

Global Manufacturing Prospects 2023

The CEO view: Sustaining growth amid turbulence

KPMG International

kpmg.com/industrialmanufacturing

Foreword



Stéphane Souchet

Global Head of Industrial Manufacturing KPMG International



Grant McDonald

Global Industry Leader, Aerospace and Defence KPMG International In the preparation of this report, KPMG International polled 182 chief executive officers (CEOs) of large manufacturers for their views on the key issues facing their companies. Respondents are based in 11 countries in Europe, Asia, and North America. The findings show that CEOs' perspectives are shifting. They are as confident about profitable growth in the next three years as they were in the previous survey, but most expect to face a headwind in 2023.

A slowdown would impact profits and sales expansion, so how will CEOs react in the short term to maintain business momentum? Indeed, they will have to grow faster, come the rebound, to stay on track with their profit projections.

Achieving these objectives will likely be a difficult balancing act, between the short and long term; investments in technology and people; onshoring and offshoring. For CEOs navigating these difficult waters, this report aims to provide key insights to help manage the journey. It can help companies benchmark themselves against their peers and offer some sound advice on what maps to take along with them.

The future is unpredictable, so prepare carefully and assess the risks and opportunities from an enterprise-wide perspective.

Unless otherwise indicated, throughout this report, "we", "KPMG", "us" and "our" refer to the network of independent member firms operating under the KPMG name and affiliated with KPMG International or to one or more of these firms or to KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm vis-à-vis third parties, nor does KPMG International have any such authority to obligate or bind any member firm.

Changing global supply chains Building blocks of transformation

Zeroing in on ESG goals

Rising value of skills

Conclusion

Contents



Zeroing in on ESG goals

Rising value of skills

Digital and people

Strong optimism despite headwinds

Changing global supply chains

6

Building blocks of transformation





8

R

Strong optimism despite headwinds

Changing global supply chains

Building blocks of transformation Zeroing in on ESG goals

Rising value of skills

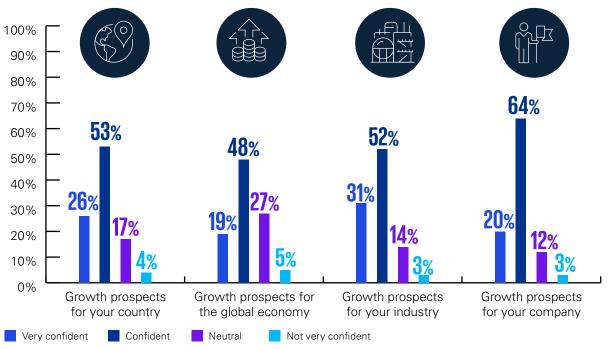
Conclusion

Strong optimism despite headwinds

The global economy is slowing down and there are numerous challenges facing manufacturers, but CEOs remain confident of their companies' growth prospects over the next three years. This level of confidence has hardly changed over the past 12 months. They are also optimistic about the growth of their industry between now and 2025, much more so than in previous polls.

They are, however, less confident about the world economy's short-term growth prospects, as governments tackle rising inflation by dampening demand.

Despite the optimism about the longer term, more than three quarters admit that in case of an economic downturn, this may affect their companies' three-year growth prospects. In terms of growth prospects, please indicate your level of confidence in the following over the next 3 years



Strong optimism despite headwinds

Changing global supply chains

Building blocks of transformation

Zeroing in on ESG goals

Rising value of skills

Conclusion



"In the face of mounting uncertainties, it is advisable to perform rolling scenario analysis and plan various responses, depending on possible paths for the business cycle," says Stéphane Souchet, Global Head of Industrial Manufacturing at KPMG. "The macro-economic outlook has brightened somewhat recently, and CEOs should prepare for a rebound at some point. If inflation comes under greater central bank control in 2023, there might be more positive momentum and companies should be ready to take advantage of a recovery."

To strengthen their organizations in the face of a slowdown, CEOs are planning for the possibility of an economic downturn, which can mean making difficult decisions. 86 percent are planning to focus on boosting productivity, or have already done so. However, they are confident their companies will remain resilient over the next six months.

Some sectors can expect to remain buoyant as a result of other geopolitical factors. "Amid all the discussion of an economic downturn, Aerospace & Defense (A&D) is, to some extent, working in a counter-cyclical direction," says Grant McDonald, Global Sector Leader, Aerospace and Defense, at KPMG. "That is, the rebound in passenger travel has accelerated aircraft orders, and the continuing geopolitical conflicts have led to increased spending on defence equipment."



Aerospace & defence is a sector known for innovation. Depending on the digital maturity, productivity improvements can be achieved through additional investment in automation that will enhance efficiency and effectiveness.

Grant McDonald

Global Industry Leader, Aerospace & Defence KPMG International Changing global supply chains Building blocks of transformation Zeroing in on ESG goals Rising value of skills

Changing global supply chains

The economic picture remains very cloudy, not only because of government measures to dampen inflation, but also because of heightened geopolitical risks around the world. Divisions were growing before the war in Ukraine broke out in February, but since then, new global tensions have caused companies to rethink their international strategies. 88 percent have discontinued operations in Russia in response to the war in Ukraine. But globalization is not necessarily retreating; it is more likely to be changing shape.

Strong optimism

despite headwinds

"Manufacturing industries are global, which means that onshoring, nearshoring, and offshoring never go away. The picture is mixed from region to region, and you have to examine global trends in their entirety. Companies may use M&A (Mergers and Acquisitions) as a tool to gain more control of supply chains, and if they can onshore parts of their operations, they will," says Grant McDonald. "This concept of strategic partnerships and alliances is also crucial to help build business relationships and to manage complex supply chains." What steps have you already taken, and which do you plan to take in the next 6 months, to adjust your strategy in response to geopolitical challenges?

39 %	43%	
Discontinue working relationship with Russia		
45%	43 %	<mark>12%</mark>
Transfer overseas operations locally/in house		
40%	44%	16 %
Diversify our supply chain		
32%	54 %	14%
Reconsider investment strategies		
40%	42%	18%
Adjust risk management procedures in light c	of geopolitical risk	
37%	32%	31%
Have taken Plan to take in the nexy 6 months	No action planned	

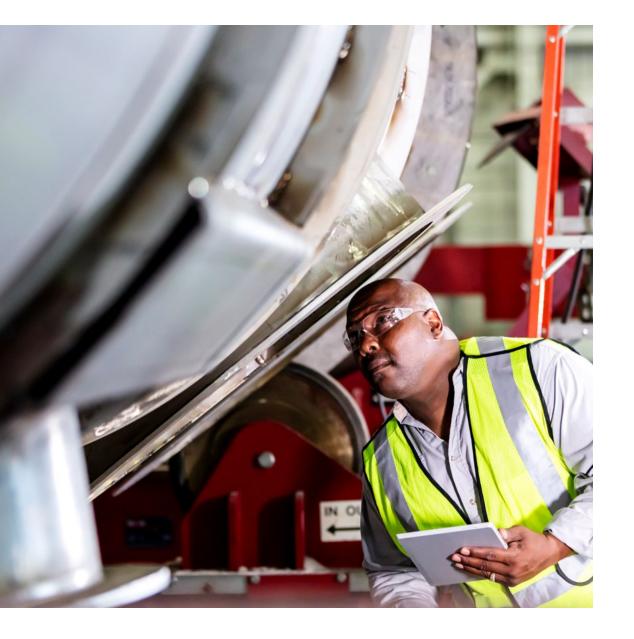
 $\widehat{\mathbf{M}}$

Strong optimism C despite headwinds

Changing global supply chains Building blocks of transformation

Zeroing in on ESG goals

Rising value



66

Supply chains have been like a roller coaster for manufacturers, which have faced some very tight bottlenecks, but it's useful to note that some trends are reversing.

Stéphane Souchet Global Head of Industrial Manufacturing KPMG International

84 percent of CEOs are nearshoring or onshoring operations or bringing them in-house, and even more are diversifying their supply chain to mitigate vulnerabilities that emerged through the pandemic. The logic of investing close to major markets is still strong, but geopolitical uncertainty is raising the possibility of a divided global economy.

"Supply chains have been like a roller coaster for manufacturers, which have faced some very tight bottlenecks, but it's useful to note that some trends are reversing," says Stéphane Souchet. For example, there is increased shipping capacity on some trade routes. Market forces are working to loosen things up. Building blocks of transformation Zeroing in on ESG goals

Rising value of skills

Building blocks of transformation

Companies are aiming to grow faster by both organic and inorganic means. CEOs say the top priorities for achieving growth objectives are strategic alliances and organic growth. Mergers & Acquisitions (M&A) are a slightly lower priority, but more than half of chief executives have a healthy appetite for M&A that will have a significant effect on their companies.

Over the next 3 years, how would you describe your organization's M&A appetite?



Source: 2022 Global CEO Outlook, KPMG International

"Faced with market uncertainties and a softening of final demand, top line performance will be more challenging. So, to maintain valuation levels and put capital to work, manufacturing CEOs are still looking at tactical M&A to support topline growth, as well as filling gaps in their product portfolio, whilst continuing the optimization of their business portfolio. For example, the sale of non-core assets to private equity raises financing for the tactical acquisitions," says Stéphane Souchet.

Despite a decline in M&A deals in 2022, corporate transactions (both disposals and acquisitions) remain a very important way for manufacturers to strengthen core operations and find faster ways to expand. It is a means of restructuring and accelerating transformation.

"A strong appetite for M&A deals doesn't necessarily mean activity exceeds 2021's elevated level, but CEOs are always interested in making deals," says Claudia Saran, National Sector Leader for Industrial Manufacturing, KPMG in the US. "The economic environment is a bit less predictable than before because of rising interest rates and the possibility of an economic slowdown, but M&A is an important way to rationalize the portfolio and shift toward higher growth opportunities."

Zeroing in on ESG goals

Zeroing in on ESG goals

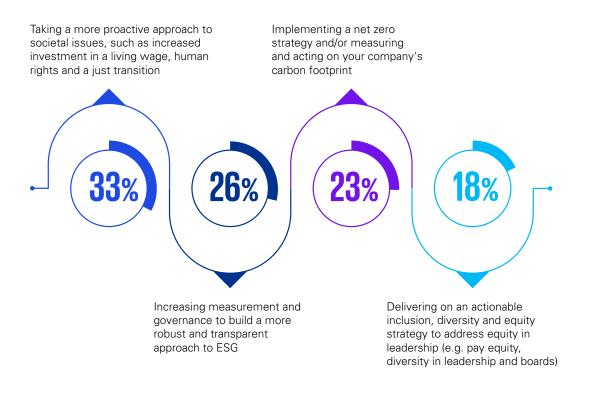
Sustainability goals continue to be emphasized by CEOs, who say that the predominant source of pressure to promote more transparency about companies' environmental, social and governance (ESG) objectives comes from employees rather than investors. To accelerate their ESG strategy, they will take a more proactive approach to societal issues, such as increased investments in a living wage and a focus on human rights.

ESG goals are particularly important in the A&D sector, which has some of the highest carbon emissions – a significant challenge in meeting the net zero objectives. "The industry is focused on making a difference and investments are being made in areas including sustainable fuels, hydrogen cells and electrification", says Grant McDonald.

"When it comes to ESG objectives, we ask clients to tell us their goals and priorities. We advise companies that there are a finite set of objectives they can focus on, so it is best to choose the ones that are important to them and where it can do the most, measurable good," says Claudia Saran.

To achieve this, companies need to take an enterprisewide view of ESG. "The recent economic dislocations have revealed more than ever that CEOs must think of their business model from a holistic point of view. So, it's not possible to focus on one topic to the detriment of others; they're connected," says Stéphane Souchet. "There's a link, for example, between supply chain issues and ESG, when you think of responsible purchasing. Sometimes there are conflicting agendas, so CEOs might have to change their priorities if they want to achieve their strategic goals."

In 3 years, what do you believe will be the key driver to accelerate your company's ESG strategy?



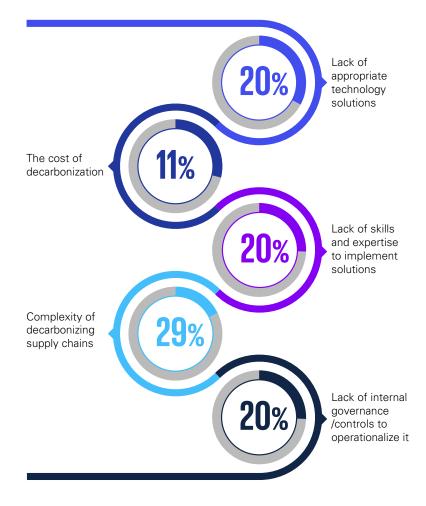
 $\widehat{\mathbf{U}}$

Changing global supply chains Building blocks of transformation Zeroing in on ESG goals

Rising value of skills

Conclusion

What do you believe is the greatest barrier to achieving net zero or similar climate ambitions for global corporations?



Another core consideration of ESG is diversity, equity, and inclusion (DEI), which must be a priority for companies creating a representative workforce. For many enterprises, this means developing talent that will fill leadership slots. Four in five CEOs say that "achieving gender equity in the C-suite will help us meet our growth ambitions." They are aware that scrutiny of their organization's performance on diversity will continue to increase, so they may need to accelerate the transition. Two thirds agree that progress on diversity and inclusion has been much too slow in the business world.

"There is research showing that companies with a focus on DEI are achieving higher shareholder returns and they will gain the greatest benefit by building a diverse leadership team," says Claudia Saran. "If you truly believe that a wide range of viewpoints will enable your company to achieve higher returns, then where better to focus than at the top, with diverse people who can help maximize the impact of business decisions."

Sustainability continues to be a critical global issue. There is growing evidence that a focus on this and wider ESG initiatives creates value for companies¹ and ESG-focused institutional investment continues to rise rapidly in importance. Conversely, a failure to meet ESG goals exposes companies to financial risks, according to a June 2022 study by Dun & Bradstreet². There are other costs, as well. CEOs think that it could be challenging to recruit the best talent if they do not meet candidates' ESG expectations.

Some have argued that coping with geopolitical disruption is causing companies to delay meeting their sustainability objectives. But Stéphane Souchet does not believe it's a choice of either/or. "When we look at the geopolitics of energy supply, we see there are increasing efforts to enhance energy sovereignty and this leads to a greater willingness to increase the supply of renewable energy. Several countries have recently turned to nuclear power projects to reconcile ESG imperatives whilst its acceptability for society is increasing in most countries," he says.

When it comes to meeting net-zero goals, the biggest barrier is the complexity of implementation. The least important challenge is cost, a sign that technology is making it possible to achieve decarbonization goals within a reasonable timeframe. Wind and solar power, for example, are increasingly competitive sources of energy. The U.S. Department of Energy states that the cost of solar power fell by more than 75 percent between 2010 and 2021. Wind turbine costs have dropped by more than half over a similar period.

Source: 2022 Global CEO Outlook, KPMG International

²" Failing to meet ESG goals exposes companies to increased operational and financial risks, study finds," Dun & Bradstreet, June 6, 2022

Zeroing in on ESG goals Rising value of skills

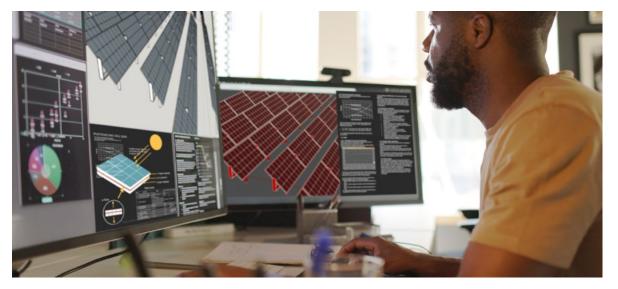
Conclusion

Rising value of skills

CEOs recognize that the quality of their workforce is crucial if their business is going to continue to expand. To achieve the company's growth targets over the next three years, the top priority is to attract and retain talent. Almost a third agree on this, 10 percent more than the number emphasizing more digitization and connectivity.

Skills shortages are a perennial problem, but at a time of market dislocation, as now, there are opportunities to fill talent gaps. Thousands of skilled workers in the technology industry have lost their jobs in 2022, so there is an opportunity to hire people who can help with the digital transformation of manufacturing.

Recruitment is not the only tool CEOs should use, says Claudia Saran. "Companies are looking more broadly for sources of talent, including within their own ranks, and are finding ways to improve retention. One way is to use machine learning to match the existing workforce with new roles, retooling employees' skills to fit demands for future innovation." Allowing employees to work flexible hours and to do so from home, at least part of the time, are important ways to attract skilled people. This kind of flexibility can also benefit the organization. 48 percent say that the impact of hybrid and remote work on innovation and collaboration has been neutral, but almost as many say it has been positive. Even so, only 38 percent think it has had a positive effect on employee morale, compared with 37 percent who say productivity has benefited.



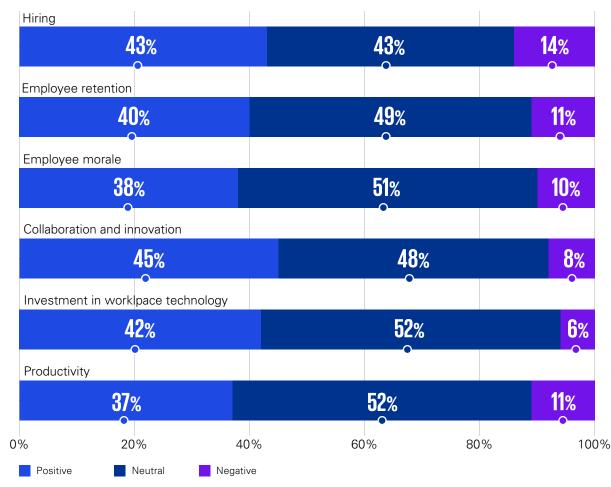
66

Companies are looking more broadly for sources for talent, including within their own ranks, and are finding ways to improve retention. One way is to use machine learning to match the existing workforce with new roles, retooling employees' skills to fit demands for future innovation.

Claudia Saran National Sector Lead, Industrial Manufacturing KPMG in the US Changing global supply chains Building blocks of transformation Zeroing in on ESG goals Rising value of skills

Conclusion

In the past 2 years, what kind of impact has hybrid/remote work had on your organization in regards to:



Source: 2022 Global CEO Outlook, KPMG International

"On one hand, collective intelligence can be gained and stimulated through physical presence. On the other hand, technology for remote working enables companies to pull together more resources from around the globe to face, and then solve, problems," says Stéphane Souchet. "Leveraging talent from a worldwide base can accelerate innovation in a large corporate organization."

Executives are keen to see employees spend more time in the office. In three years' time, 73 percent of CEOs predict their employees will have fully returned to the office and only 21 percent expect they will continue to work in a hybrid manner. It remains to be seen, however, whether employees share this view and will comply if asked to return to the office full time. Much will depend on the balance of bargaining power between the management and workers.

"Employers are aware of this new balance and are developing strategies to attract and retain talent. Offering employees the option of hybrid work is part of that," says Claudia Saran.

"In striving to attract talent, employers should note that flexible work and location schedules are highly valued by job seekers. It's been almost three years since work patterns were disrupted by the pandemic and it may be difficult to persuade employees to return to the 'old normal'," she says.

Zeroing in on ESG goals

Digital and people

CEOs are divided about the position of their companies in relation to industrial transformation. 78 percent say they need to be quicker to invest in digital opportunities, but 75 percent say they have the strategy to secure firstmover advantage. Manufacturers have already gone through several stages of transformation focusing on continuous improvement.

"Now they are looking for changes in business models by using digital technology to achieve this. Any company that moves faster than its peers will have an edge, so they fear missing out on the opportunities if they don't accelerate their technology investments," says Vinod Ramachandran, Global Head of Industry 4.0, KPMG International.

If something is holding back transformation, two thirds say the main challenge is choosing the right technology. "One useful way of approaching this problem is to differentiate foundational technologies, which are a must for digital transformation, from specific applications integrated on top," Vinod Ramachandran elaborates. "The former includes a very strong ERP platform, cloud infrastructure, data links and a data analytics platform, all interconnected. The foundational technology investments require a longer ROI."

To what extent do you agree with the following statements about your digital transformation strategy?

We have an aggressive digital investment strategy, intended to secure first-mover or fast-follower status

23%	52%	15%	10%

We need to be quicker to shift investment to digital opportunities and divest in those areas where we face digital obsolescence

29%	<u> </u>		14%	8%
We need to address be continuing on our trans	U	nation over the past	2 years before	

25%	45%	19%	12%

New partnerships will be critical to continuing our pace of digital transformation

28	3%	43%	/ 0	18%	13%
Continuing to dr and customers	rive digital trans	formation at a rapid	pace is critical to	our competition for t	alent
23%		45%		24%	8%
We're content w resources elsev		are on digital transfo	ormation and are a	allocating investment	
21%		50%		18%	11%
)%	20%	40%	60%	80%	100%
Very confident	Confident	Neutral N	ot very confident	Not at all confident	

 $\widehat{\mathbf{W}}$

Strong optimism despite headwinds

Changing global supply chains Building blocks of transformation Zeroing in on ESG goals

Rising value of skills

Conclusion



"Once that is in place, then specific applications can be built on top of it. For these, the ROI needs to be higher, because the pace of technological evolution is very fast. CEOs don't want a long payback period when the technology is quickly out of date," says Vinod Ramachandran.

Clearly, workforce attitudes need to be aligned with the company's goals for Industry 4.0, but there are signs of a divergence. CEOs say an even more important factor than technology for holding back their transformation efforts is the need to make sure employees adopt new ways of working. This suggests that it is important to ensure workers not only support the company's transformation strategy, but also work hard to help achieve it. Employees are at the center of digital transformation and technology should be used to help them play that role so that the digital share of work content goes up. Changing employees' attitudes to the adoption of new technologies requires a lot of effort and time from managers. Yet when asked which is the higher priority to meet transformation objectives, 57 percent chose investing in new technology and only 43 percent said skill development.

"Both the technology and the workforce go hand in hand in driving digital transformation. New technologies enable new possibilities, but it is up to employees to realize those opportunities. The challenge is that the requisite skills are becoming harder to get," Vinod Ramachandran continues. "Furthermore, employees need more than one skill. For example, an engineer in a workshop also needs to be proficient in data science so they can analyze and solve problems quickly and efficiently. Combining skills is becoming important to help ensure companies can maximize the benefits of technology."

66

Both the technology and the workforce go hand in hand in driving digital transformation. New technologies enable new possibilities, but it is up to employees to realize those opportunities.

Vinod Ramachandran Global Head of Industry 4.0 KPMG International Strong optimism despite headwinds

Changing global supply chains Building blocks of transformation

Zeroing in on ESG goals

Rising value

Conclusion

Conclusion

In the 2022 report on global manufacturing prospects, it was clear that macroeconomic trends are driving executives to focus even more than before on a twin transformation: smart digitization and a focus on ESG. These remain key imperatives, but now the global picture has become distorted. The world economy is slowing down while technological change is accelerating.

CEOs should not take their eye off the main prize: sustainable and profitable growth. To achieve it, they should recalibrate continuously while sticking to their core strengths and values. Given the dramatic changes in geopolitics, climate change and working practices, it is more challenging than ever to stay on track in meeting long-term corporate objectives. However, based on our survey, it is clear that CEOs are aware of both the challenges and opportunities in setting a solid course for the future.



Contacts

Stéphane Souchet

Global Head Industrial Manufacturing KPMG International +33 (0) 1 55 68 33 90 ssouchet@kpmg.fr

Toni Jones

Country Leader KPMG Australia +61 3 9288 6699 tonijones@kpmg.com.au

Tammy Brown

Country Leader KPMG in Canada +1 416 777 8344 tammybrown@kpmg.ca

Norbert Meyring

Country Leader KPMG China +86 21 22 12 27 07 norbert.meyring@kpmg.com

Ulrich Ackermann

Country Leader KPMG in Germany +49 711 9060-42000 uackermann@kpmg.com

Grant McDonald

Global Industry Leader, Aerospace and Defence KPMG International +1 246 233 7866 grantmcdonald@kpmg.bb

Romain Liotard

Global Sector Executive, Industrial Manufacturing KPMG International +33 (0) 1 55 68 96 84 rliotard@kpmg.fr

Vinod Ramachandran Partner and National Leader, Global Head — Industry 4.0 KPMG in India +91 22 30 90 19 30 vinodkumarr@kpmg.com

Jun Okamoto

Country Leader KPMG in Japan +81 33 54 85 385 jun.okamoto@jp.kpmg.com

Jonathon Gill

Country Leader KPMG in the UK +44 (0) 776 871 0617 jonathon.gill@kpmg.co.uk

Claudia Saran

Country Leader KPMG in the US +1 312 665 3088 csaran@kpmg.com

Some or all of the services described herein may not be permissible for KPMG audit clients and their affiliates or related entities.

kpmg.com



The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

©2023 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

KPMG refers to the global organization or to one or more of the member firms of KPMG International Limited ("KPMG International"), each of which is a separate legal entity. KPMG International Limited is a private English company limited by guarantee and does not provide services to clients. For more detail about our structure please visit home.kpmg/governance.

The KPMG name and logo are trademarks used under license by the independent member firms of the KPMG global organization.

Throughout this document "we", "KPMG", "us" and "our" refers to the global organization or to one or more of the member firms of KPMG International Limited ("KPMG International"), each of which is a separate legal entity.