

Tech-Clarity

Executive Strategies for Sustainable Business Success 2024

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Focus on Business Fundamentals and Resilience

Risks Persist, but Fundamentals Take Priority

What's become clear over the six years we've run this survey is that although the level of risk and disruption varies, it is constant. While the underlying causes change, companies now operate with inherent, persistent threats to their long-term success and profitability.

This year's survey of 222 companies shows, however, that they are not reacting to specific pandemic threats, new supply chain challenges, or unforeseen financial crises. Instead, they are focusing their strategies and actions on the fundamental factors driving long-term business success.

A Shift in Fundamentals

As companies focus on the fundamentals, we've observed some noteworthy shifts in these basic business performance factors. While traditional focus areas like brand perception, long-term profits, and customer relationships continue to be viewed as significant success drivers, we observed three noticeable changes:

- The focus on workforce development as both profitability and strategy drivers increased significantly
- Environmental sustainability is a significant business success driver
- Supply chain resilience is considered fundamental to company success

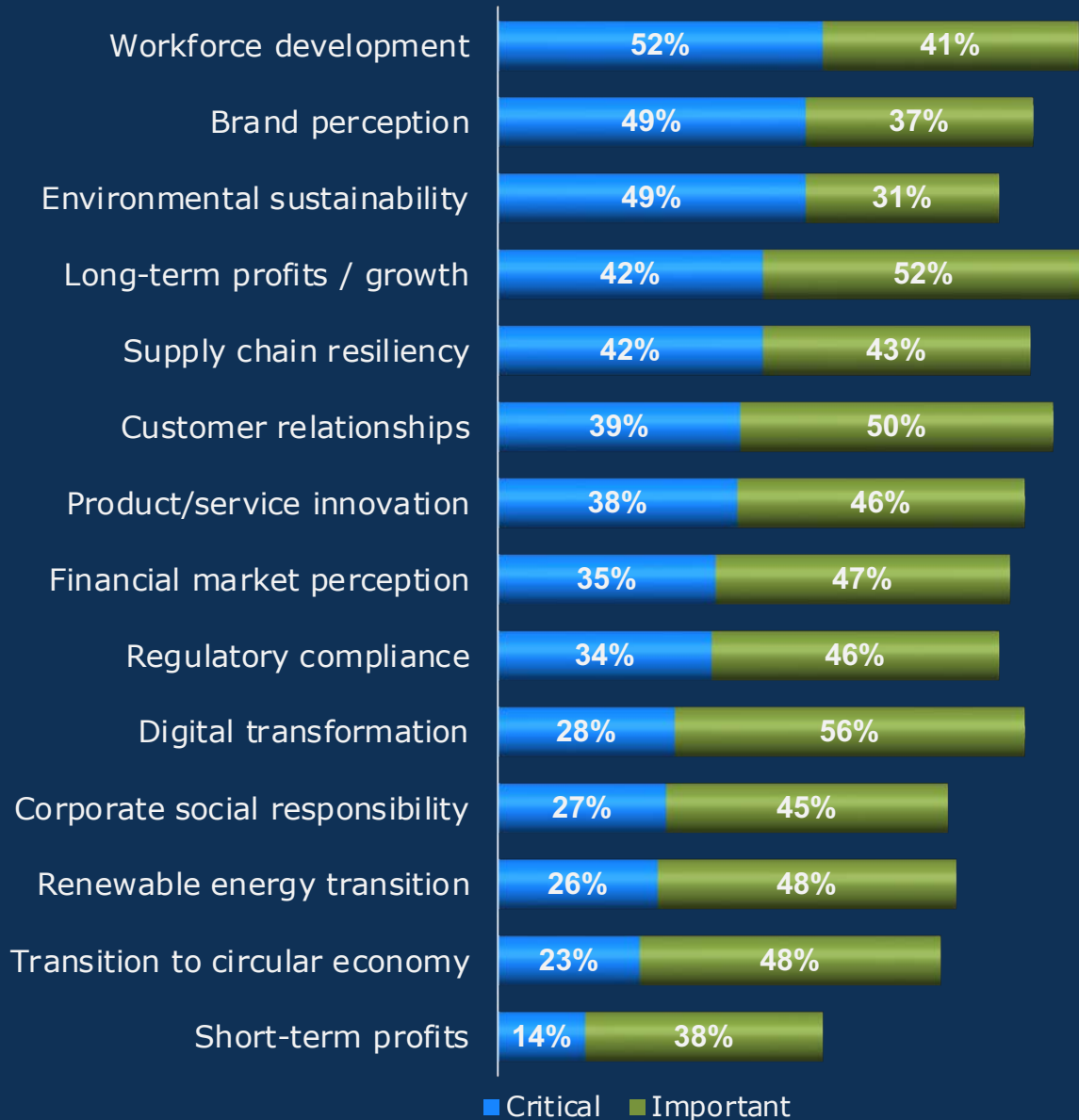
Improve Performance and Increase Agility

Now is the time for businesses to prepare for long-term success while keeping an eye on risk and staying prepared to react to external disruption. The next major business disruption may or may not be just around the corner, but the actions required to succeed are clear either way. Companies are increasing their focus on innovation and digital transformation, including AI, to improve their overall business performance and be ready to pivot when external factors dictate a change.

Let's look at how companies focus on the essential pillars of long-term business sustainability to ensure business success in 2024 and beyond.



BUSINESS FACTORS DRIVING LONG-TERM COMPANY SUCCESS



Long-Term Success Requires Tradition and Transition

Traditional Success Drivers Remain

What do surveyed companies see as important to the long-term success in 2024 and beyond? Not surprisingly, some of the tried-and-tested business fundamentals still hold true. Common factors like brand perception, long-term profits / growth, customer relationships, and product / service innovation are considered critical or important by over three-quarters of responding companies. Very few, only 12%, believe short-term profits are critical, showing that companies are maintaining a long-term view for 2024 and beyond.

A Shift Toward the Workforce

The most significant shift is increased attention to workforce development as a driver of long-term success. About one-half now say that focusing on workers is critical to success, dramatically more than in prior survey years. This is a positive view, consistent across the survey, and one that clearly holds importance to long-term success. This shift could be due to changing workforce dynamics, such as retiring employees and younger workers with different work-life balance priorities. However, we don't have data to identify why it is more important this year other than potentially linking it to a shift in survey respondent demographics away from North American companies to more European ones.

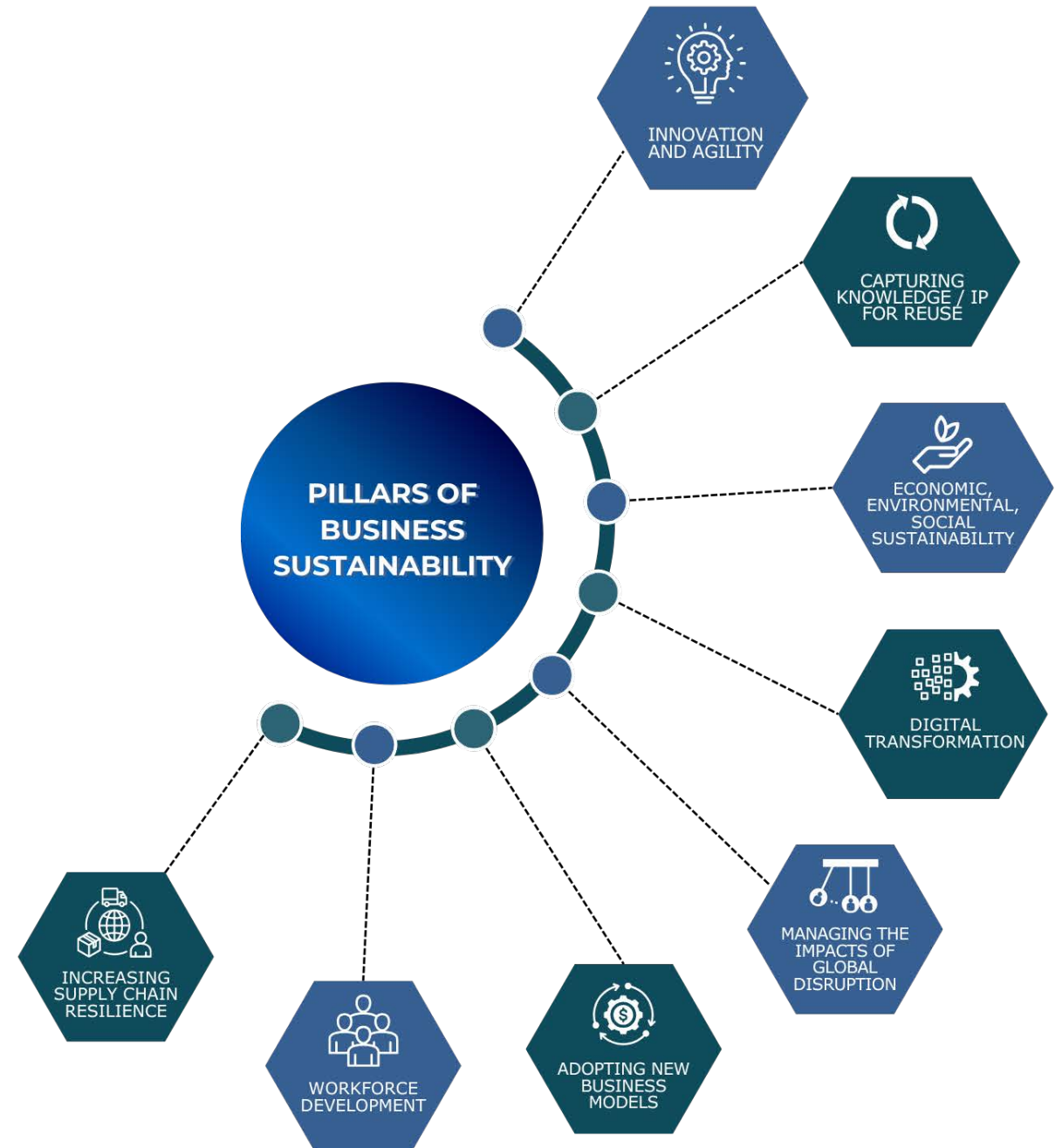
Long-Term Success Requires Tradition and Transition

Sustainability Rebounds Back Beyond Regulation

Environmental sustainability is the second most mentioned critical driver of long-term business success. Interestingly, last year sustainability dipped in criticality while regulations rose. Our interpretation was that ESG (environmental, sustainability, and governance) efforts primarily focused on greenhouse gas emissions and other environmental mandates. Perhaps we're seeing a shift back to broader ESG drivers instead of just focusing on regulation. This finding may also be due to a large population of survey takers from Northern Europe this year as compared to previous years, where attitudes toward sustainability are more mature.

Supply Chain Resilience Gains Attention

This year's report includes a new pillar, supply chain resilience. We added this because supply chain disruption was the most reported negative impact on businesses reported last year. In addition, we recognize that innovation, digital transformation, and corporate agility require supply chain participation. Survey takers included supply chain resilience as one of the top five most crucial challenges, with 87% saying it is critical or important. We take a deeper dive into supply chain resilience in this survey as you'll see later in the report.



Strategies Focus on the Fundamentals

Strategy Drivers are Relatively Stable

How do these priorities impact strategy? The most common corporate strategy and initiative drivers align well with the more stable success drivers (see chart next page). In 2024, the top factors influencing company direction are long-term growth goals, consumer pressure / sentiment, market opportunities / competition, and competitive threats. Like the success drivers, these represent business fundamentals and have been significant drivers over the years.

ESG Returns to Prior Levels

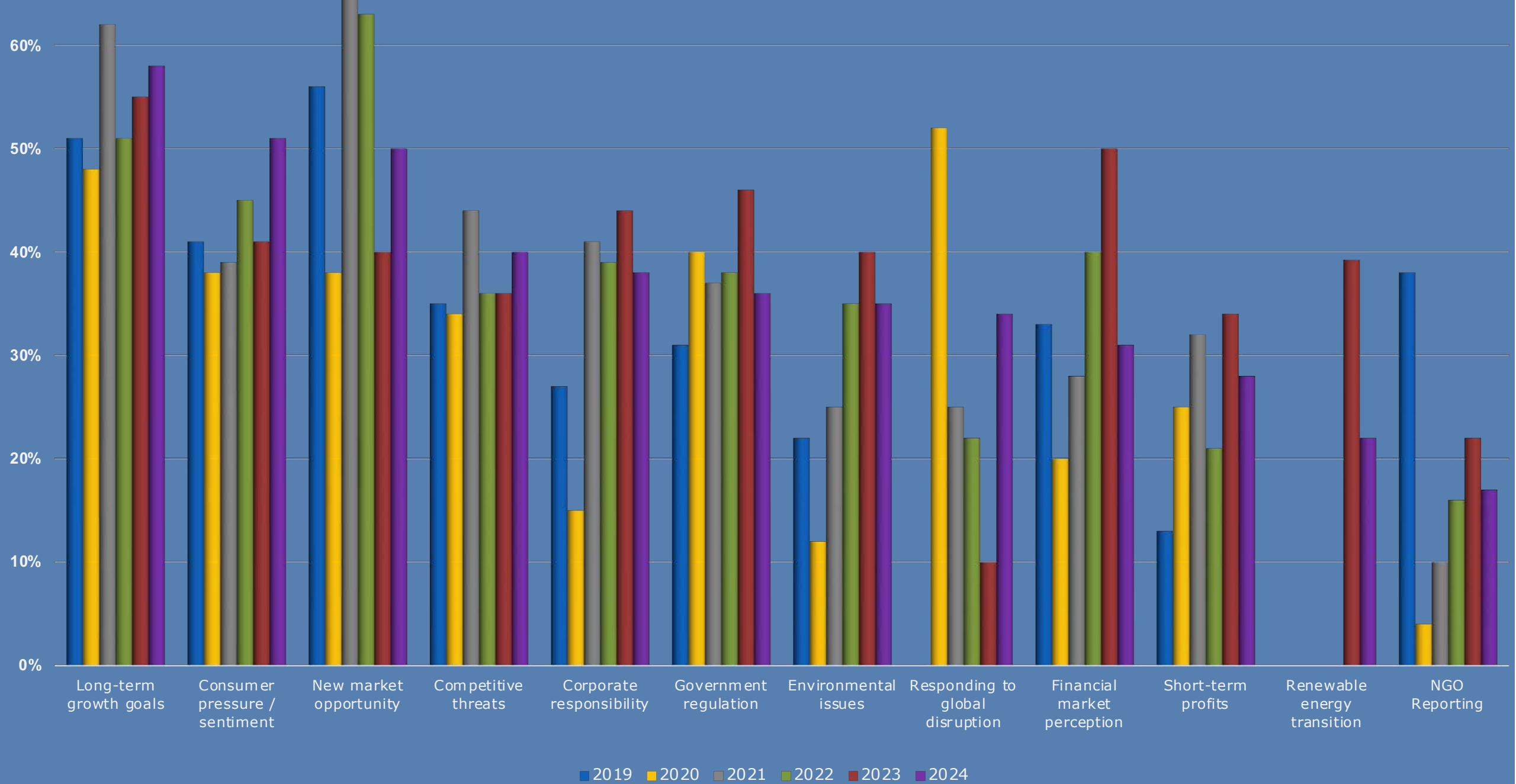
Last year, we saw slight growth in the role of corporate responsibility and environmental issues as strategy and initiative drivers. Government regulations also grew as a long-term success driver. These factors are still some of the more prominent drivers of strategy and action but have dipped to prior levels. We'll look further into specific ESG drivers later in the report.

Reacting to Disruption Still Plays a Role

Last year, we reported on a period of (relative) stability, tracking decreased focus on responding to global risk and disruption to the lowest point we've measured over six years. This year shows an increase from the prior three years but is significantly lower than what companies reported during the initial impacts of the pandemic. We'll drill further into risk and disruption drivers shortly to better understand the shift.



FACTORS DICTATING CORPORATE STRATEGY AND INITIATIVES



Revisiting Risk and Disruption

Impact of Disruption

As seen on the prior page, responding to risk and disruption continues to drive company strategy and initiatives. Risk and disruption aren't new, and survey takers report that the severity is similar to last year. Specifically, 30% of companies say risk and disruption have increased significantly, and another 44% say it has increased somewhat. Only 7% report that risk and disruption have decreased. It seems that in modern times they are ever present even in the absence of significant events.

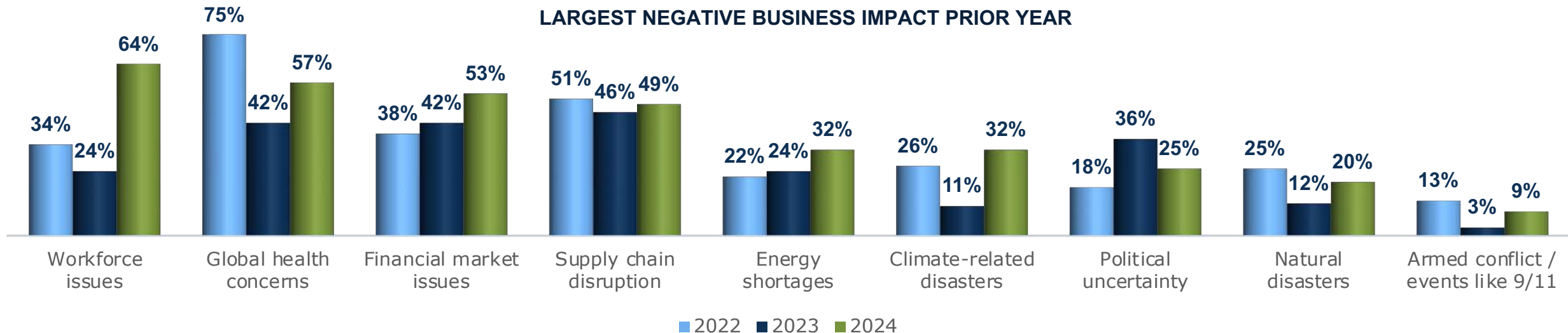
Analyzing Disruptive Factors

Respondents report a variety of issues with significant negative impacts on their business over the last year. The impact of workforce issues has more than doubled and became the most commonly reported issue, followed by global health concerns which rose from last year but is still significantly lower than in 2022. It appears that concerns about the pandemic have not fully subsided as expected. In addition to these human issues, financial market issues had an increased impact last year, likely due to continued uncertainty.

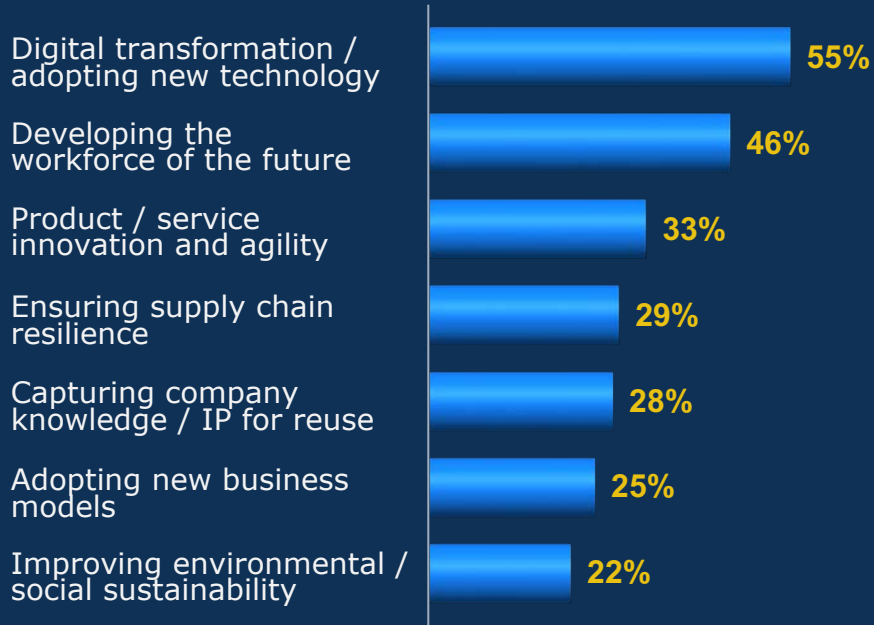
In addition, supply chain disruption continues to impact about one-half of responding companies. We'll discuss supply chain issues in more detail later in the report.

Climate Disasters Grew Significantly

The greatest growth of any of the issues was the impact of climate-related disasters, reported almost three times as frequently as the prior year. However, the impact was only somewhat higher than two years ago, so this may be due to normal variability in the effects of these more frequent global weather and derivative events.



PILLARS WITH INCREASED FOCUS / ATTENTION FROM GLOBAL DISRUPTION



Impacts of Disruption on Long-Term Business Sustainability

Pillars of Business Sustainability

Our research on long-term business sustainability has focused on a number of business fundamentals that our experience shows are essential for companies to be successful now and into the future. This year, we added supply chain reliability as a pillar because of the continued impact we've seen from supply chain disruption. Companies must have strong supply chain relationships and coordination to succeed.

Disruption Leads to Focus on Agility

Companies must continue to be aware of risk and disruption from all sources and be ready to respond. How has disruption impacted companies over the last year? We believe that companies are investing in increased agility to respond as situations arise. For example, over one-half have increased focus and attention on digital transformation and adopting new technology. Transformations and technology help businesses today and prepare them for the future. We'll drill down on the value of technology later in the report.

In addition to focusing on technology, almost one-half of respondents say their company has increased its focus on developing the future workforce. This is consistent with earlier findings showing a significant focus on the workforce.

Disruption Demands Tradeoffs

Company resources are finite, and increasing focus on some areas typically means decreasing it in others. While some companies increased their focus on environmental / social sustainability and adopting new business models, about one-third of companies reported decreasing attention or slowing down their focus on each of these areas. It's essential to recognize that each company has different priorities and some percentage increased focus on each of the pillars.



ESG Focus Moves Beyond Regulation

Shift to Doing the Right Things

Let's turn our attention to environmental sustainability. Last year, we observed a significant shift in what drives sustainability goals and action away from internal and customer ESG drivers toward regulation. We believe this was due to new regulations focused on greenhouse gas emissions. That shift appears to have reversed itself this year. The percentage of companies that reported internal goals of net zero drive their sustainability activity doubled from the prior year, and the impact of customer brands grew significantly as well. Both of these appeared to lose attention last year while government regulations rose, but they have rebounded and returned to levels higher than in previous years.

Other internal goals, such as the pursuit of clean and cheap energy, also grew more prominent. External drivers also grew. Achieving a green market image rebounded and was reported more frequently than last year, rising almost to the level of 2022. In addition, we started tracking the influence of sustainability transparency and product passports this year, and respondents stated that it is one of the more common factors driving goals and action.



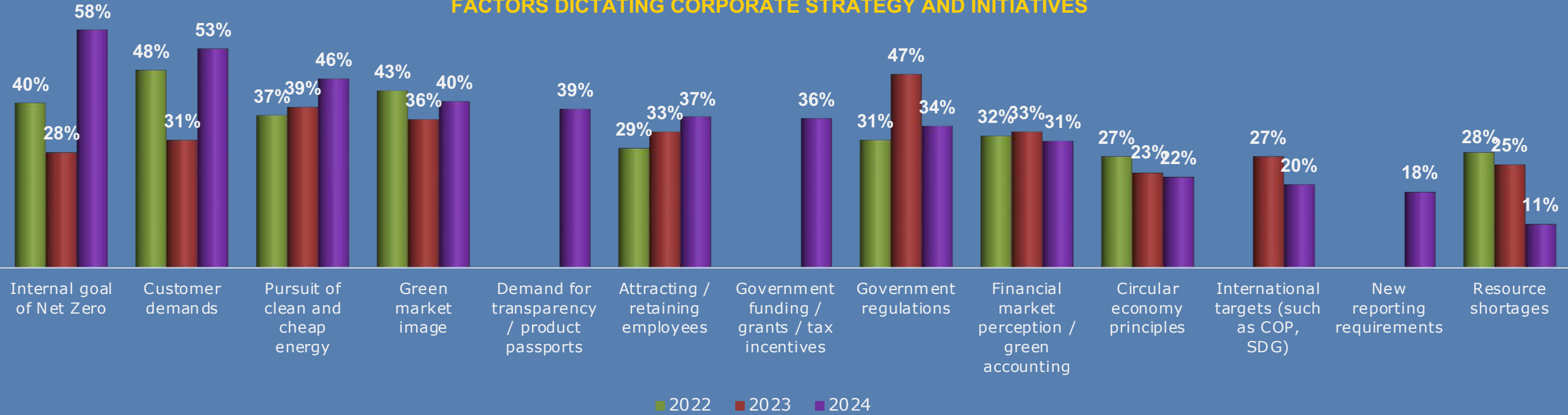
ESG Focus Moves Beyond Regulation

Regulation Still Relevant

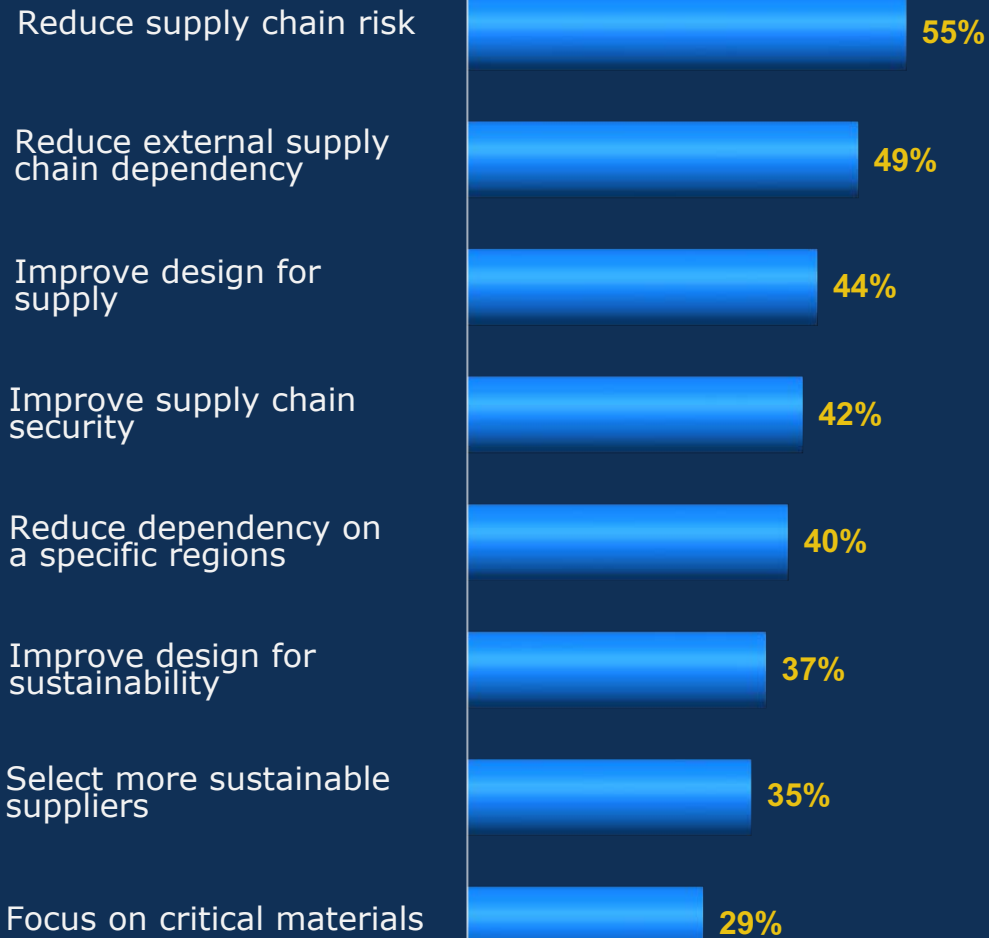
Government regulations, reported as driving action by about one-half of companies last year, dropped down to being reported by about one-third this year. This was similar to two years ago, indicating a potential spike in attention last year as new emissions regulations became more prominent. Interestingly, government green funding initiatives, such as the US Inflation Reduction Act and EU grants for Net Zero, were slightly more commonly reported as drivers than regulations that tend to be more punitive.

Together, we see these changes reflecting that companies are doing the right things for the business instead of reacting only to legislative demands. We acknowledge that these findings may not be entirely attributable to a market trend and may at least be partially related to the increased ratio of European versus North American businesses in this year’s survey respondents. The influence of net zero goals, government grants, and product passports was higher in companies doing business in Europe than those active in North American respondents.

FACTORS DICTATING CORPORATE STRATEGY AND INITIATIVES



SUPPLY CHAIN OBJECTIVES



Supply Chain Resilience Receiving Significant Attention

Focus on Improving Supply Chains

We added more focus on the supply chain this year, adding it as a new pillar of business sustainability based on the impacts we've observed from supply chain disruption over recent years. Few companies are fully vertically integrated. Instead, most rely heavily on their supply chains to support their products and services. Further, they also turn to their value chain to help them innovate and deliver more value. Companies can't afford to put that at risk, and they're taking action to ensure stability. More than one-half of companies have objectives to decrease supply chain risk, and almost one-half are trying to improve their ability to build supply chain success into their products through a design for supply approach. Similarly, over one-third are improving design for sustainability and selecting more sustainable suppliers.

Increased Focus on Supply Chain Sovereignty

Long-term business success relies on the supply chain. Several factors indicate that companies seek to reduce risk and increase control of their supply chain geopolitically. Companies have to be agile and be able to respond to global disruption as a part of a broader value chain. To that end, about one-half of companies report that they want to reduce external supply chain dependency. Another 42% want to improve supply chain security, and 40% want to reduce dependency on specific geographic regions.

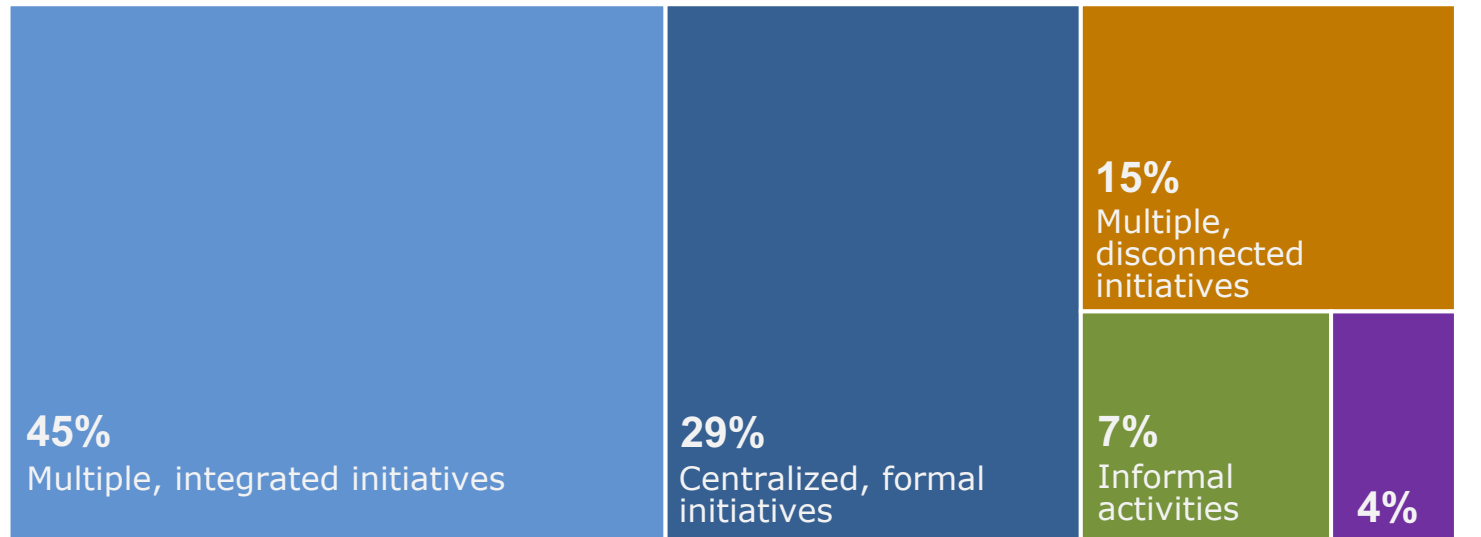
Acting on Supply Chain Resilience Needs

Companies Operationalizing Supply Chain Resilience

Goals without action are not impactful. The companies we surveyed report that they are taking action to improve their supply chain resilience and sovereignty. The survey shows that a full 96% of companies are taking action to improve their supply chains, and 89% have formal initiatives as opposed to ad-hoc activities.

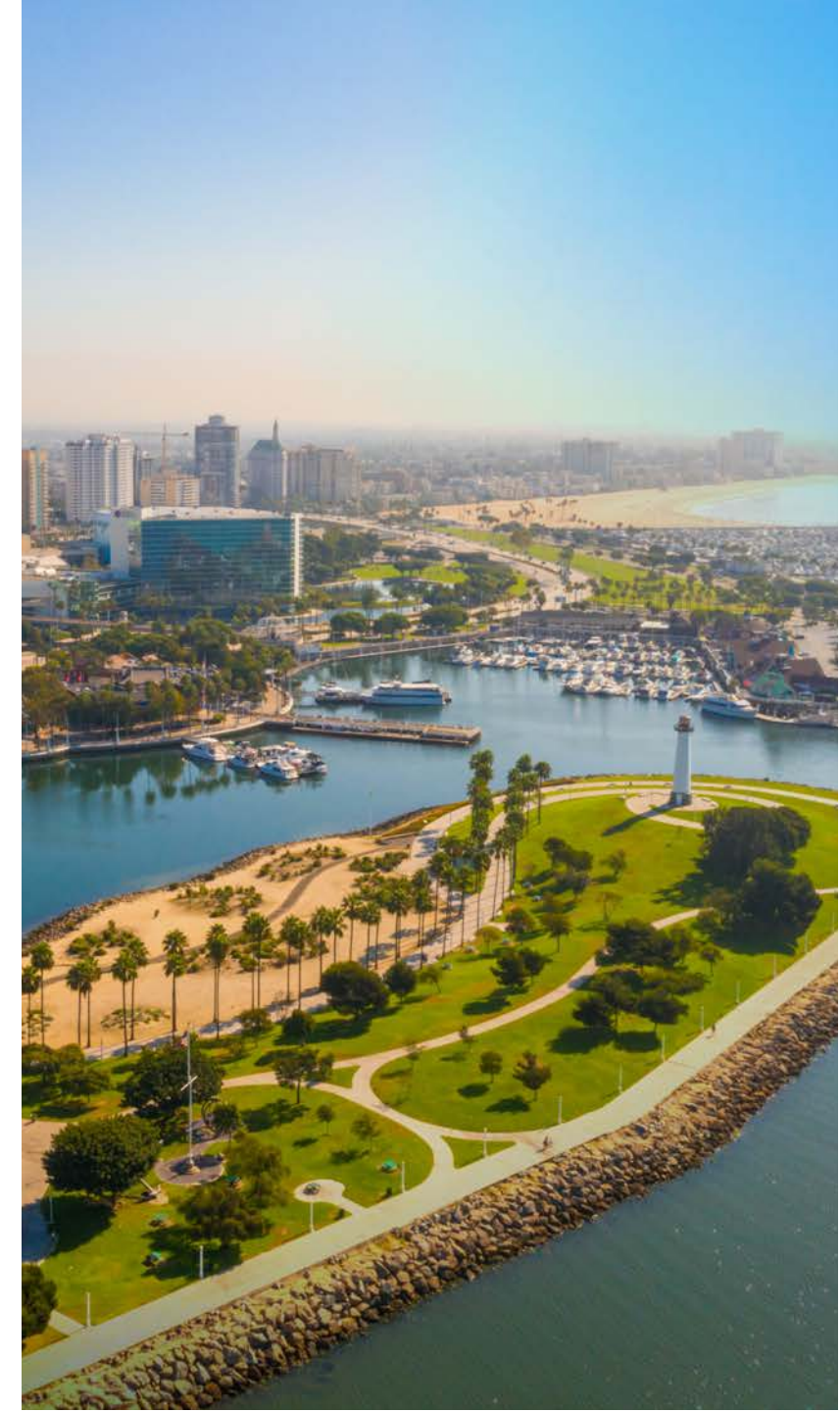
The survey shows that companies are organizing and planning for supply chain success. About three-quarters have either centralized or integrated their supply chain improvement initiatives. Over one-quarter have a centralized, formal initiative in place. Companies are taking their supply chains seriously to drive long-term business success. Of note, no responding companies reported that they were "not considering any action" to improve their supply chain resilience.

COMPANY FOCUS ON IMPROVING SUPPLY CHAIN RESILIENCE



0% - not considering any action

Considering some action



Technology is Essential to Long-Term Business Success

Technology Adoption is Mandatory

How vital is technology adoption to support business success? The vast majority, 91%, say it's either critical or important to their company's long-term success and profitability. In fact, the number that say it's critical, 44%, has grown by 50% from a year ago. Further, survey respondents say technology is essential to support each pillar of long-term business sustainability.

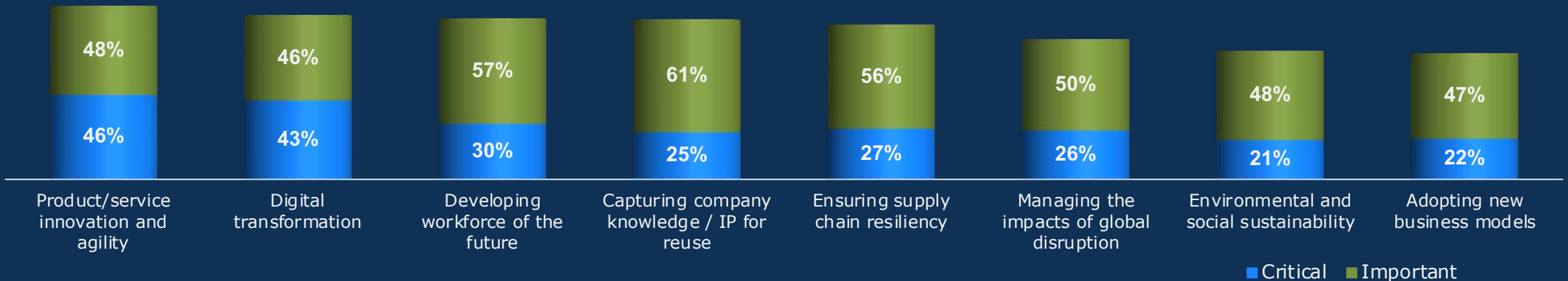
Technology is Crucial to Drive Innovation, Agility, and Transformation

This year, 94% say technology adoption is important to support product/service innovation and agility. A similar number, 89%, say supporting digital transformation is important. Throughout the six years of this study, product innovation and agility have emerged as themes to support successful businesses over the long term, whether to overcome disruption or take advantage of opportunities. Technology adoption is considered critical to support each of these.

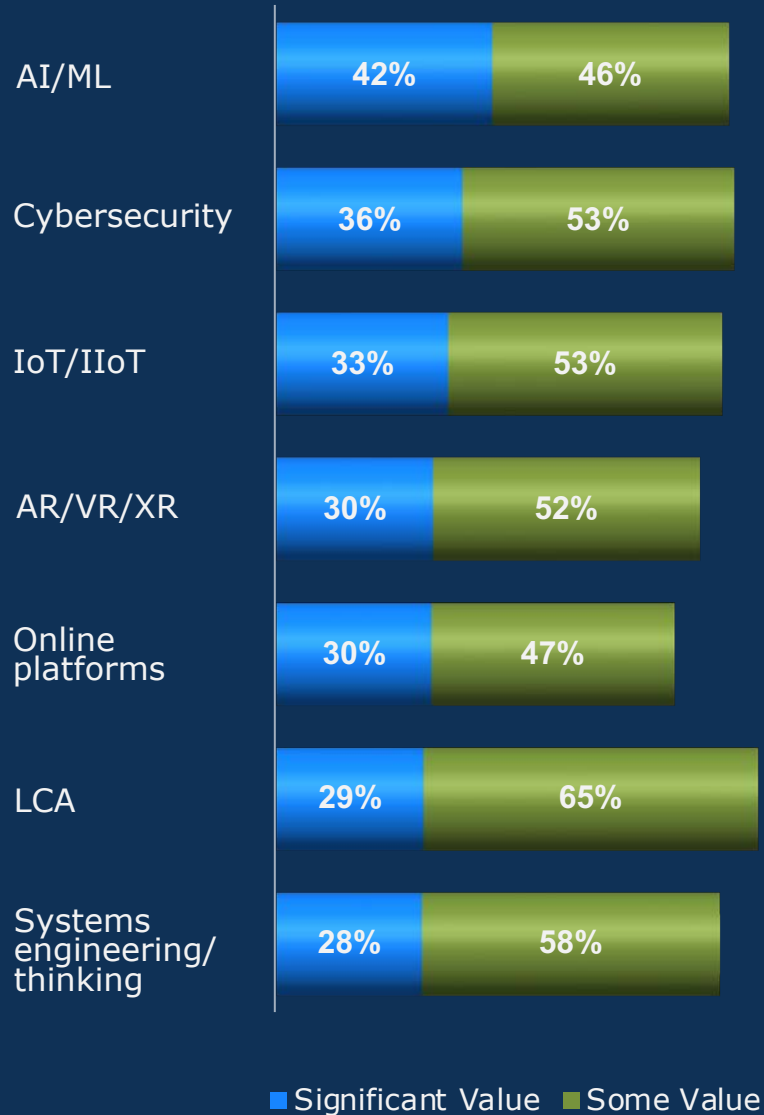
AI Driving Innovation and Agility?

The criticality of technology to support product / service innovation and agility grew from 77% to 94%. We believe this significant jump in the role of technology to support innovation is due to the increased focus and maturation of artificial intelligence (AI) technologies, including generative AI. We'll explore what companies report they're doing with AI shortly.

IMPORTANCE OF TECHNOLOGY ADOPTION TO SUPPORT PILLARS



BUSINESS VALUE AVAILABLE FROM APPLICATIONS



Technology Providing Value

New Tech Drives Business Value

Not only is technology adoption considered essential to long-term success, companies see the value today. Survey respondents indicate they can gain significant value from a variety of technologies. Many of the capabilities reported as significant value drivers are "newer" technologies like AI/ML (machine learning), IoT/IIoT (internet of things / industrial internet of things), and AR/VR/XR (augmented/virtual/extended reality).

Security and Platforms

The survey also reports that foundational technologies like cybersecurity and platforms are seen as important in addition to newer technologies. These technologies drive significant value in their own way. Cybersecurity protects company intellectual property (IP) and know-how and keeps operations running. Platforms also play an essential role, for example, by providing common data and services to support integrated, digital ways of working and provide data continuity, quality, and context.

AI and ML are Emerging Rapidly

This year's most notable change is the business value companies say is available from AI and ML. On the one hand, these technologies aren't new. On the other hand, we believe that the value of these capabilities will continue to grow rapidly as they continue to become more mainstream and generative capabilities leveraging large language models become readily available. A full 88% say they see value in AI / ML, with almost half of those saying they see significant value.

Lifecycle Assessment Value Gains

Another notable shift this year is that Life Cycle Assessment (LCA) is reported to be a value driver by 94% of participants. This is the highest total for any technology. We believe this technology is becoming increasingly important to help companies design, deliver, and report on product and service sustainability. While just less than one-third say it offers significant value, almost two-thirds are getting value from it.

AI Targeted for Broad Impacts

Improve Products with AI

As mentioned earlier, AI and ML are not necessarily new but are getting much more attention. This is especially true for generative AI (GenAI). These technologies can be applied in a variety of ways to improve processes and performance. Interestingly, over three-quarters of the respondents say that they are looking to AI to improve products and services through increased innovation and by creating better performance. This has a significant potential impact on every business and can positively or negatively impact company sustainability and viability. We believe companies must learn what these technologies can do for their business to improve their operations and stay ahead of competitors who are embracing AI and ML.

Improve Workforce Productivity with AI

The importance of developing the future workforce is reported repeatedly across this survey. Companies need to get the most out of their employees and must retain their workforce to protect and transfer knowledge and knowhow. This may be why a large majority (71%) target workforce efficiency improvements from AI/ML. It's essential to

recognize the value that these technologies play in augmenting current workforce capabilities as opposed to replacing people.

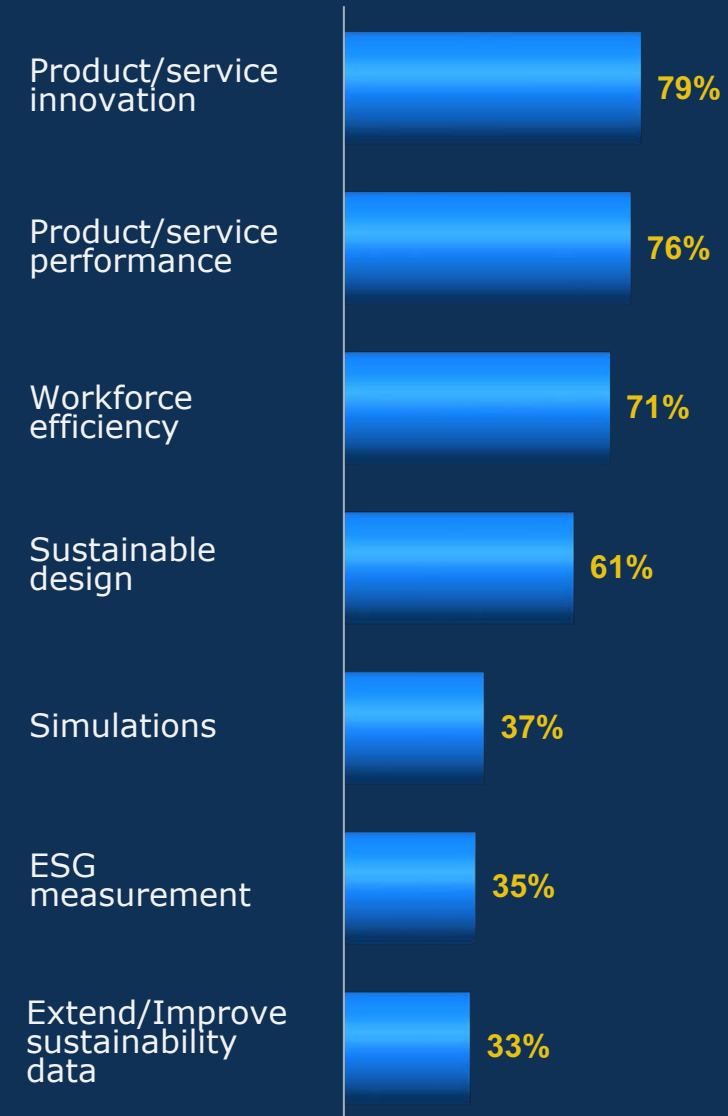
AI/ML to Help ESG Efforts

One-third of companies report they are targeting AI to improve ESG data, and a smaller number are focusing on it to improve reporting. We believe this is an emerging use of these technologies. For example, companies can use AI and ML to gather previously inaccessible sustainability data. Further, they can get more value from their known sustainability data by leveraging generative AI to augment and extend their current data, collating and using information from other products and services.

Is AI the Disruptor?

We typically view technology adoption as a way to overcome disruption. Although we didn't explore this question in the survey, maybe we should consider that AI is a potential disruptor on its own. New technologies can change marketplace dynamics and create upheaval, and companies should be aware of the potential for their competitors to adopt AI/ML to gain an advantage.

AI / ML IMPROVEMENT TARGETS



Conclusions and Recommendations

Create Agility

Companies still face growing risk and disruption. They face a state of persistent business turbulence even in the absence of specific, new global events. Companies must remain alert and agile to be able to respond to new, unforeseen marketplace challenges. Companies this year increased their focus on digital transformation, technology adoption, and innovation in order to combat business risk and disruption now and in the future.

Focus on Business Fundamentals

It's crucial for companies to keep an eye on long-term business fundamentals like long-term growth goals, brand perception, customer relationships, consumer needs, market dynamics, and competitive actions. Companies must keep these in mind as they develop their strategies and implement their initiatives to achieve them.

The pillars of business sustainability provide a framework of business priorities to act on.

The survey shows that companies continue to focus on all of the pillars required for long-term business success, again increasing their focus on digital transformation and adopting new technology.

Invest in the Workforce of the Future

Companies must place more emphasis on developing their workforce. The survey showed that companies viewed the workforce of the future more frequently as a driver of long-term success and as a driver of their strategy. They also reported that disruption significantly impacted their workforce last year. For the first time, this was the top issue reported in the survey, reflecting a 100% growth in occurrence. Whether this is due to retiring workers, new workforce views held by younger employees, or the European focus on the survey this year, the message is clear that the workforce demands attention to keep companies profitable into the future.



Conclusions and Recommendations

Focus on Supply Chain Resilience

Companies have to take action to improve their supply. Last year, supply chain disruptions were reported as the most common negative impact on business we surveyed. This year, we looked more closely and found that supply chain resilience is seen as one of the more essential pillars of long-term business success. Companies are taking action to improve their supply chains. Based on survey findings, we believe focusing on improving supply chain resilience through actions like reducing risk and designing for supply is essential. It's also essential to take action to improve supply chain sovereignty by reducing supply chain dependencies, increasing security, and reducing reliance on regions that come with greater supply risk.

Companies must continue to digitally transform to drive agility and innovation in the short term and business success for the long term.

Adopt Technology to Agility and Long-Term Success

Companies must continue to digitally transform to drive agility and innovation in the short term and business success in the long term. Adopting the right technology is the key to achieving that. Survey respondents confirm that technology is still critical and adding value. It's the common denominator for attaining long-term success across all pillars.

Companies today are seeing value from a variety of technologies. Companies see AI/ML as a significant value driver and are looking for substantial value gains. AI/ML can drive product / service innovation in addition to product performance. Companies are also looking to use AI/ML for workforce efficiency, contributing to the increased focus on the workforce identified by the survey. However, technology can do much more, and one of the most significant shifts was the value seen by LCA software, which further reflects the importance and activity surrounding ESG. Numerous technologies are essential to drive long-term success and support the pillars of long-term business sustainability.



About the Research

Data Gathering

Tech-Clarity gathered and analyzed 222 responses from companies that develop, deliver, and/or provide engineering services for products or services. Survey responses were collected by direct e-mail, social media, online postings, and paid survey outreach via a web-based survey.

Industries

The respondents represent a broad cross-section of industries. 14% were from Industrial Equipment / Machinery, 14% Automotive / Transportation, 13% Financial and Business Services, 13% Life

Sciences / Biotech / Pharmaceuticals, 11% Consumer Packaged Goods (CPG), 10% Aerospace / Defense, and others including Energy / Utilities, Medical Devices, Chemicals, and Electronics / High Tech.*

Company Size

The respondents represent a mix of company sizes, including 7% of companies with less than 1,000 employees, 60% between 1,001 to 5,000 employees, 18% between 5,001 to 10,000 employees, and 15% with greater than 10,000 employees.

Geographies

Responding companies report doing business in North Europe (74%), Western Europe (55%), Central Europe (22%), North America (21%), Eastern Europe (11%), and others including Asia, Australia, Africa, Latin America, and the Middle East.*

Title

The respondents comprised of 9% Executives, 13% VP level, 25% Directors level, 49% Manager level, and 4% Individual Contributors.

Organizational Function

Of the respondents, 17% were in R&D / Design / Engineering, 12% Product Innovation / Product Strategy, 11% Business Strategy, 10% Operations, 9% General Management, 9% Digital Transformation, 9% Manufacturing, 9% Supply Chain / Logistics, and others including Supply Chain / Logistics, Sustainability, and Information Technology (IT).

* Note that the values may total greater than 100% because companies reported doing business in multiple industries and geographies.



North Europe
74%



Western Europe
55%



Central Europe
22%



North America
21%



Eastern Europe
11%

Acknowledgements



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President
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About the Author

Jim Brown founded Tech-Clarity in 2002 and has over 30 years of experience in the manufacturing and software industries. Jim is an experienced researcher, author, and speaker and enjoys engaging with people with a passion to improve business performance through digital enterprise strategies and supporting software technology.

Jim is actively researching the impact of digital transformation and technology convergence in the manufacturing industries.

Tech-Clarity is an independent research firm dedicated to making the business value of technology clear. We analyze how companies improve innovation, product development, design, engineering, manufacturing, and service performance through the use of digital transformation, best practices, software technology, industrial automation, and IT services.



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