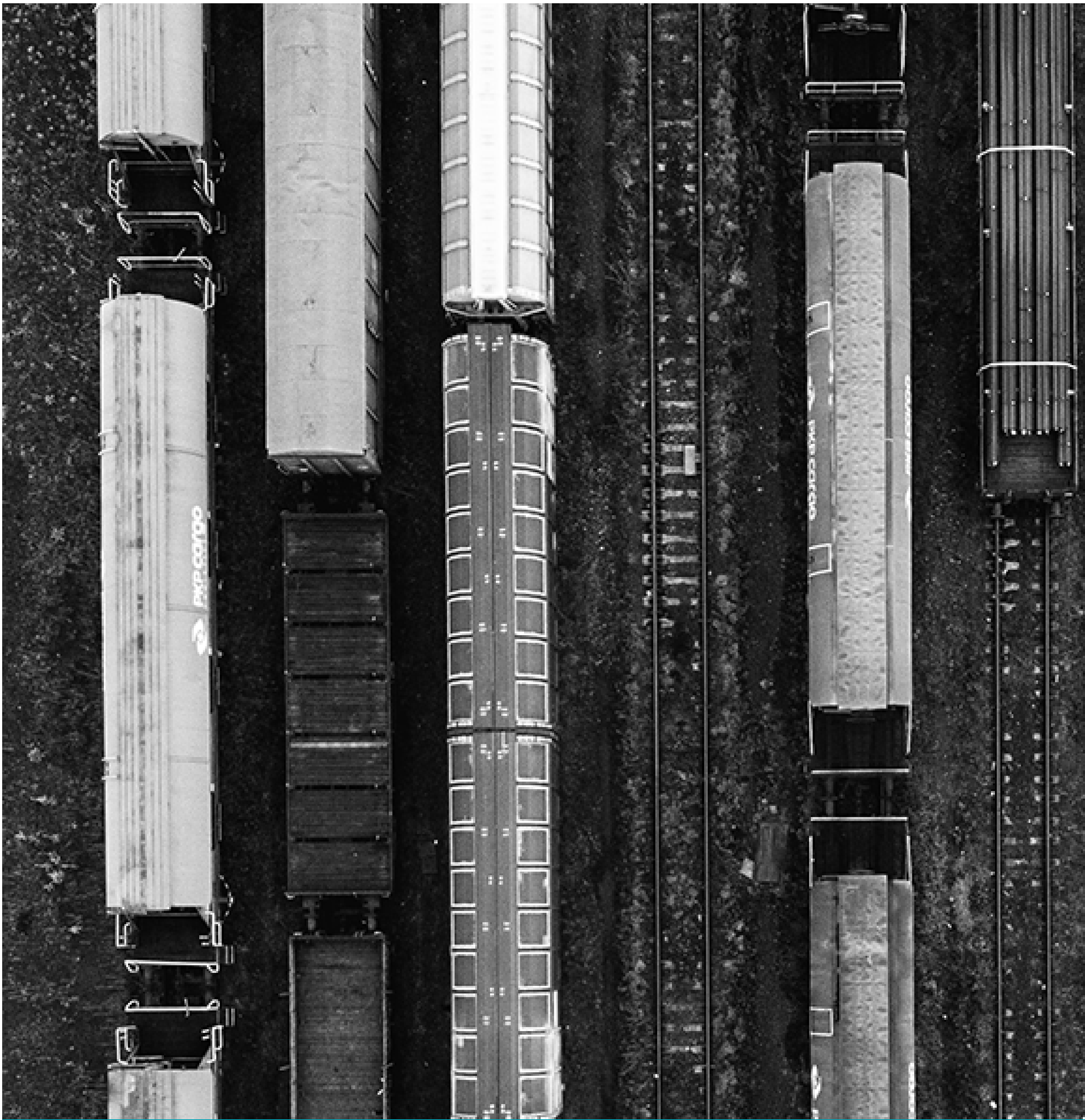
Continued uncertainty calls for radical rethinking

Chances are high that this diverse range of challenges will continue into the future and that uncertainty will become our "new normal". Our respondents are not expecting the pressure to let up any time soon, with 56 percent seeing no change in the current trend of supply chain disruption (see fig. 8).

Although half of the respondents expect a slight improvement over the medium to long term, more than one fifth (22%) are concerned that issues with the supply chain could become either slightly or significantly worse in the future. This calls for radical rethinking and novel strategies.

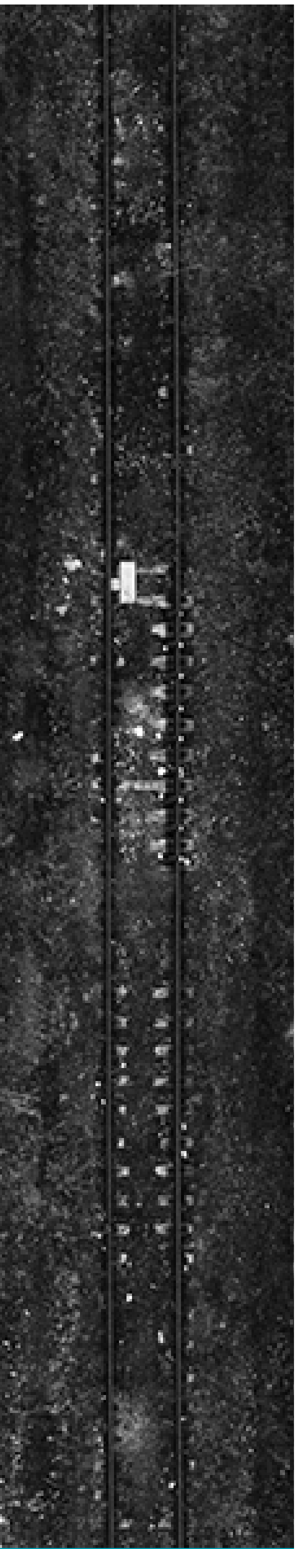
Fig. 8 – Supply chain disruption – Outlook
Question: How do you expect current supply chain disruption to evolve over the short, medium and long term?





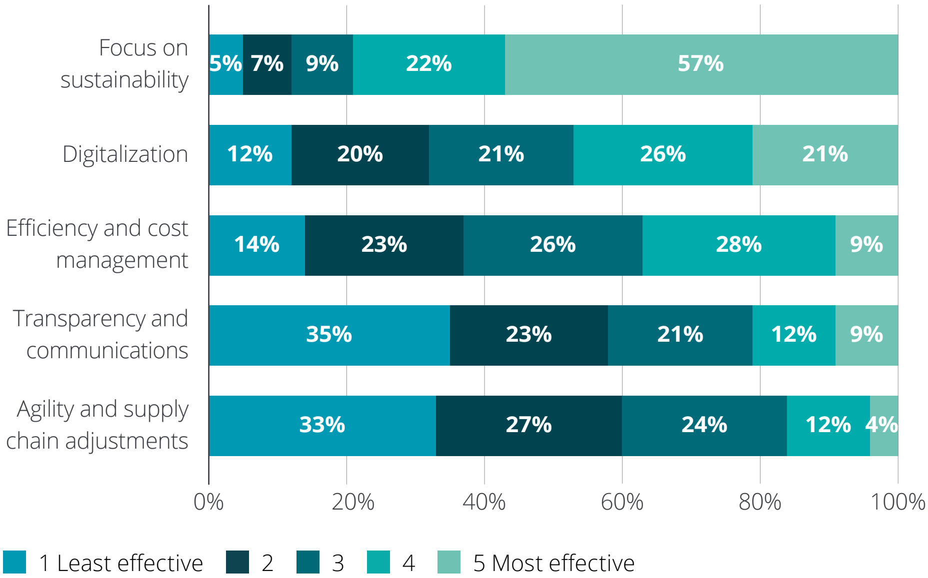
"Concerns about resilient supply chains and pressure on profitability are here to stay. Not acknowledging this or resorting to short-term measures will simply make the next crisis even more difficult to manage."

Florian Ploner, Partner, Lead Industrial Products & Construction, Deloitte



The majority of the companies we surveyed believes that a focus on sustainability, digitalization and efficiency/cost management are the most effective measures to improve the robustness and overall resilience of their supply chains (see fig. 9). Companies that reported an increase in profit for the last fiscal year are concentrating much more on sustainability, agility and cost efficiency/management to improve resilience – while companies that incurred a loss last year prefer instead to focus on digitalization and transparency/communications. Making the supply chain more sustainable may, however, come at an additional cost. At least in part for this reason, four fifths of our respondents believe that they will have to invest either slightly or significantly more effort and funds in improving their resilience over the next twelve months.

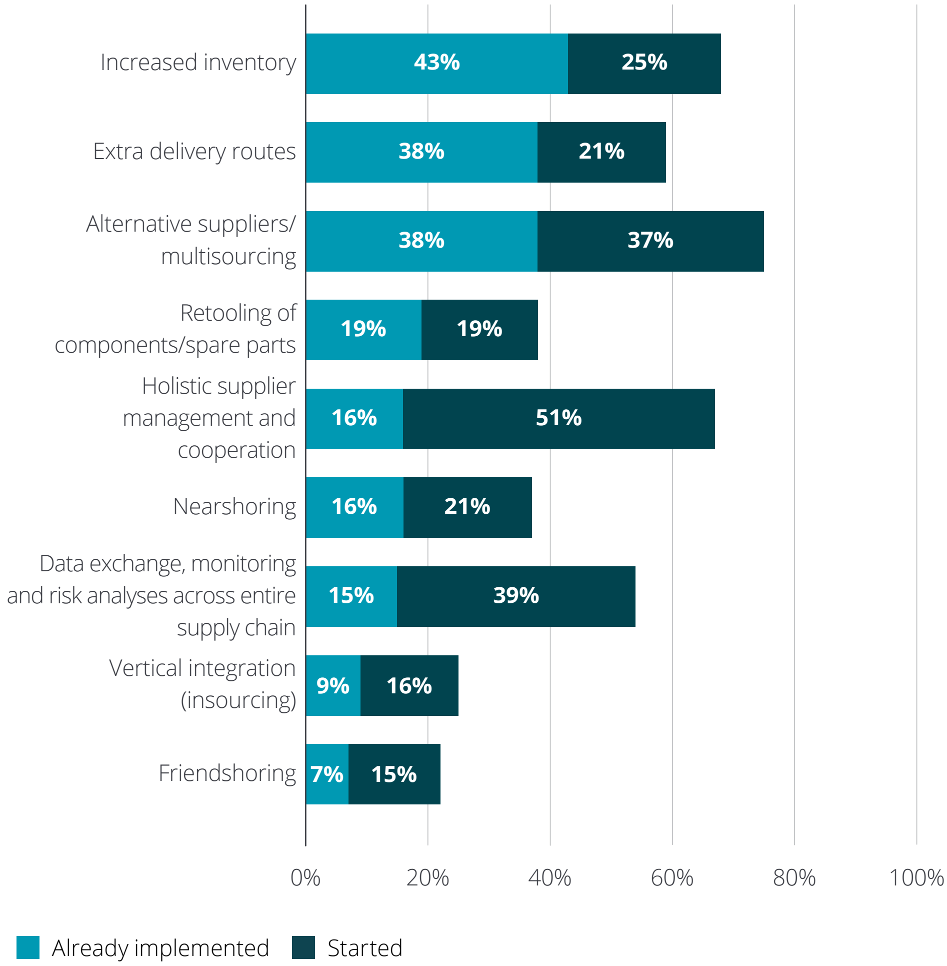
Fig. 9 – Measures to improve resilience
Question: Please rank the following measures to improve supply chain resilience in order of effectiveness (five responses possible, rank in order from 1 to 5, with 5 as the most effective and 1 as the least effective of the measures listed).



The respondents cite increasing inventories and driving extra routes as specific initiatives that promise to help mitigate current disruption, though these are not necessarily cost-effective or eco-friendly. 43 and 38 percent of the respondents, respectively, have already implemented these initiatives with an additional fifth starting them (see fig. 10).

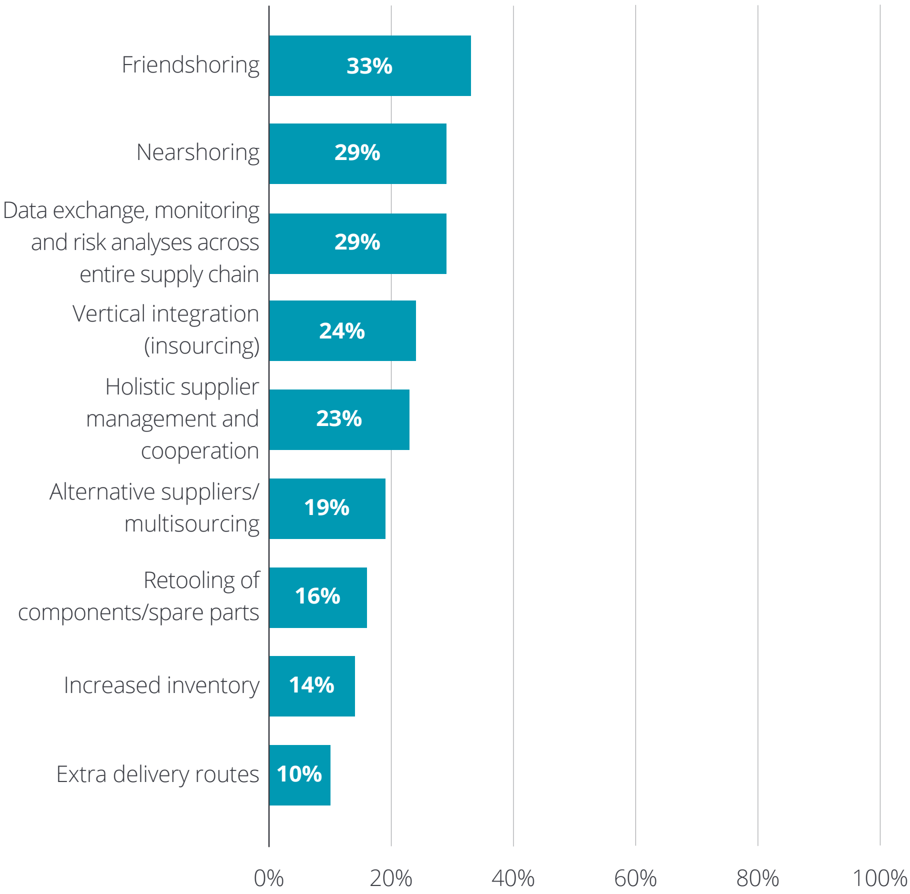
Among the respondents, 38 percent are already cultivating alternative suppliers or exploring multisourcing, while every second respondent is retooling components or spare parts in the spirit of a more resource-efficient circular economy. On the other hand, very few of our respondents are pursuing holistic supplier management strategies or smart, data-driven solutions across the entire supply chain, with a slight majority just beginning this journey (51% and 39% of respondents respectively).

Fig. 10 – Countermeasures already implemented or started
Question: What measures have you already implemented or started to counteract current disruption?



Likewise, only very few of our respondents have introduced nearshoring, friendshoring or vertical integration (insourcing) though most have at least made plans to do so (see fig. 11).

Fig. 11 – Planned measures
Question: Which measures are you already planning to pursue as a result of current supply chain disruption?



"The results show that the threat of deindustrialization is real. North America in particular is perceived as a more attractive investment location. Energy supply, market access, and less bureaucracy are key location factors. Against this backdrop, the general conditions in Germany need an upgrade."

Alexander Börsch, Director, Chief Economist & Research Lead, Deloitte

Recommended actions

For the majority of Germany's businesses, supply chain disruption will continue to dominate in 2023. What can we do about it? The main strategies for facing these challenges seem to be launching "conventional" rescue operations or additional efforts with a short-term horizon, for instance by increasing inventories, driving extra routes and multisourcing. In other words, they are amplifying the classic bullwhip effect along the supply chain. However, this runs counter to our efforts to become more sustainable, a focus more than half of our respondents see as the most important factor for increasing resilience. Where is the vision, the future-ready mindset? Some companies have started exploring investing in data transparency to facilitate collaboration or pursuing alliances with key suppliers, but few have managed to take it to the next level. It is essential for the manufacturing sector to build resilience for the long term, if only to finally get out of crisis mode. For many companies, this may mean tackling the problem from both ends – i.e., mitigating short-term disruptions while also investing in forward-looking systems – but it is clear that constant firefighting is not a long-term solution. If we have learned anything in the past few years, it is that the next crisis is always just around the corner.

According to Deloitte's experts, the pressure on Germany's manufacturers is only going to get worse. And there are two issues that stand out in our survey: regulatory requirements related to the passing of the LkSG on the one hand and Germany's declining attractiveness as an industry location on the other. This should have warning bells ringing in both corporate and political circles. The results of the survey point to three vital areas of action that will give us the tools we need to handle severe disruption and increased uncertainty in the supply chain. To win the future, today's companies need to chart the right course, right now.

1. Embrace cost optimization

Greater efficiency and better cost management have always been critical for supply chain management. More than one third of the surveyed companies rated efficiency/cost management as the most important or the second most important factor in increasing supply chain resilience (see fig. 9). Holistic supplier management and deeper cooperation with suppliers and partners are two additional initiatives they believe will make supply chains more resilient. However, only about one fifth of our respondents have actually made this a priority so far, while half are only starting to explore their options (see fig. 10). There is also room for improvement when it comes to cultivating alternative suppliers or multisourcing, which one fifth of our respondents has plans to pursue (see fig. 11).

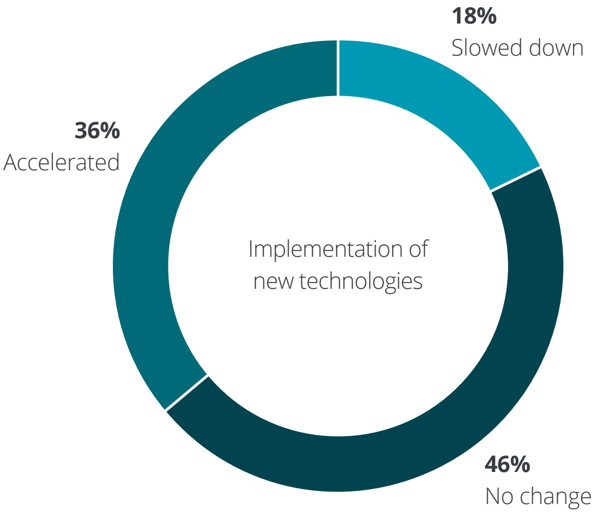
New technologies can help optimize processes and integrate them more efficiently in the value chain. Big data and analytics, for example, can make planning tools more effective, artificial intelligence can help optimize shipping and handling, and digital twins can make supply chains, warehouses and production lines more agile while also cutting costs.

2. Drive digitalization

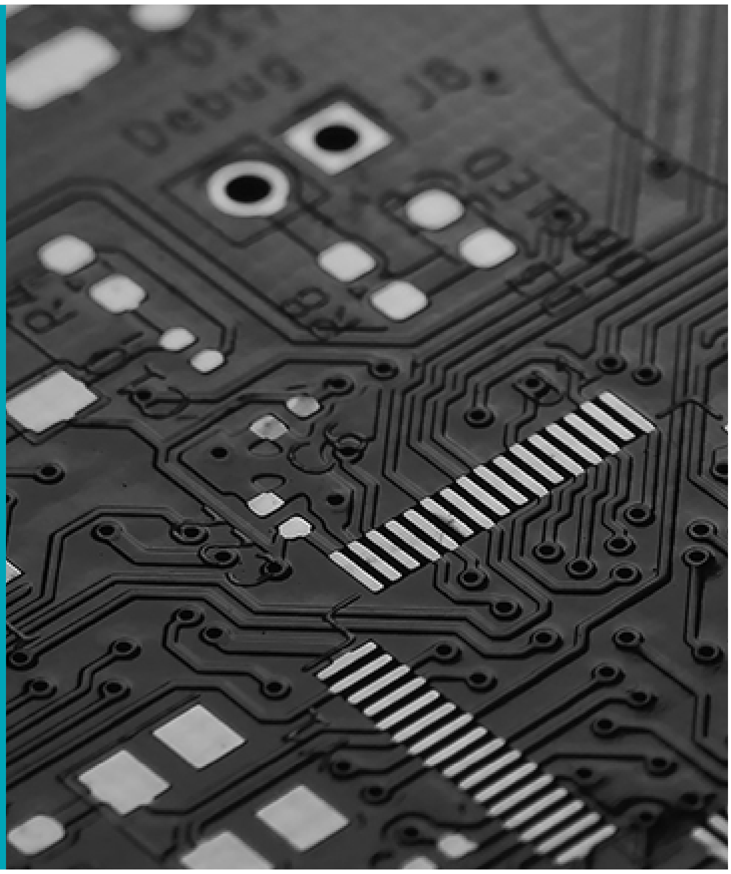
We are also seeing demand soar for digital connectivity, data analytics and remote solutions across the entire value chain from supplier to end customer. For example, a third of the companies we surveyed (36%) say that concerns about supply shortages have made their customers more willing to introduce new technologies to improve machine connectivity and predictive maintenance (see fig. 12).

Fig. 12 – Willingness to embrace new technologies

Question: How have concerns about supply shortages impacted your customers' willingness to embrace new technologies (e.g., machine connectivity, predictive maintenance)?



Digital technologies are essential for efficiently meeting new regulatory requirements.

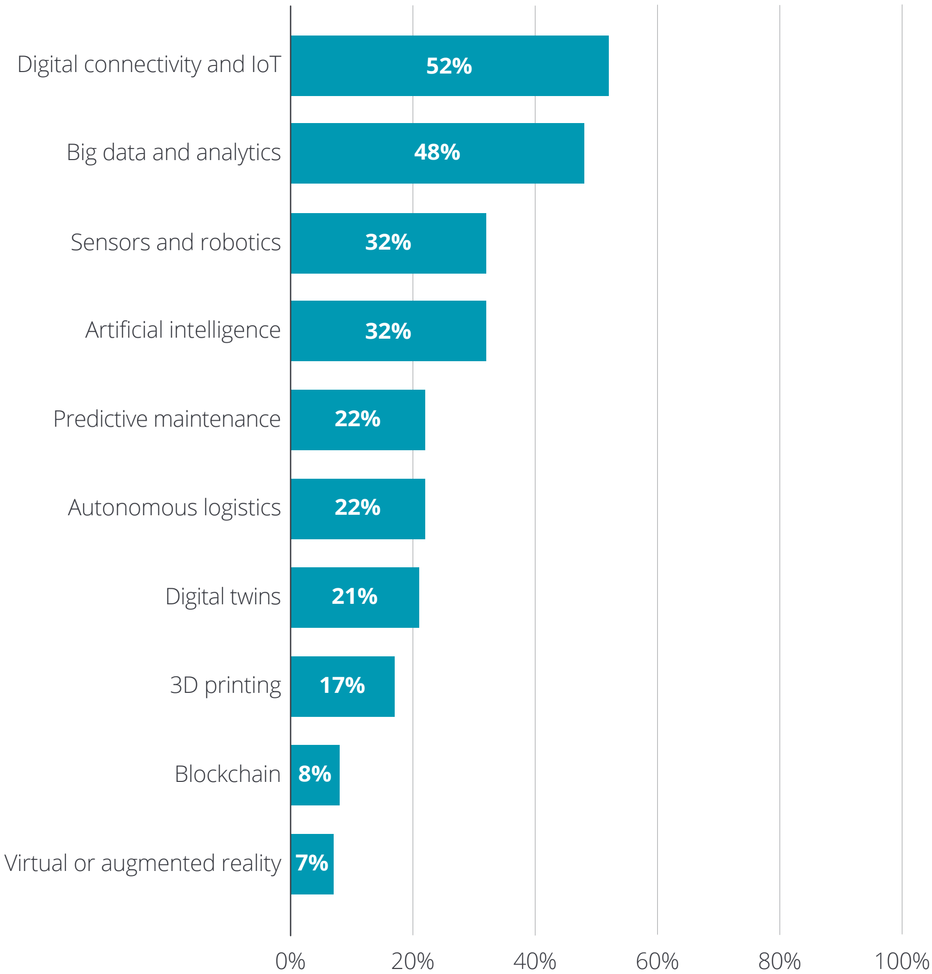


The respondents also have clear preferences when it comes to the new technologies that could be particularly useful here. Half of them are focusing on digital connectivity and IoT (52%) as well as big data and analytics (48%) in an effort to improve, for example, data exchange within the supply chain through cloud computing or to introduce more targeted risk management tools (see fig. 13).

About one third of respondents, respectively, see more automation using sensors and robotics or artificial intelligence as key strategies to improve supply chain resilience. By contrast, they see far less potential for building resilience with blockchain technologies, virtual or augmented reality or 3D printing.

Overall, digitalization is a very useful and necessary means of keeping effort and expense to a minimum when it comes to fulfilling regulatory requirements (for example – LkSG). Without digital solutions, companies would need to invest an enormous amount of additional staff and time (i.e., money and skilled specialists), which are in short supply across most sectors. We cannot underestimate the importance of expanding digital technologies for future resilience.

Fig. 13 – Relevance of new technologies
Question: Which of these technologies do you believe are particularly important in terms of improving resilience?



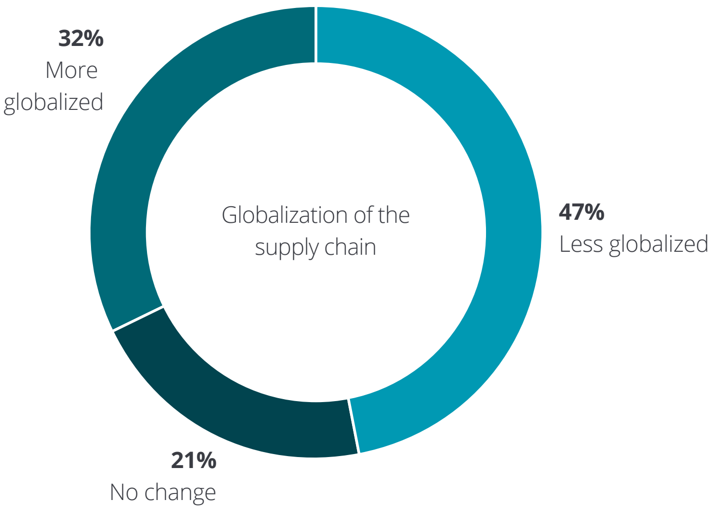
3. Explore nearshoring/friendshoring

Many of the companies we surveyed are interested in exploring the idea of relocating at least parts of the supply chain (nearshoring and friendshoring). Growing geopolitical tensions and trade policy distortion, particularly between China and the US, mean that companies are placing more emphasis on adapting their globalization strategies. To remain successful, Germany's manufacturers will have to, for example, rethink their respective strategies in terms of purchasing, production or sales in Asia to reduce dependency and diversify risk in the supply chain. Reshoring most of the supply chain, a trend that is getting a lot of attention in the US, may be less impactful than relocating critical segments of the supply chain to alternative Asian locations, to new and existing growth markets or to regions closer to Germany.

As tensions and distortions grow, one third of respondents has plans to invest in the diversification or further globalization of their supply chains over the next 24 months (see fig. 14). This raises the question in which locations these new investments should be made.

Fig. 14 – Globalization outlook

Question: Do you plan to make your supply chain more or less globalized over the next 24 months?

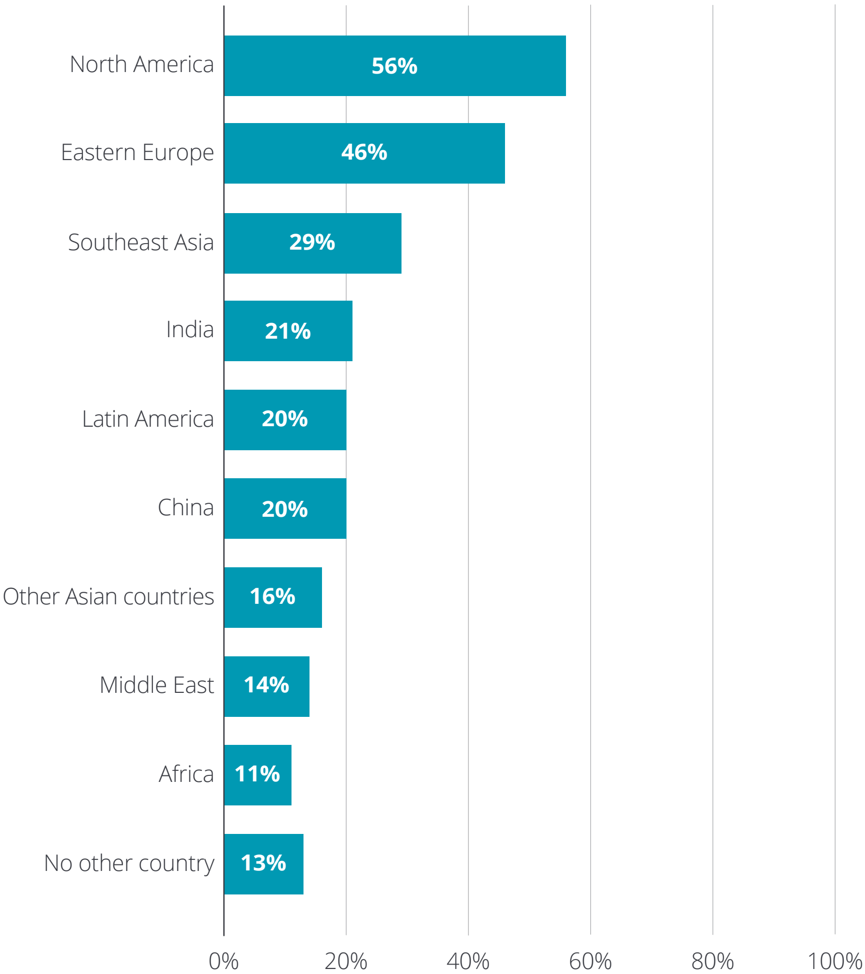


The companies we surveyed believe that North America (56%), Eastern Europe (46%) and Southeast Asia (29%) in particular may prove more attractive investment locations than Germany (see fig. 15). The countries they mentioned most frequently in this context are the US, Poland, Vietnam, India, Brazil, Canada and Turkey.

As the main drivers for relocating to North America, our respondents cited better market access, less bureaucracy/regulation as well as the reliability and cost of energy supply. The main benefits of alternative locations in Eastern Europe are lower labor costs, good transportation links as well as available and skilled staff. There are various locations in Southeast Asia with clear production cost advantages that may offer a good alternative to China.

Fig. 15 – Targeted investment locations

Question: Which countries/regions do you currently find more attractive than Germany as an investment location?



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