GEP INSIGHT DRIVES INNOVATION®

GEP SPEND CATEGORY OUTLOOK 2022

DIRECT SPEND & INDIRECT SPEND CATEGORIES

INTRODUCTION & EXECUTIVE SUMMARY

The year 2021 was uncertain for many organizations, with the pandemic continuing to rage across many regions. This disrupted the supply chains, with demand for some goods and services going through the roof while stagnating for others.

In 2022, organizations are still looking to navigate the volatilities in demand and supply. Their challenges are not just limited to the supply chain but other aspects of business too, such as labor.

For instance, even though the employment recovery rate accelerated in the second half of 2021, the unemployment rate for 2022 is projected to be 5.7% — still higher than the pre-COVID-19 numbers.[1]

However, businesses focusing on innovation, resilient supply chains, adoption of digital technologies and sustainability have not only better withstood the challenges but also increased their revenue and market share.

In this 2022 edition of **GEP Spend Category Outlook**, our global subject matter experts discuss the key trends and risks impacting various categories and the strategies that have helped our clients keep up with the ever-changing business needs. This report will help procurement leaders and category managers create short-term and long-term plans and be better prepared for the uncertainties ahead this year.

The report is classified into:

- **Influencing factors:** Key risks that have had the most impact on different categories that procurement experts should evaluate for 2022.
- **Resulting buyer action:** Key measures for procurement experts to minimize risk and propel the business towards a path of stability and growth.
- **Category deep dives:** Global insights across key direct and indirect spend categories.

Key Risks Impacting Supply Chains

While many of the category risks we discuss are not new, the concurrent timing of these coupled with increased focus on sustainability, heightened volatility and technological disruptions has presented unique challenges and opportunities.

We believe that reassessment and the resulting realignment are going to transform the way organizations work and force them to bring more clarity to their business model while also making their operations and supply chain more robust.

Inflation Continues to Impact Profit Margins

Lockdowns imposed in different regions to control the pandemic slowed down many global economies. Subsequent lifting of restrictions along with expansionary monetary policy and increased government spending lifted consumer demand, putting further pressure on supply. While this mismatch in supply and demand and the resulting inflation were considered ‘transitory’ and expected to stabilize, continued disruption and the possibility of another wave of the pandemic have dampened the hopes of global economies to bounce back anytime soon.

High inflation makes it more difficult for procurement professionals to ensure supply and price stability. This could lead to higher operational and financial risk for organizations. To lower inflation’s impact on the bottom line, companies will have to tame costs and invest in programs that build greater resilience and stronger purchasing and pricing capabilities.[2]

Geopolitics Poses Risks to Optimized Supply Chains

As countries across the world grapple with shortages of pharmaceutical drugs, vaccines, semiconductor chips and commodities (the list goes on), governments are focusing on short-term goals for the benefit of citizens.

The supply chain, which is optimized with a singular world view, is at risk.

Lack of political alignment has led to trade wars between major economies. This is not only creating supply gaps impacting the consumers directly but also making it difficult for organizations to continue business as usual. The situation has been exacerbated by inward-looking policies of major economies.

Recently, in a forum convened by the World Economic Forum, leaders of the world’s biggest companies from 17 countries reiterated the importance of governments to rise above geopolitical tensions and work towards better trade cooperation to address global resiliency and sustainability.[3]

Global Freight Battles Bottlenecks

When the early impact of the pandemic receded, demand picked up drastically. However, the global logistics infrastructure could not keep up. Lack of warehouse availability, sky-rocketing container rates, port congestion and trucker shortages, elaborated below, are the symptoms of a globalized industry struggling to keep up with rising demand.

- **High container rates:** Unbalanced demand on various trade routes is incentivizing shippers to move vessels to more profitable routes, resulting in improper utilization of containers. This uni-directional flow of containers also led to many containers idling in Africa, without any vessels to move them. Cost of shipping from China to the U.S. West Coast has increased exponentially while the cost for the opposite route only rose by a fraction[4]. Although the prices have started to normalize, full recovery will take time.
- **Congestion in ports:** Ports on the U.S. West Coast and some in China have face extreme congestion. This had a ripple effect on inland railways and roadways resulting in delays in the supply chain. The use of digital technologies to increase the throughput of the ports has become more crucial to ease the congestion and manage future disruptions.
- **Warehouse scarcity:** People avoiding brick-and-mortar stores amid the pandemic accelerated the adoption of online retail. This led to a boom in warehouse demand, which could not be met with existing capacity and labor shortage. Warehouse scarcity is also prominent in and around port cities. This year, changing consumer behavior is likely to bring warehouses closer to the end consumer with businesses using idle spaces such as retail stores and malls for warehousing.
- **Shortage of drivers:** The trucking industry has been struggling with driver shortage for many years because of low pay, long working hours and difficult working conditions. The pandemic and Brexit have further restricted the movement of drivers.

Changing Priorities of the Workforce

Global GDP was expected to grow by 5.6% in 2021,[5] resulting in huge workforce demand and high labor shortage across industries. According to the U.S. Bureau of Labor Statistics, millions of Americans quit their jobs in 2021.[6] "The Great Resignation" trend is visible in many other economies too. Employees are not only resigning in favor of better paying jobs but are also looking to improve their physical and mental wellbeing. This has led to higher labor cost across the supply chain and created bottlenecks.

- High workforce demand has enabled workers to demand higher pay and provided an opportunity for them to reevaluate their career choices.
- The last couple of years have been stressful for many employees, trying to manage personal and professional obligations in challenging times, and have compelled some to leave their jobs.
- Workplace flexibility options such as work from home have become key enablers for employees to manage work-life priorities better and allowed more women to join the workforce.
- Schools and support systems such as daycares are still not fully open, keeping people from working full time.
- New variants of COVID-19 have discouraged employees from returning to office, even after vaccinations.
- Restricted international mobility and slow immigration process have also impacted cross-border labor availability.

Increased Focus on Supply Stability and Resiliency

In a survey of C-suite executives by The Economist Intelligence Unit and GEP in 2021, 60% agreed that redundancy and resilience in their supply chains were more important than efficiency and agility, signaling a significant shift in strategy.[7] This is not surprising given the unprecedented supply shortages and disruptions that companies faced because of pandemic-induced plant shutdowns, international trade restrictions and geopolitical tensions. Supply chain leaders were forced to take a hard look at their supply chain design and planning processes. Consequently, many concepts like just-in-time and Kaizen are being reevaluated. There is renewed focus on supply chain decoupling, diversification and modularity. The need for better visibility into supplier's suppliers has also become critical. Many companies are starting to leverage intelligent technology to pursue these goals. But two years into the pandemic, companies are still struggling to achieve the balance between supply stability and costs.

Sustainability Has Gone Mainstream

Sustainability is no more just a business buzzword. It is gaining momentum and finding key place in strategy. Investors, consumers, and employees are expecting businesses to aim for bigger sustainability targets. Research shows companies with high environmental, social and governance (ESG) ratings have a lower cost of debt and equity, and that sustainability initiatives can help improve financial performance while fostering public support[8]. Sustainability today covers several aspects of business[9].

- **Environmental:** 18% of GDP could be wiped off the global economy by 2050 if global temperatures rise by 3.2°C[10]. Strategies to reduce carbon footprint and other environmental waste will not only preserve nature for future generations but also have a positive financial impact.
- **Social:** By treating their employees fairly and contributing to the community they serve, companies can attract new talent and improve talent retention while also tapping into new markets and expanding existing ones.
- **Governance:** Strong and effective corporate governance improves accountability and results in superior financial performance. Better alignment with shareholder interests (through transparent communication and engaged decision-making) helps in developing clear goals and making concerted efforts to achieve those.

Technological Disruption

2021 witnessed an impressive expansion in the number of unicorns or privately-held startup companies valued at $1 billion or more.[11] These startups, in most cases, are competing with large enterprises by disrupting the existing business models. New technologies such as blockchain, artificial intelligence, robotic process automation and natural language processing have not only become mediums to transform a business but also a threat to organizations that are slow in adopting them. There are additional risks organizations need to prepare for, as they increase their dependence on technology.

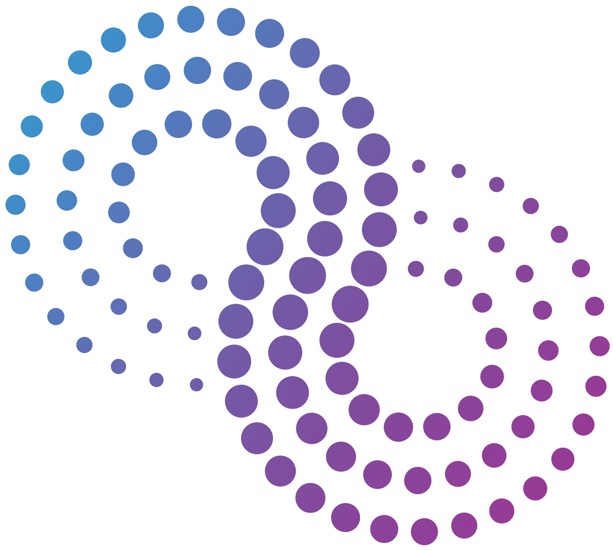
One example is the cyberattack on a U.S. oil pipeline that disrupted supply of fuel to the East Coast for several days. This was not an isolated incident. Organizations need to work on a well-rounded strategy to achieve competitive advantage in the market while minimizing related risks.

Resulting Buyer Action

As organizations face additional risks due to supply chain disruptions, **GEP Spend Category Outlook 2022** presents the key strategies we are implementing to help our clients achieve supply chain stability and drive their businesses to a sustainable growth path.

Supplier Collaboration

Supply chains often consist of multiple and ever-changing partners in different geographies with different specializations. Collaboration between these partners has become crucial to innovate and optimize various facets of the business for competitive advantage. Collaboration is needed for speed to market, but more importantly for effectively managing supply chain shocks due to events such as natural disasters, the pandemic, shifts in consumer preference, logistics bottlenecks and labor unrest.



Organizations are working on establishing the right tools and processes to increase the level of trust between all parties and rely on them during crucial times. These include:

Helping partners innovate: Companies are partnering with strategic suppliers to create custom solutions to customer problems. This is highly beneficial for the suppliers as they have a ready market to pilot their innovative solutions and get real-time feedback to improve their offerings. On the other side, organizations can leverage the research capabilities of their partners to increase market share.

Increasing efficiency with operational optimization: The cost and speed of supply chain operations is dependent on every partner, and technology can be leveraged to help all of them work at optimum capacity. This involves establishing a process to clearly communicate the requirements, timelines and any other specifications with the rest of the participants in the value chain (such as production, packaging, logistics and warehousing). This should include SOPs to make changes to the existing orders. It is also important for the downstream partners to transparently share their total capacity and its allocation to the respective client. This helps in developing a trusted relationship and reduces any last-minute changes to the schedule.

Preparing suppliers for future demand: An easy way to help suppliers provide the level of service expected from them is to give short and medium-term forecasts in a transparent manner. If this information is not available in a timely manner, suppliers have to rely on past orders, leaving them ill-equipped to manage any sudden change in demand or supply.

As more organizations focus on core competencies while relying on partners to help manage all other functions/activities, it has become critical to collaborate with them in a way that the business can compete successfully in the market.

Digitalization and Automation of Business Processes

IT spend was projected to grow at over 8%[12,13] in 2021, highest in the last decade. The growth is likely to stay high in 2022 as well. Companies are leveraging technology to support immediate business needs such as enabling employees to work remotely, mitigating supply chain risks and workforce churn and managing supply and demand volatility.

The key technologies being used to optimize the supply chain include:

- **Cloud:** Small businesses to large enterprises are becoming more comfortable with adopting cloud technologies not only because of the low upfront cost but also enhanced security and the ability to scale up or down depending on business needs. According to estimates, the global cloud computing market will grow by $461 billion by the last quarter of 2025.[14]
- **AI/ML:** Many labor-intensive business processes are being automated to provide faster service to the end customer and optimize cost. These technologies are also being used to augment existing workforce, such as in customer support to process more requests in lesser time and even automating decision-making.
- **Big data reporting:** Organizations are working towards integrating disparate IT systems to be able to create reports/dashboards with actionable insights for the leadership. This in turn is fostering cross-functional decision-making and significantly increasing end-to-end value chain transparency.

Supply Chain Transparency

Supply chain transparency requires companies to know what is happening upstream in the supply chain and to communicate this knowledge internally and externally[15]. Consumers and communities are concerned more than ever about what they are consuming and how the product is sourced.

Procurement leaders thus must gain more visibility not just into Tier 1 suppliers but also lower-tier suppliers to gather actionable insights about potential risks, opportunities for improvement, and information gaps[16]. Many companies leverage third-party partners to gain expertise not internally available.

Organizations can expect the following benefits by investing in a transparent supply chain:

- Many governments are making more stringent laws requiring companies to own responsibility for their suppliers. A transparent supply chain helps the organization to comply with such requirements, saving time and money on litigations.
- Organizations with a transparent supply chain can establish themselves as trustworthy. This helps them minimize reputational risk and develop better customer loyalty for their products and services.
- Responsible and transparent organizations can attract and retain talent through better employee engagement and motivation.
- More and more investors are looking into the performance of companies on ESG goals while making investment decisions.[17] Transparent companies can secure funds from investors and approval from various stakeholders more easily.

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Supplier Diversification and Nearshoring

COVID-19 has been a unique event with global impact and lasting after-effects. As suppliers spread across different regions struggle to fulfill demand, organizations are starting to evaluate and resolve supplier bottlenecks. One of the ways is regional diversification — sourcing of goods and services from the same region where they will be consumed. This limits the impact to the supply chain in case of disruptions.

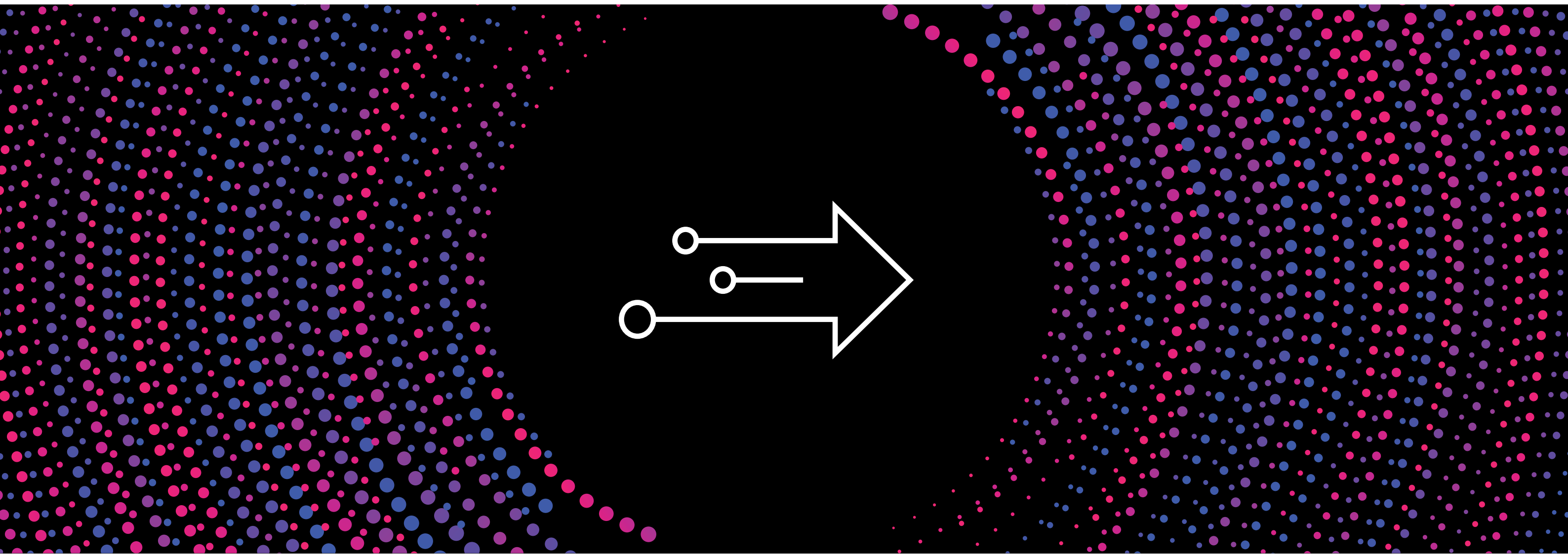
For example, companies from North America are looking at Mexico and Puerto Rico for labor intensive work[18] while those in Europe are considering Western Baltic countries.

However, the strategy cannot be applied in all cases, especially for suppliers of semiconductor chips, electronic displays and specialty chemicals, which are concentrated in single regions.

China is a great example of such concentration for many industries. Companies trying to follow a “China plus one” strategy are looking at Southeast Asia for alternative supply sources. This shift, however, will take both time and investment to build all the related infrastructure, so that these industries can thrive in newer regions.

Another short-term strategy being considered is regional inventory, where excess inventory is stored in countries where it can be accessed on short notice, without refreshing the entire supply chain. The just-in-time model too is being reassessed to accommodate a just-in-case model where supply stability is prioritized for smoother business operations.

DIRECT SPEND CATEGORIES



CHEMICALS

If 2020 was a year of disruption for the chemicals industry, 2021 was a year of marginal recovery. The first half of 2021 witnessed the chemical output return to pre-COVID levels.

However, the industry continued to be marred by challenges such as material scarcity, logistics issues, trade barriers and natural disasters. Chemical companies had to adapt to the new normal to overcome these challenges. While production and overall output increased globally, much uncertainty is still in the cards for 2022.

Overall, GEP expects global chemical production to grow in the range of 2% to 4% as compared to 2021, indicating a continued year of recovery. The United States will see the biggest production gains as many of the planned capacity additions will come to fruition, further boosting their already robust chemicals industry. Though China has experienced some structural changes to the way they operate due to regulations and power shortages, the Chinese output will be quite healthy and will feed most of the APAC markets.

GDP will rise in healthy numbers across most of the bigger industrial markets in 2022, and the focus for the industry across regions will be to improve workforce issues, especially in the shipping and trucking industries. Port congestion will continue to be a major problem; supply chain issues and delays will persist.

Though there are some U.S. government initiatives designed to unclog the bottlenecks at some of the country's largest ports, no major improvements are expected until 2023.

Regional Trends

North America

Capital spending is expected to further increase in 2022, indicating that the U.S. chemicals industry will register strong growth both in terms of output and shipments. The American Chemistry Council expects the U.S. output to increase by over 8% in 2022[19] compared to 2021. From an end-user standpoint, the demand for agrochemicals will rise significantly, followed by plastic resins, due to recovery in the construction and auto industry and the continued use of basic and specialty chemicals across electronics and semiconductors. The availability of basic feedstock such as ethylene and propylene will be abundant going into 2022, thus further bolstering the availability of important resins and improving the availability of some of the key derivatives.

Sub-Category Trends

Basic Feedstock and Polymers

Both polyethylene and polypropylene prices are dropping from record levels in 2021. Though they are not in freefall, 2022 will witness a downturn. However, inadequate power in China will begin to have a counter effect on the global resin market. 2021 marked a significant rise in plastic prices compared to previous years.

Most resin prices increased over 25%[20] and some even reached an all-time high historically. 2022 will be relatively stable, and the prices for key resins like PE, PP, PET and other commercially used resins are expected to stabilize and even drop marginally as the supply situation improves. The availability of key feedstock like ethylene and propylene will be relatively balanced on the back of impending openings of new crackers in the U.S. such as Baystar's new Texas cracker. However, demand from the PE/PP industry will be quite strong and the markets will remain balanced, counteracting any significant price drops.

Aromatics and Solvents

Benzene trade volumes in the U.S. have been strengthening since the beginning of Q3 due to higher demand from the styrene industry. The volumes imported in September and October were almost four times as high as that of August 2021. Demand from automobile and construction sectors for solvents like benzene and its derivatives will strengthen as supply chain challenges resolve and COVID-19-related uncertainty reduces.

New supply and derivative units that are due to come online in Asia by H1 2022 should eventually improve the global supply-demand balance. Extremely high freight costs could push back on tanker trade movements from the U.S. to Asia, with some relief expected gradually from Q2 2022. Methanol will correct itself during 2022 as the market stabilizes. Supply from the Middle East will find its way to India and Chinese markets. The wide price difference between India and China will result in cost-competitive imports of Chinese methanol to India.

However, the offers from the Middle East are expected to be more competitive. On average, Methanol CFR prices for India and China are expected to be between USD 350-400/MT during the initial months of 2022.[21]

Acids and Caustic Soda

Acids and caustic supply have been restricted since February 2021, when the winter storm knocked out approximately three-quarters of the U.S. production capacity. Combined with a series of outages and Hurricane Ida in August, supply tightened. The supply tightness will resolve as plants come back online, but the rise in electricity costs will be a factor for a price increase for the first half of 2022. The availability of key acids will continue to be at a premium, and markets will remain tense in the first quarter of 2022. For fatty acids, shortage of vessels, increasing freight costs (especially APAC) and labor constraints will contribute to major tightness in Europe moving into 2022. The settlements for the first quarter of 2022 will be on the higher side largely due to logistical constraints.

The availability of the material in the market will, however, remain sufficient. Large-scale buyers are advised to keep the significantly large lead times in mind when placing orders with key suppliers. Buyers who have the flexibility to switch between tallow and palm can hold back their purchases for Q1 until the market clears up but both material groups are facing bullish pressures. In terms of fatty alcohols, the tightness in the palm kernel segment is causing some overall concerns from a supply standpoint. Q1 and Q2 2022 prices will remain bullish due to raw material shortages coupled with logistical constraints.

Sustainability

The appetite for sustainability in the chemicals industry is high and will continue playing a vital role in addressing major global challenges like carbon emissions. Companies are working with their suppliers toward defining frameworks and targets to address key sustainability concerns.

Apart from reducing emissions along their value chain and taking a step towards carbon neutrality in their operations, companies need to focus on their extended value chain. The creation of a code of conduct and assessment of suppliers will be the first steps of the process. A robust audit process will also be essential to review and take corrective measures in driving overall success.

The industry is expected to witness a tighter regulatory framework from the likes of REACH, CLP, and other governing bodies to ensure carbon neutrality targets are met by 2050. The pressure to manufacture sustainably will provide an opportunity for many in the industry. Though environmental guidelines are, at present, more stringent in Europe than other regions, this will pick up more significantly in 2022; we have already seen significant movements on this front in China in 2021. When it happens, firms with involvement and exposure to modern and efficient production methods will be at an advantage.

What to Expect This Year

2022 will continue to be a year of recovery. Logistics shortages and distresses will likely linger and impact industries, but the lessons of 2021 in the form of building buffer capacity, planning for greater lead times, decongestion of ports and other initiatives to resolve these issues will eventually succeed. GEP expects 2022 to be a transition year for the chemicals industry, and anticipates it will slowly return to pre-COVID levels by 2023.

We advise the companies sourcing chemicals to refer to the following recommendations as they move into 2022:

I. **Focus on local procurement:** Procure locally as much as possible if the markets permit and until they stabilize.

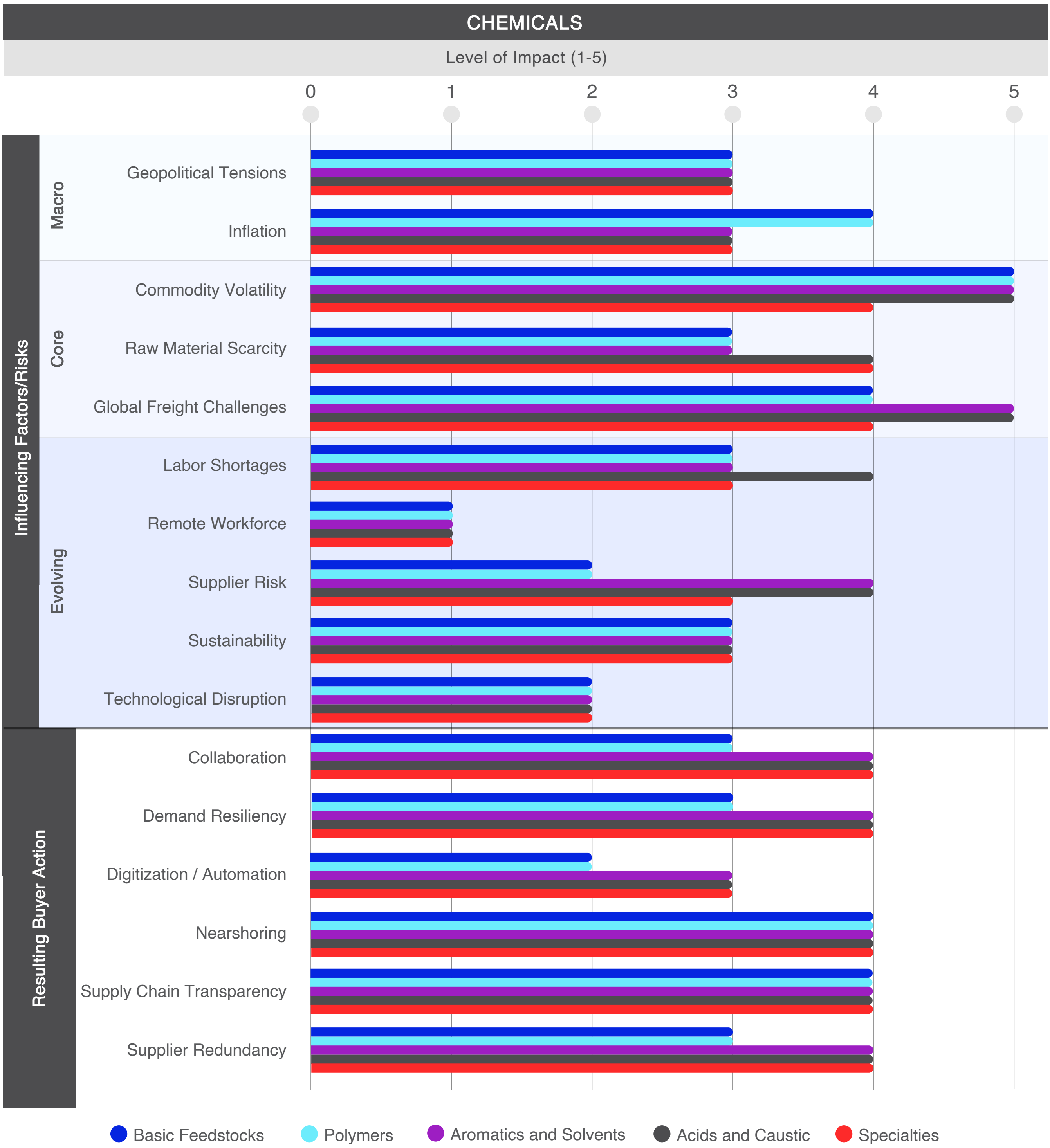
II. **Provide a rolling 12-month forecast to suppliers:** This will significantly reduce exposure to risk.

III. **Revamp and adjust supplier relationship programs:** Companies with better supply relationships in place will be better prepared to reduce the impact of disruptions during market uncertainty through benefits such as delivery priority.

IV. **Optimize buffer capacity for critical material:** Increase safety stock and move away from just-in-time orders for all critical materials until the markets stabilize. Also avoid last-minute purchases, especially for materials that have large lead times.

V. **Build redundancy in the supply network:** Add a second/third qualified supplier to global supply networks, specifically to mitigate geographical bottlenecks and build resilience.

VI. **Link prices to market indices as much as possible:** This will ensure proximity to the market reality and a transparent pricing mechanism.


CHEMICALS
Level of Impact (1-5)
0
1
2
3
4
5
Influencing Factors/Risks
Macro
Geopolitical Tensions
Inflation
Core
Commodity Volatility
Raw Material Scarcity
Global Freight Challenges
Evolving
Labor Shortages
Remote Workforce
Supplier Risk
Sustainability
Technological Disruption
Resulting Buyer Action
Collaboration
Demand Resiliency
Digitization / Automation
Nearshoring
Supply Chain Transparency
Supplier Redundancy
Basic Feedstocks
Polymers
Aromatics and Solvents
Acids and Caustic
Specialties

METALS, PRECIOUS METALS AND AGRICULTURAL COMMODITIES

2021 was a turbulent year for both metal and agricultural commodities. It began with strengthening demand as economies started to open back up from Q1 through Q3. Due to the increasing global vaccination rate, many countries were able to emerge from their lockdowns and resume economic activity. However, supply was not able to ramp up at the pace of demand recovery, thus leading to a supply deficit in the earlier part of the year that drove prices upward for most commodities. As the year progressed, supply chain production issues for semiconductor chips dampened demand, causing pricing for metal-related commodities to eventually stabilize or decline.

Companies are facing various supply continuity-related challenges that call for improved planning and enhanced resiliency within the supply chain. Capacity and volume changes in the short and long term need to be addressed via better processes, digital supply chain optimization and improved supplier collaboration. As newer variants of COVID-19 evolve, there is still a looming threat of potential lockdowns across economies, which could further aggravate supply chain and transportation challenges — emphasizing the importance of securing supply first. Focusing on supply chain restructuring and supplier risk management is critical in current circumstances, though there may be opportunities to leverage stabilizing or softening prices for certain commodities when supply-demand dynamics improve.

Base Metals

Aluminum

Aluminum prices were originally predicted to grow at an incremental pace of 1% in 2021. Instead, prices increased dramatically and hit a 13-year high, with increasing demand and a combination of energy[22] supply shortages, higher input costs and supply chain disruptions in China, India, Brazil and Jamaica contributing to the steep price incline.

Aluminum prices may continue to rise in 2022 if the demand from manufacturing industries remains strong and the ongoing strain on supply persists. Another potential impact to aluminum supply is magnesium scarcities and the inability of aluminum companies to purchase the necessary magnesium to harden aluminum alloys. Some suppliers have been implementing force-majeure clauses in their contracts in anticipation of this potential headwind; buyers should be cognizant of the possibility when purchasing aluminum supplies. When seeking to source aluminum,[22] buyers should consider potential supply shortages and structure long-term contracts to ensure continuity, including penalties for failure to meet supply commitments. A preferred supplier approach with minimum volume commitments is a viable strategy in current circumstances. Inventory optimization is another option as long as carrying costs offset potential losses from supply shortages. Price management using financial hedges will be key to averaging out increasing commodity costs.

Copper

Copper prices were slated to rise 4% in 2021; however, they have remained volatile owing to significant changes in supply and demand. The price of copper experienced a steep incline at the beginning of 2021 due to a combination of strong demand and constraints on supply in Chile and Peru.[24] Along with a continued rise in demand from industries such as electric vehicles and renewable energy, China increased its acquisition of copper as it placed greater investment into the country's infrastructure and construction, thus resulting in a spike in overall global copper demand. Prices then dropped in Q3, largely influenced by a combination of the weaker global automotive production (due to the semiconductor chip shortage) as well as the slowing pace of China's real estate market and the subsequent glut of copper in China due to earlier anticipations of demand.

Despite the relative downturn in copper prices in the second half of 2021, they are expected to rebound in 2022 due to continued increases in demand from the electric vehicle, battery manufacturing, and utilities industries, as well as the short-term strains on supply due to declining inventories and threats of worker strikes in Chile and Peru. A focused approach on copper supply continuity is critical to effectively managing this category in 2022, with similar price and supplier management strategies for other metals such as aluminum applied to copper as well.

Iron & Steel

While 2021 initially saw a dramatic increase in iron ore pricing — nearly 51% higher as compared to 2020 — in Q3 iron plummeted from its June 2021 all-time high by 40%.[25] With about 98% of all iron ore going toward steel manufacturing, the price is largely tied with the steel industry.[26] The stark contrast in iron ore pricing is reflective of a sizeable drop in steel production and the reduction of supply chain issues among major ore exporters such as Brazil and Australia. Steel pricing, on the other hand, maintained its elevated levels throughout 2021 despite sustained demand and supply disruptions.

The general forecast on iron ore pricing appears to be trending downward for 2022 as countries like China must curtail their steel production during the winter months to meet their government's energy emissions goals, lowering overall demand. There will also be an additional demand reduction in China due to its government asking Chinese steel mills to curb output by 30% between January 1 and March 15, 2022. This is in part due to the Winter Olympics, where pollution levels are tightly regulated to improve air quality.

Levels of steel production saw a minor increase from the strong construction industry in 2021, although automobile production will most likely remain flat in the first half of 2022 due to the manufacturing slowdown caused by the semiconductor chip shortage bottleneck. It is likely that iron ore and steel prices will either stabilize or face downward pressure compared to their 2021 highs while continuing to be influenced by everchanging supply and demand levels from China, Brazil and Australia.[27] Procurement insight points to closely monitoring steel supply as a function of the chip shortage. Tier 1 and Tier 2 supply risks will need to be mapped out in the supply chain, combined with an index-based pricing formula, to lock in pricing in a staggered manner throughout the year.

Nickel

Nickel prices rose sharply in 2021, driven by strong demand for stainless steel and batteries and weak supply due to strikes in Canada and flooding in Russia. Indonesia saw an increase in nickel production of 47% for ores and 55% for refined products as of Q1 and Q2 2021.[28] Unlike other metals, nickel remains fairly stable as a nonvolatile commodity, owing to strong support from steady demand and supply for stainless steels (SS). The long-term future of the energy transition and the change in consumer preferences to electric vehicles (EVs) will support growth in the nickel industry for rechargeable batteries, although the short term will see a small decline in nickel prices due to increases in the supply from Indonesia.

Supply challenges across most regions producing nickel will keep pressure on pricing during H1 2022; this is expected to stabilize later in the year. Manufacturers have been pressured to buy 304SS at quoted prices to allow for continuous production at the manufacturing line. Other alloys such as 430SS are in short supply, which has led to a huge price premium for the available 304SS. With these types of market dynamics, it is expected that nickel prices will see a short spike toward the beginning of 2022, followed by a downward price adjustment later in the year.[29] Although battery components within the EV space present exciting news, this only makes up about 10% of nickel consumption, whereas 70% is from stainless steels.[30] Buyers may consider fixing their contracts to avoid price inflation early in 2022, then readjusting to a new price once the nickel supply in the market has increased.

Lead, Tin and Zinc

These metals are mainly used in the automotive and electronics industries for car batteries (lead), electronic solders (tin), and steel coatings (zinc). Their prices were on an upward trajectory in 2021. The demand for lead-acid batteries increased during the start of 2021 due to the chip shortage, which caused buyers to purchase more used vehicles, leading to more battery replacements of legacy vehicles. The need for consumer electronics drove tin prices significantly higher than other base metals, while zinc saw a price increase due to global power outages, decreasing the supply for the construction and housing industries.

All three metal prices are expected to drop from their historic 2021 highs, leading to a slight decrease in 2022 as the current price levels are not sustainable. Supply of lead will increase as it forms from a byproduct of zinc mining, which will drive prices lower. Once supply disruptions — mainly from the electronics industry of semiconductor chips — are resolved, demand and supply of tin will stabilize. Although demand for new automobiles will be high, supply should outpace demand. Mining of tin is expected to increase with the addition of several new mines in Indonesia and Malaysia, which should push prices lower for 2022. For zinc, large increases in production from Brazil, China, India, Kazakhstan and Mexico are expected. The disruption of property development in China due to the recent energy increases may suppress demand for zinc (galvanized steels) in the near term. As with aluminum, zinc uses large amounts of electricity to operate its electric arc furnaces for smelting. The recent power crisis across Europe and China has caused widespread production cuts to avoid inflated operating costs.[31] To mitigate potential supply chain disruptions caused by the lingering effects of the pandemic, procurement teams should secure fixed volume contracts, with a staggered approach toward locking in pricing as it stabilizes during the year.

Precious Metals

Gold, Silver, Platinum

Precious metals have been a safe haven asset during the pandemic, with a large portion of their demand driven by investments and monetary policies implemented by central banks across the world. As economies started to bounce back in Q4 2020 and early 2021 and interest rate yields began to climb, these metals became a less attractive investment option, thus impacting their investment-related demand throughout 2021.

Silver and platinum, with their industrial demand ramping up primarily from the automotive, electronics and energy industries, went through price strengthening during the early part of 2021, which was further exacerbated by mining supply issues in South America, South Africa and Russia. However, improved mining output in the second half of 2021, coupled with the slightly declining production in automotive and electronics industries due to supply chain issues of other materials such as semiconductors, softened the pricing for these precious metals.[32,33]

2022 is expected to keep pricing in check thanks to improving supply and persistent demand challenges for investment purposes and other industrial manufacturing applications (taking into account shortages of other materials). Procurement functions will need to closely monitor monetary policy changes and account for potential fluctuations based on investments in each metal. Entering into long-term contracts to ensure supply continuity will be a sound approach despite the improving supply, as the demand from industrial manufacturing and automotive applications may remain volatile and ramp up suddenly, as was observed in 2021.

Agricultural Commodities

Wheat

Owing to weather issues in key exporting markets such as Argentina and Ukraine, wheat prices have continued to rise since the second half of 2020. Balance between production in the southern hemisphere and supply impact in countries such as Canada, the United States and Russia, along with strong export from Australia, determines stability in pricing.

For 2022, production in the southern hemisphere is expected to compensate for lower-than-expected yields in major producing regions of the northern hemisphere such as the U.S., Canada and Russia. India is expected to harvest a record crop during the current season, providing sufficient exportable surplus to the country's neighbors and the Middle East. China has incentivized wheat production by increasing the minimum purchasing price for 2022, which will also contribute to the production forecast.[34]

Overall, upward pricing pressure is expected to persist despite a high (relative to historical standards) global stock-to-use ratio, as countries like the U.S. will see the lowest level of carryover stock since 2008.

Buyers will need to keep an eye on carryover stock numbers for the end of next season, as they could impact pricing for the upcoming season crop. Securing supply in a timely manner will be critical to avoid challenges and pricing pressure as a result of carryover stock depletion. Well-established hedging practices and discipline in commodity trading, along with strategic management of transportation charges covered under the basis component for grain millers and growers, will play a huge role in managing costs. Close collaboration with quality and technical teams to balance the ratio of winter and spring wheat while maintaining end product functional characteristics may provide support in case of potential supply constraints.

Corn

Corn prices saw a significant fluctuation recently, primarily due to higher consumption growth in China and Latin America between Q4 2020 and Q1 2021. During this time, prices rose sharply to reach $245/mt, which was the highest since mid-2013. Chinese imports have recently diminished owing to the use of cheaper grain alternatives for feed, thus weakening demand and restricting the surge in price as other supply factors offered a boost.

While the planting of corn in the U.S. is expected to be limited in 2022 due to the rising input price of fertilizer, global production in the current season (2021-22) is expected to grow moderately. This estimate is mainly attributed to higher expected yield in Latin America. Brazil's corn crop is expected to see a significant yield along with an increased plantation area. Argentina, which is another major corn producer in Latin America and the third largest global exporter after the U.S. and Brazil, is expected to export a record crop during 2021-22. Corn production growth for 2022 will most likely outpace consumption growth, thus offering pricing relief.

Relative price stability might offer opportunities to lower commodity costs, although, increased ethanol usage must be closely monitored to maintain price ceilings with a robust hedging strategy for corn. Multiple applications of corn may also trigger supply challenges coupled with transportation challenges that could remain prevalent in 2022.

Rice

India and China account for more than 50% of global rice supplies, while India and Thailand together account for close to 50% of total global exports. Attributed to concerns about export restrictions from 2020, rice prices reached a 7-year high in early 2021. Weather-related supply issues in the Philippines, Thailand and Indonesia were also key contributors fueling the rise. As export-related concerns did not materialize, price correction was observed in the second half of 2021.

Overall, pricing is expected to remain stable or marginally decline in 2022, owing to favorable growing conditions in major producing regions like India and China — thereby increasing production marginally, whereas demand may remain steady. India has been dominating rice exports, and is expected to continue doing so due to tighter exportable supplies from other markets.

Given the favorable supply situation and historically high stock-to-use ratio, it will be critical to ensure supply continuity in light of container and transport challenges. The trend in this commodity should offer opportunities to monitor pricing levels and lock volumes at opportune times.

Cocoa

Cocoa prices have largely remained unchanged, primarily due to favorable weather conditions in West Africa and Côte d'Ivoire, which are the world's largest cocoa suppliers. As the season came to an end, production rose by nearly 10 percent YoY.

Slumped demand in the early stages of the pandemic picked up over the course of 2021, and is expected to increase marginally in 2022. While Nigerian cocoa production has been slow in the current season — primarily attributed to unfavorable rain patterns — harvest is expected to pick up and continue well into Q1 2022.[35] Global production is expected to take a hit compared to the previous year as production in Côte d'Ivoire and Ghana is set to be curtailed due to unfavorable weather. The risks to price stem from lowered production estimates from leading producers. Organizations may wish to consider locking volumes for 2022 to cushion the impact of potential price rise.

Natural Rubber

Lower demand in the second half of 2021 saw the price of natural rubber stabilize, albeit 10% higher YOY. The lowered demand was primarily attributed to semiconductor shortages that led to a decrease in automobile sales, as natural rubber is a key material in manufacturing tires.

2022 may continue to see COVID-19-related supply side risks in the Southeast Asian region, though Thailand's incentivized production in its recent Rubber Price Guarantee Scheme provides a positive outlook, with initiatives including cutting production costs and promoting use of rubber as a raw material.[36] Major demand side risks relate to the semiconductor shortage and how long it will continue to have an impact on the automobile industry. 2022 pricing for natural rubber is projected to remain softened on account of demand side risks, though restrictions

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in major producing regions need to be monitored. While demand may be lower due to other material shortages, there is a potential opportunity to lower overall costs by locking volumes in advance and carrying higher inventory if carrying costs are managed well. It will also avoid a potential supply concern when the automotive market ramps up demand once semiconductor constraints are eventually resolved.

Sustainability

Metals (Base and Precious)

The steel industry is a strong leader in sustainability due to its reliance on scrap metal recycling and the transition to natural gas versus coke and coal for lower overall emissions. Steel is the most recycled material in the world, with the U.S. leading in sustainable metal use over all other countries and China working toward catching up with their latest emission goals. The industry overall continues to improve its sustainability efforts by lowering CO_2 emissions through the use of more renewable resources and more environmentally friendly grades of steel, as well as plant innovations focusing on efficiencies.[37]

Alcoa has recently announced its “technology road map” to improve sustainability of its aluminum processes. Their key initiatives seek to increase decarbonization of alumina refining, increase the amount of post-consumer aluminum turned into reusable aluminum, and eliminate greenhouse gases released during the traditional smelting process.[38]

In the precious metals space, there have also been efforts to improve sustainability. Sandstorm has become the first precious metals royalty company, as well as one of the first North American metals and mining companies, to have established a loan structure related to sustainability and established KPIs. This measure means that Sandstorm’s credit facility will increase or decrease the borrowing costs based on whether sustainability performance targets are met.[39]

Agricultural Commodities

Major agricultural commodities producers across markets have undertaken initiatives to enable sustainable sourcing. Cargill, one of the leading agricultural companies, continues to work on its multi-year action plan through its public-private partnership (Cocoa and Forest Initiatives) in major cocoa-producing African countries. This is part of its larger strategic initiative, Protect our Planet, to eliminate deforestation from its cocoa supply lines by 2030. In addition, Cargill also partners with farmers, industry groups and its customers on its existing sustainability initiatives for cotton and maize.[40]

In 2021, ADM, another leading agricultural company, released its no-deforestation policy with an objective to promote and protect forests and biodiversity, aiming to eliminate deforestation from all its supply lines by 2030. The policy focusses on all its supply chains with an emphasis on its soy and palm oil lines.[41] Syngenta, a UK-based provider of agricultural science and technology, plans to invest $2 billion by 2025 in sustainable agriculture initiatives through its Good Growth Plan. The company aims to reduce the carbon intensity of its operations by 50% by 2030.[42]

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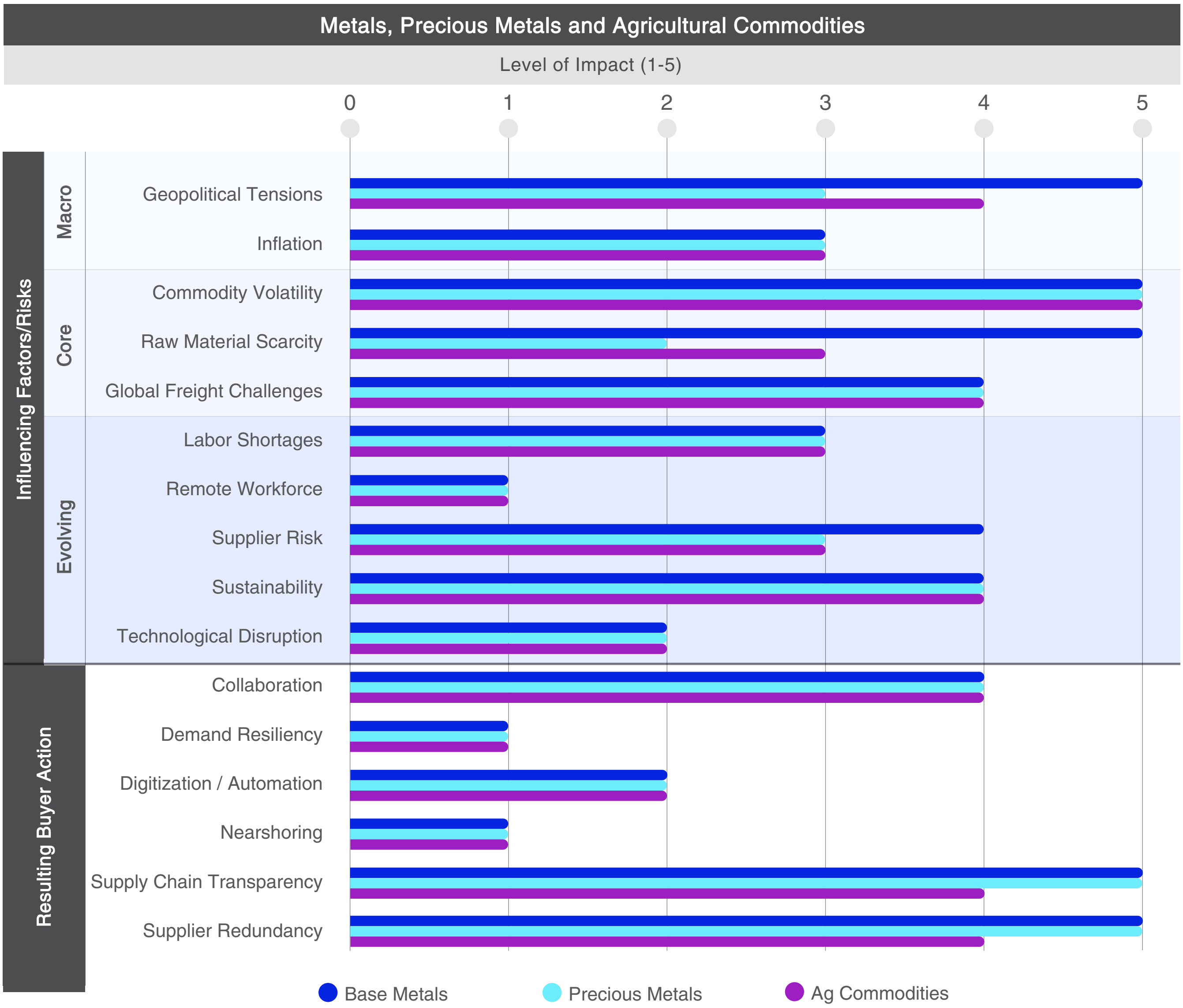

Metals, Precious Metals and Agricultural Commodities
Level of Impact (1-5)
0
1
2
3
4
5
Influencing Factors/Risks
Macro
Geopolitical Tensions
Inflation
Core
Commodity Volatility
Raw Material Scarcity
Global Freight Challenges
Evolving
Labor Shortages
Remote Workforce
Supplier Risk
Sustainability
Technological Disruption
Resulting Buyer Action
Collaboration
Demand Resiliency
Digitization / Automation
Nearshoring
Supply Chain Transparency
Supplier Redundancy
Base Metals
Precious Metals
Ag Commodities

PACKAGING

Packaging category managers spent most of 2021 dealing with pandemic-related supply shocks and coping with inflationary headwinds on most input cost factors. These two facets were often at odds over the past year, pushing category managers to strike a careful balance between supply assurance and cost mitigation.

While several inflationary factors are expected to persist (and in some cases even worsen) in 2022, packaging buyers now have the opportunity to leverage the relative stability afforded by vaccine rollouts and glimmers of economic recovery. They can shift focus from short-term survival to a more strategic, longer-term vision for their category.

As we inch toward a new normal, category managers must discern which trends are long term, requiring strategic intervention, and which are temporary, calling for short-term measures to mitigate impact or leverage opportunity.

Paper and Pulp

Globally, paper-based packaging has seen a surge in demand, fuelled by a broader rise in consumer consumption as economies begin their recovery, and the shift of consumer preferences to e-commerce.

From a pricing perspective, unbleached kraft linerboard prices saw an increase of 14.5%[43] in the United States and over 35%[44] in major European markets such as Germany, Italy, the U.K., Sweden and Poland.

Demand trends are expected to sustain well into 2022. IMF maintained a global growth projection of 4.9% in its October 2021 edition of the World Economic Outlook,[45] with sustained growth in several markets such as Europe (3.6% to 4.4%), China (5.6%) and India (8.5%).

Consumer demand is also inherently tied to sentiment, and the mood is buoyant in major economies thanks to progress in vaccination levels. A large part of the associated packaging demand will have to be fulfilled by paper.

Starting 2022, countries such as France and Spain will ban the use of plastic for fresh food packaging[46] while the U.K. is introducing a 30% plastic packaging tax.[47]

Even emerging markets, which have pushed back against sustainability pressures, will at best maintain the status quo. The shift to e-commerce is here to stay, as the pandemic simply sped up an existing trend away from brick-and-mortar stores in segments such as food and beverage (F&B) and retail.

On the supply side, several paper packaging companies reported a decline in margins driven by higher raw material, conversion and logistics costs. Timber shortages persisted in 2021 owing to various local factors ranging from supply chain disruptions to forest fires.

In view of the demand- and supply-side pressures, it is likely that inflationary headwinds in paper or timber-based packaging will sustain over the next 12 to 18 months, if not longer. Packaging buyers are advised to invest in value engineering and packaging design evaluations, with a medium to long term view of benefit realization.

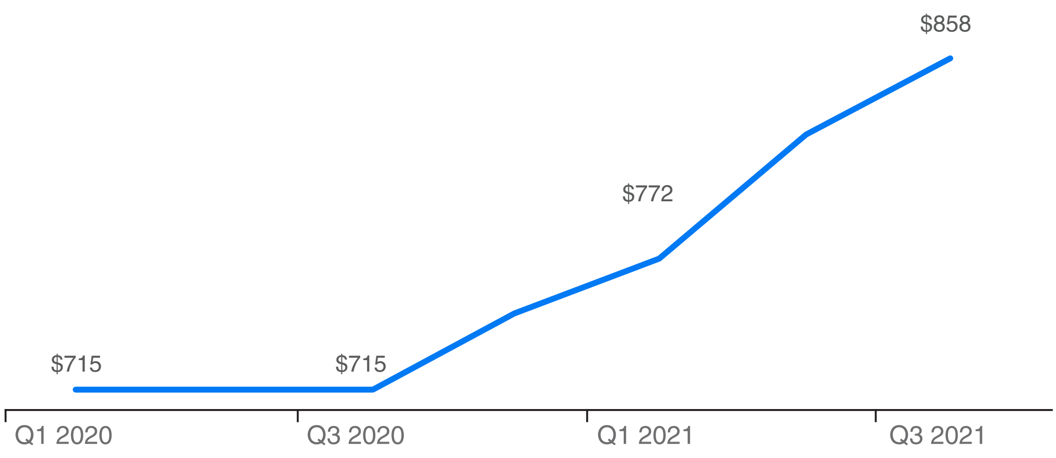
Engagement model reassessment may also provide benefits or mitigate against uncertainties. For example, enterprises can contract with the substrate manufacturers or partner with converters/printers to aggregate volumes if volumes are sizeable.

Paper-based packaging is inherently a format suited for near-sourcing.

However, the inflationary pressures on smaller converters (especially in emerging markets), coupled with their limited flexibility on cash management, prompts a comprehensive evaluation of supplier risk.

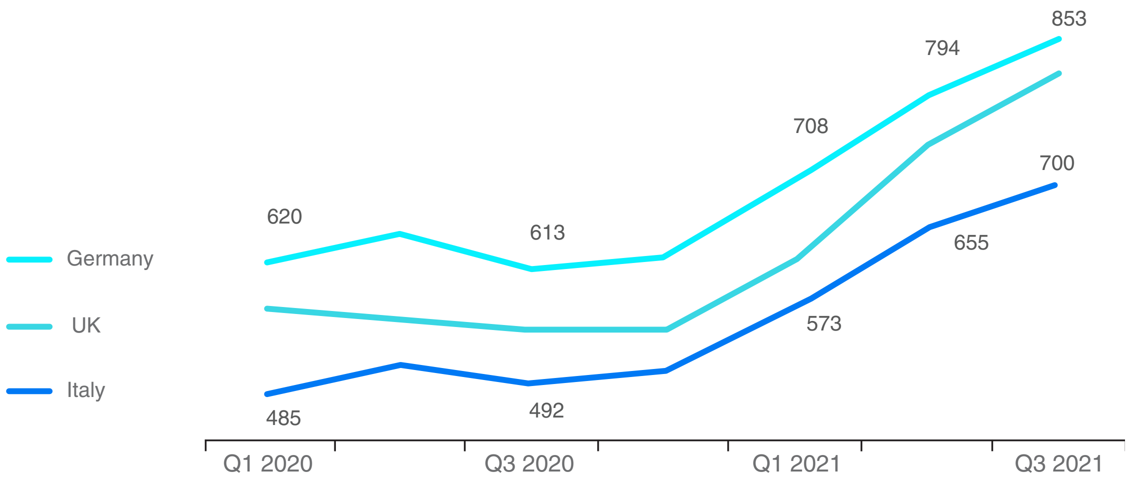
Buyers should identify converters with the right fundamentals and fit for their organization and develop them through this tumultuous time. This will enable “customer of choice” positioning and joint business planning, thus yielding favorable terms in a tough market and augmenting the buyer’s value engineering efforts.

America Kraftliner Trends ($/MT) – RISI



Source: RISI

Europe Kraftliner Trends (€/MT) – EUWID



Source: EUWID

Plastic Packaging

2021 was a year marked by a significant rise in plastic prices. Most resin prices witnessed increases of over 25%[48] and some even reached all-time highs. By contrast, 2022 is expected to be relatively stable. No dramatic drop is expected though; a gradual correction is far more likely.

Both polyethylene and polypropylene prices are finally shedding off from record levels and are expected to continue a downward trend as the overall supply situation improves. But market factors in China may create some counter pressure on the global resin market.

Due to surplus availability of plastics in China, Asian resin prices had been much lower than in the West. However, energy shortages and regulatory changes are expected to result in some supply curtailment, thus reducing the East-West gap. The U.S. has enough material to cover global demand, but arbitrage from the U.S. to Asia will only make sense if the resin price gap drops substantially and ocean freight prices stabilize after a tumultuous 2021.

Most converters/processors that utilize the spot market for PE and PP will closely follow market movements and are expected to stock up significant volumes and build inventories when the timing is right.

Conversion costs, however, remain a matter of concern. Inflationary factors around energy, labor and logistics (covered earlier in this report) will maintain margin pressure on converters and limit the relief from the stabilization of resin prices.

China and India are introducing new laws around single-use and ultrathin/microbead plastics, but there is a sense of skepticism for the implementation of these last, especially given the history and growth pressures amid the pandemic.

Regulations in Europe against plastic waste are expected to have a ripple effect with the U.S. However, economic growth in Asian markets, especially around retail and consumer goods consumption, will likely mitigate the demand impact.

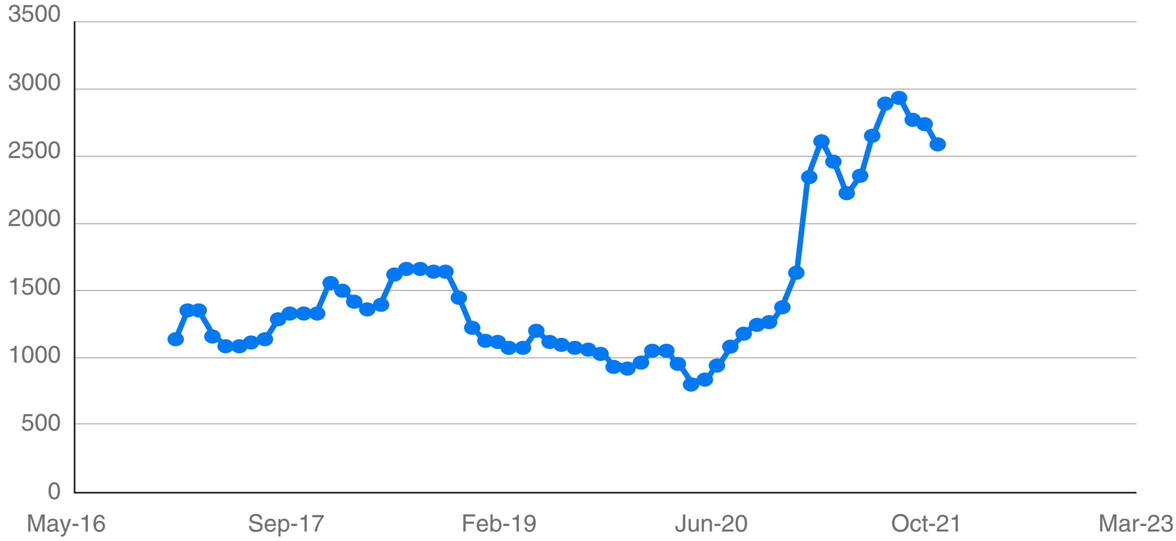
On balance, the global need for plastic will likely remain steady through 2022, with a possible localized drop in certain European markets. From a pricing perspective, contracts negotiated during the highs of late 2020 and 2021 should be revisited.

Actions can range from a comprehensive market test to a fact-based discussion with strategic suppliers, depending on product criticality, demand outlook and outcomes of the last contract discussion. As part of the review, buyers should also establish appropriate index-linked, price review clauses, which may have been severely tested over the last 12 to 18 months.

Investment in longer-term, strategic projects around redesign and value engineering in plastic packaging is and will remain a tricky proposition in the foreseeable future. A country and format-specific evaluation is warranted. For example, single use plastics in food packaging are on their way out in most markets, and organizations operating in this industry should aim to move toward more sustainable forms of packaging.

However, use of rigid packaging in industrial applications is likely to remain, as there are few viable alternatives. In such cases, the actions of major suppliers are often a marker of where the industry will be headed, as they are closest to the market and make significant investments in machinery and molds based on medium-long term outlook. A strategic review of the supply base's product roadmap and investments should be considered a vital input to the buyer organization's decision making.

PP Historical Trend Analysis



Source: Polymerupdate Data Service

Metal & Glass

Aluminum prices exhibited a steady upward trend in 2021 due to strong demand-recovery from end use sectors coinciding with production disruptions. China, the world's largest primary aluminum producer by a distance, attempted to blunt the price rally in Q3 by facilitating production increase and boosting coal production. However, these measures were unable to have a significant impact on the industry, as energy shortages drove prices back up by the end of Q3.

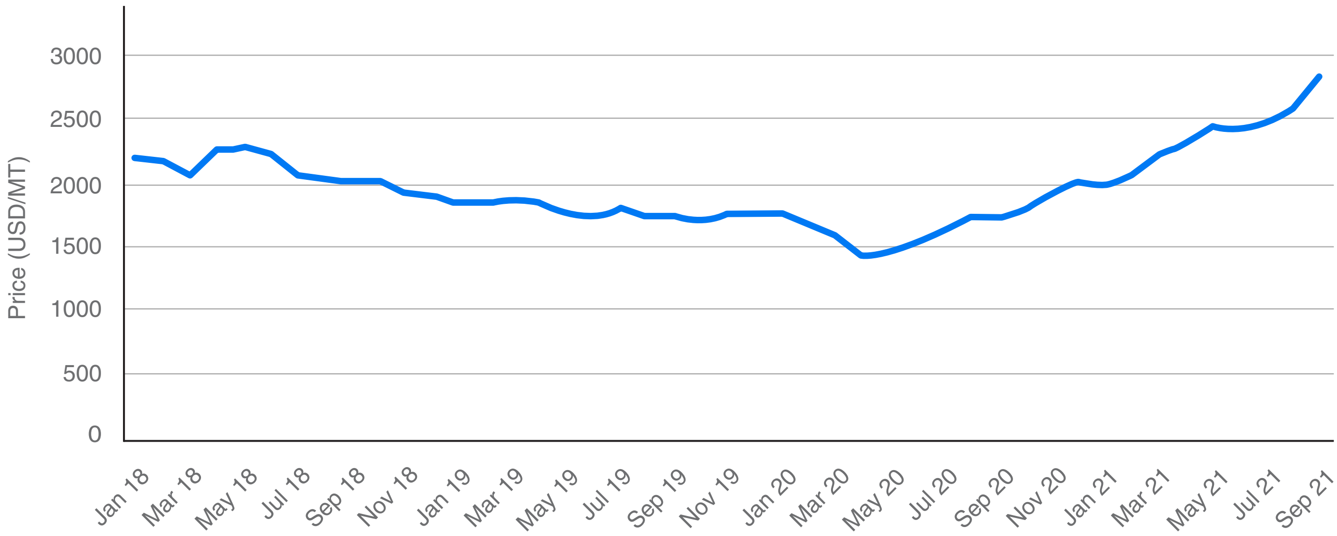
Prices are not expected to witness a slowdown anytime soon, as global demand will only increase with economic recovery, while supply will be constrained amid stricter emission controls and rising power charges in China.

F&B manufacturers looking at glass bottles as a savior from metal prices aren't in for much luck either. In the U.S. for example, producers of a variety of goods ranging from pasta sauces to fine wine were hit with supply chain pressures driven by rising domestic and international logistics prices. 20% to 30% of F&B bottles in the U.S. are imported from Europe or Asia[49] and were severely hit by disruptions to the ocean freight market.

The situation is expected to exacerbate, as demand for glass will only strengthen with economic recovery and a push toward eco-friendly packaging in several key markets. There is also increased demand from the cosmetics industry, who moved toward plastic couple of decades ago, but are now gradually moving back into glass and offering refillable options.

A cross-functional team with representation from different roles, ranging from supply chain to marketing, is best-placed to develop a long-term packaging strategy that is closely aligned with product strategy. This team can work with key suppliers and develop the company's packaging roadmap for a post-COVID world. In the near term, a greater emphasis will be needed on supply chain flexibility and reliability. Buyers should develop a clear understanding of their packaging suppliers' inventory and contingency plans and evaluate near-shore options where previously dependent on global supply chains.

U.S. Aluminum Price Trends



Source: London Metals Exchange

Sustainability

Sustainability took a back seat to hygiene and safety concerns in 2020 and early 2021, with many applications turning to single-use packaging or higher-footprint formats of packaging to reduce actual and perceived COVID transmission risk. However, several climate change events spanning multiple continents are forcing governments and corporations to renew efforts towards sustainable supply chains. Packaging remains one of the most "visible" focus areas for sustainable practices and products.

Regardless of skepticism around implementation of regulations, organizations are best advised to develop a holistic view of sustainability in packaging, encompassing elements such as material usage reduction, energy efficient processes and recyclability.

While regulations will inform packaging strategy, "chasing" them often results in hurried and sub-optimal solutions, often with significant financial implications. Developing a sustainability scorecard across the packaging portfolio is the first step towards identifying priority areas and creating a "project pipeline." This should be followed by due diligence of existing and upcoming technologies or products which are best placed to address the pipeline.

Sustainability isn't simply about ditching plastic for paper or glass. When implemented correctly, closed-loop solutions for packaging significantly reduce raw material consumption and carbon footprint, while simultaneously reducing cost.

It's also worth noting that significant innovation is being driven by startups or small-scale companies that are seeking investment and business knowhow to take their concept to the next level. Supplier collaboration and development in areas having the greatest impact are key to identifying viable solutions.

A long-term view, informed by operational, sales and regulatory considerations will yield the most optimal results.

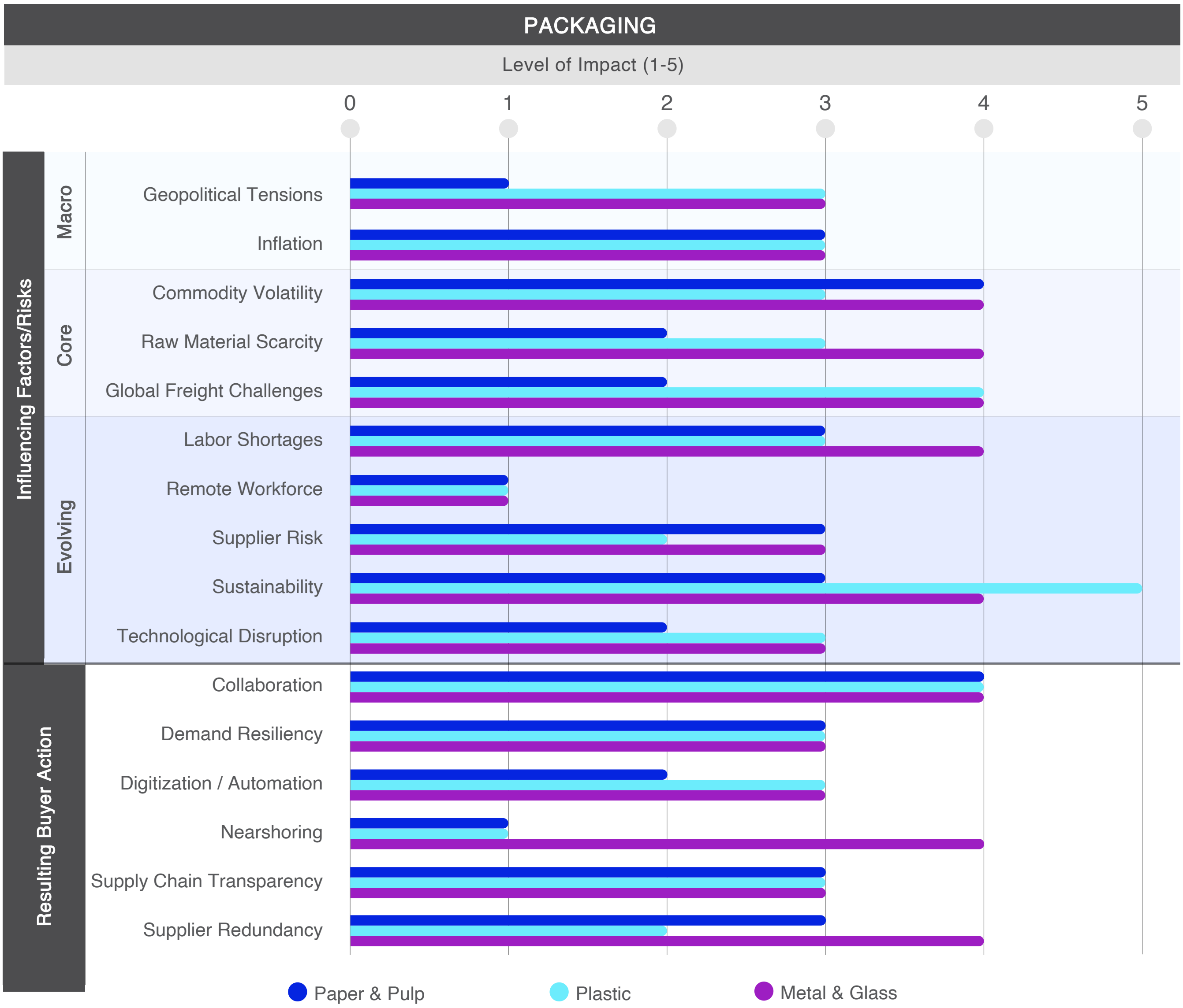
What to Expect This Year

Inflation is likely to continue or perhaps accelerate in 2022. That will have a significant impact on the cost and availability of packaging materials. As packaging demand mirrors consumer attitude and preferences, the future of packaging is closely tied to the economy and sustainability concerns.

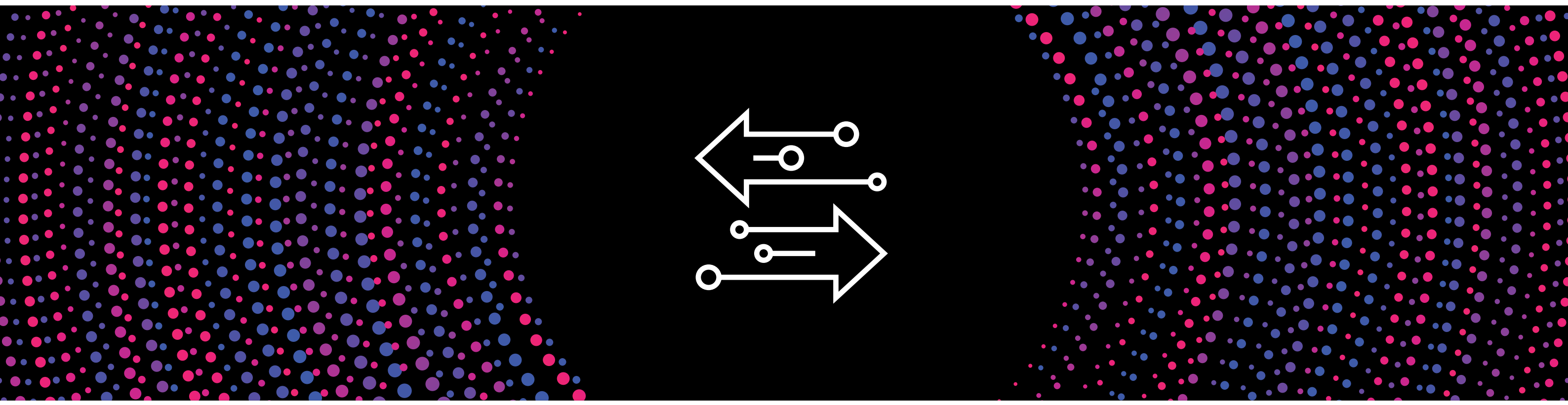
For paper and pulp, even if disruptions to raw material supply subside in 2022, there is no hint of any let up in conversion and logistics costs. Several countries are experiencing unprecedented labor market disruptions and energy and fuel shortages. Supplier consolidation witnessed over the past couple of years is expected to continue, as major players look to improve scales and build leverage to pass on cost increases to customers.

Long-term demand outlook for plastic packaging remains a contested subject. Recent actions around banning plastic packaging for fresh foods in the E.U. and imposing a "plastic packaging tax" in the U.K. are expected to impact medium-term demand in that part of the world. However, the picture in growth markets is not as clear.

As with paper packaging, the outlook for metal and glass packaging remains driven by inflation. Industries such as pharma and beverages should draw up a value engineering priority list based on their portfolio. Most metal and glass packaging applications are primary in nature (i.e., have direct contact with the manufacturer's product) thus having significant impact on the supply chain and/or brand value and often requiring considerable regulatory approval before any change.



INDIRECT SPEND CATEGORIES



CAPEX

Capital expenditure (capex) has shown signs of recovery after a dip in 2021 due to supply chain disruptions amid COVID-19. Global corporate capex is set to surge in 2022 — all regions will see growth, across broad sectors and industry groups. Semiconductors, retail, software, housing and transportation sectors are expected to see the largest boost in their capex spending. Ongoing economic recovery should sustain capex momentum, augmented by powerful policy encouragement for infrastructure and sustainability.

However, enduring issues from last year will continue to be a challenge. Production of equipment has lagged because of supply chain issues and labor shortage. Backorders for capital equipment and labor shortages exacerbated by raw material price inflation can result in longer lead times, costly delays and downtime on critical projects.

Diversifying the supply chain for capital, increasing demand transparency and ensuring strategic collaboration with suppliers will be key to mitigating disruptions. Prioritizing risk assessments, planning for continued disruptions, and leveraging technology to reduce the lead times of capital projects can help leaders overcome these challenges while resulting in cost savings and more efficient operations.

Engineering & Construction Services

The engineering and construction services industry expects an increase in demand in 2022. Pent-up liquidity in the market and pandemic stimulus programs will combine to spur growth, propelling construction's expansion.

The decline in the construction Purchasing Managers' Index (PMI) for the last few months partly reflected softer demand in the short term but, as with services and manufacturing, was mainly due to supply-side constraints. Supply chain delays and record-high cost increases will continue to put pressure on project execution and profitability in the short-to-medium term. However, in the longer term, the global engineering services market is expected to bounce back to register a CAGR of 8% by 2026.[50]

North America

The pandemic may not be fully over, but the U.S. engineering and construction industry has been recovering since early 2021. According to forecasts, U.S. construction output is set to grow at a CAGR of 2.3% over the next couple of years.[51] The upturn in activity is expected to accelerate in 2022.[52] The progressive uptick in key market indicators, such as the Architecture Billings Index (ABI), signaled strong design activity in Q4 2021, which is a leading indicator of stronger growth in construction in 2022. Improving vaccination levels, coupled with the Biden administration's $2 trillion infrastructure investment plan,[53] provides a good reason to believe that it's going to be a busy couple of years for engineering and construction.

While the demand outlook is recovering well, a multitude of challenges remain on the supply side for construction contractors:

- **High costs:** Overall input cost for construction has increased more than 20% from April 2020 to August 2021[54] and is expected to remain high in the near future, primarily driven by labor and supply chain constraints.
- **Labor constraints:** The pandemic has led to some permanent capacity losses in the industry. This has restricted supply and forced numerous contractors to increase prices and even turn down work because of unavailability of skilled labor. While these contractors are trying to mitigate the situation by hiring aggressively, leveraging overtimes and double-times and even turning to retired workers, they have not been able to contain the impact on project budgets and timelines. The situation is expected to improve through 2022 and further, although only gradually. The outlook is much better for professional firms providing engineering services, which have been able to ride the COVID-19 waves with stability because of their ability to function in a remote environment — the only challenge being the bandwidth of their A-Teams. Hence, while costs go up in construction, the net overheads and staff multipliers for architectural and engineering firms have remained stable without any significant change from pre-pandemic levels.
- **Material supply chain constraints:** Steel, lumber, bricks and lighting supplies top the list of materials with the highest level of availability concerns. The shortage has impacted lead time, availability and pricing of finished building materials and equipment as well.

These challenges for suppliers are going to manifest for buyers in terms of contractors declining bids or overbidding on projects, difficulty in getting into long-term fixed-price contracts and paying high contingencies. They have also fueled consolidation by big architectural and engineering firms, the most recent example being IPS's takeover of Linesight.[55]

Recommendations for Sourcing Managers

Organizations must follow a holistic strategy to ensure supply continuity and mitigate the labor and supply chain bottlenecks, as well as keep inflation at bay.

- Sourcing managers need to account for the labor and supply chain constraints, leverage key supplier partnerships to draw up early sourcing plans and provide visibility into their capacities and costs.
- While selecting suppliers, sourcing managers must balance resource commitments with cost competitiveness, especially for more critical projects, to ensure one gets the team one wants. Tracking the solvency and financial health of the subcontractors and construction managers will help guard against unwanted disruptions.
- For smaller site-level construction activity, a locally focused supply plan is recommended. Taking a portfolio approach and managing volume with a smaller pool of trusted suppliers will help to ensure cashflow and relationship management.
- Sourcing managers should be cognizant of longer-than-usual design lead times and proactively mitigate them by releasing procurement packages early. In some cases, it may be best to select construction managers before completing design or even establishing cost.
- Sourcing and category managers must pay heightened attention to insurance covers, the type of insurance being bought, contractual framework related to contractor default and excusable delays to thereby be better

prepared for events that may not be in the buyer organization's control.

- Cost increases and shortages make it advisable to include price escalation clauses in contracts. While contractors will be wary of accepting a blanket cap on escalation, it's important to negotiate caps linked to the appropriate indices.
- Sourcing managers must acknowledge that there will be a premium for engaging with the high-grade team in this market. Managing demand by prioritizing key projects and selecting the optimum suppliers for projects may help mitigate costs and risk.
- Despite market conditions, trends like modular construction, off-site fabrication and the use of alternate materials and digital collaboration tools continue to drive focus, and their adoption will accelerate further over the longer term.

Digitalization continues to be another key factor driving the market. This is due to the growing use of industrial IoT across a variety of industry verticals, resulting in a surge in demand for engineering services to manage the complex linked infrastructure. Procurement teams must keep an eye on supplier capabilities in these emerging areas while devising long-term capital plans and selecting strategic partners.

Equipment

Across sectors, investment in capital equipment is expected to increase in 2022. The supply side blockages due to COVID-19 have prompted investment in more capital equipment, capacity expansion and sustainability to overcome supply constraints. The semiconductor crunch has spurred a wave of investment, with outlays for front-end fabs in 2022 expected to reach nearly $100 billion, powered by digital transformation and other secular technology trends, to meet the soaring demand for electronics. Other sectors like pharma and food and beverages are also expected to grow based on expected demand.

Increase in material prices due to inflationary pressures has impacted equipment demand. Global freight issues have also put increasing pressure on the capital equipment supply chain.

Packaging Equipment

Amid the COVID-19 crisis, the global market for packaging machinery, estimated at $42 billion in 2021, is projected to reach $46 billion by 2026, growing at a CAGR of 1.6%.[56] Development of novel products across various industries, such as pharmaceutical, food and beverages and consumer electronics, is expected to boost the demand for packaging machinery during this period.[57] Demand is expected to be strongest across the pharma sector, with the market expected grow at a CAGR of 9.3% by 2026.[58] Approximately 41% of the packaging machinery market's overall growth during this time is expected to originate from APAC, driven by the rapid expansion of end-user industries such as e-commerce, fast-moving consumer goods (FMCG) and personal care.[59]

The global packaging equipment market is facing headwinds in the form of longer lead times due to port congestions, elevated transportation costs and vessel delays.[60] Demand for packaging equipment is expected to increase because of continuous growth in the logistics and transportation industry; demand for corrugated goods is expected to present a 3.2% increase in 2022, driving a potential boost in the demand for packaging machinery.[61]

The current labor shortage is a major constraint in the overall packaging industry, as it impacts manufacturing and causes packaging equipment backlogs to stretch.[62]

Some of the methods organizations are using to manage their risk in the wake of the pandemic include opting for "Pandemic Prepared Certification" for packaging lines and an "Overall Equipment Effectiveness" focus for lean packaging operations. These allow companies to standardize technology while reducing unit costs and maintenance expenditures.[63] With health and safety being a consideration, protective and tamper-evident packaging is becoming ever more popular for many foods and consumer goods manufacturing companies.[64] Because of the rising demand for packaging techniques to improve the shelf life of perishable goods, modified atmosphere packaging technology (controlling the makeup of gases contained within each package, providing optimal conditions for shelf life and reducing spoilage of perishable food and beverage) will become a dominating technology used by the global packaging market through 2027.[65] Automation continues to be a growing trend, as top market players recognize the relevance of integrating packaging equipment with wrapping, automated labeling and palletizing technology with the main objective to reduce costs and operation time.

The packaging equipment industry is expected to continue seeing the emergence of new technology. Sourcing managers need to approach this development through a total cost of ownership (TCO) lens and evaluate the cost-related efficiencies that can be obtained. Owing to emerging technology and maintenance-related labor constraints, it's more important to negotiate additional benefits upfront — such as long-term maintenance programs, spare parts and training for using new technology. Depending on volume consolidation opportunities, it's vital to select the correct supply channel (e.g., distributor vs. OEM). Considering the current supply chain complications, it is crucial to consider lead times. Organizations that are dependent on global or low-cost country sourcing may need to revive relationships closer to home to mitigate supply chain and commodity-related risks.

Processing Equipment

The global industrial machinery market is estimated to grow from $534.89 billion in 2020 to $793.85 billion in 2025 at a CAGR of 9%.[66] The growth will be mainly fueled by companies rearranging their operations and recovering from the COVID-19 impact, which led to restrictive containment measures involving social distancing, remote working and the closure of commercial activities that resulted in operational challenges.

The processing equipment market is set to follow a strong economic recovery in the medium to long term. However, the recovery will be mixed and is still vulnerable to risks in the short term:

- **Commodity price volatility and inflation:** There has been an inflationary trend in almost every sector in the market. Prices have increased because of an increase in raw material and labor costs. A downward trend in pricing is expected in the second half of 2022.
- **Global supply chain challenges:** Over the last year, there has been a considerable increase in logistics costs as demand has outstripped supply. Container shortages and other socioeconomic factors are leading to additional fees and delays in shipment lead times.
- **Labor scarcity:** The current labor shortage — a preexisting situation exacerbated by the pandemic — has led to a 4-5% hike in wages across many developed countries.[67] The labor shortage of blue-collar workers will continue and may worsen owing to border closures and a slower birth rate, resulting in fewer young workers entering the labor market and more older workers taking early retirement.

- **Technological disruption:** AI and IoT (Internet of Things) have now made their way onto the shop floor. The rapid rate of transformation in technology brings cybersecurity challenges to protect systems from digital attacks. Workforce transformation, which involves training and cultural change, is important for taking advantage of smart manufacturing.[68]

In view of the supply chain constraints and rising commodity inflation, many companies are looking to defer procurement of noncritical processing equipment. Sourcing managers should prioritize critical purchases and delay the purchase of noncritical capital goods whenever possible until the second half of 2022, when the market is expected to cool down. The pandemic-induced supply chain constraints have forced organizations to reduce their dependence on overseas suppliers. When procuring processing equipment, sourcing teams should consider and evaluate local options. These may not always be as competitive as suppliers located in other countries in terms of pricing, but the service level and resilience they can provide may make them a good alternative. Local suppliers are often more attuned to the ever-changing needs of the markets they serve.[69]

Processing equipment manufacturers are expanding and updating new technologies to increase automation and reduce dependence on labor. It’s important to consider suppliers’ ability to supply technologies, such as machines that are easier to change and have self-diagnostic capabilities. As the shortage of skilled professionals grows, these technologies will provide intuitive machinery and reduce the need for trained professionals.[70] Where the budget allows, automated processing equipment should be considered.

Heating, Ventilation and Air Conditioning

The global heating, ventilation and air conditioning (HVAC) market reached a value of $265 billion in 2021 after a decline in 2020 because of the pandemic, led mainly by organizations delaying their capex investments. It is expected to grow 4.8% through 2030.[71] Residential demand is seeing a growth spurt, as more people are looking at quality air in enclosed spaces to counter the effects of the pandemic.[72] Led by China, the Asia-Pacific region has been the largest consumer, accounting for over 45% of the global revenue share in 2020, thanks to factors such as rapid urbanization, rising population and increasing disposable income levels.

Demand for enclosed spaces with sanitation, lower energy requirements, environment-friendly refrigeration and the focus on carbon-efficient refrigerants keeping in line with environmental targets will be key drivers of growth. The residential segment held the largest revenue share of over 40% in 2020. The industry is expected to continue to grow ~5-6% CAGR in 2022, as the anticipated augmented demand for energy-efficient conditioning systems continues from both private enterprises and governments.

Despite the upturn, the global HVAC equipment market must overcome a few enduring challenges:

- **Commodity price volatility and inflation:** Fluctuations in the commodity and raw material prices have made industry forecasting and demand management-critical. Unforeseen raw material cost increases are driving the rise in HVAC equipment prices.
- **Global supply chain challenges:** Supply chain risks have provided the impetus to forecast and plan for commercial projects, as a delay in supply of critical parts can also set back the project or lead to unwarranted cost increases.

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- **Raw material scarcity:** Manufacturers are hedging and forecasting at higher levels of demand to preplan for supply chain needs. Scarcity of raw materials will mean longer lead times and delays in implementation of commercial projects. Being proactive and planning ahead for projects will be key to avoiding these major impacts.
- **Labor Shortages:** Pandemic-restricted movement of labor delayed several key commercial installations. The pent-up demand expected in 2022 will be affected by the labor shortage and local restrictions that will still be prevalent in certain regions. Movement of labor can be more efficient with increased vaccination and proper working environments designed to contain infection, which can help to alleviate labor costs in 2022.

Recommendations for Sourcing Managers

As the demand for HVAC equipment bounces back in 2022, procurement teams will play a critical role amid equipment supply chain bottlenecks and long order books resulting from COVID-19-related shutdowns. A lack of critical parts will push the lead times for manufacturing. Sourcing managers will need to decode the long lead items in collaboration with equipment manufacturers, and evaluate a strategy for placing purchase orders well in advance to have vendors mobilize their supply chains. In line with the environmental regulations, there must be regular audits to maximize efficiencies of the current equipment prior to any planning for new equipment.

Services such as cool air are beginning to attract attention as more companies are willing to offload capital and maintenance responsibilities.[73] Market players are also focusing on R&D to develop technologically advanced and differentiated products that comply with regional regulation norms to gain a competitive edge.

Material Handling Equipment

Material handling equipment (MHE) is an integral part of the manufacturing industry. It encompasses a wide variety of equipment, from industrial trucks to lifting equipment to cranes and more. The MHE sector is forecasted to grow at ~7% CAGR over the next five years.[74] Infrastructure initiatives by governments, rapid urbanization in Asian countries such as India and China, the rise of the e-commerce industry and the increased focus on automation are key drivers of this growth. Enterprises recuperating from COVID-19 and reorganizing their operations will also fuel this growth. In the industrial trucks segment, high growth is anticipated due to changing demographics and an aging workforce. The electric forklift market has seen a surge in demand, owing to large online merchants purchasing more Class 2 and 3 equipment. Rapid urbanization, technological advancements and a rise in mining activities will bolster the demand for cranes.

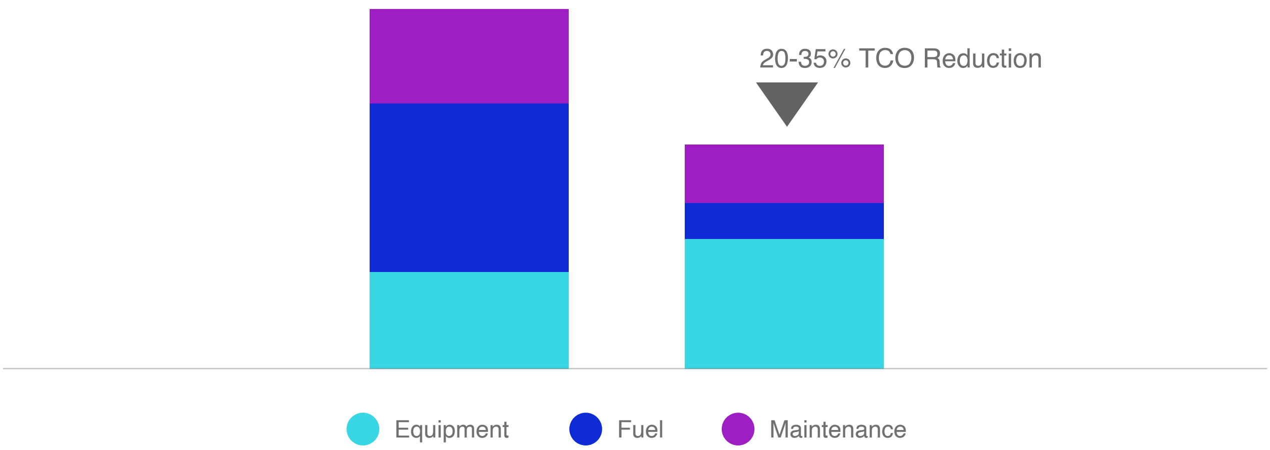
Despite the growth projections, the industry is facing short-term constraints due to high equipment costs and a scarcity of skilled employees. The increasing price of raw materials, including iron and steel, is leading to hikes in the list prices of MHE such as trucks and lifting equipment.

Sourcing teams must analyze their fleet condition and consider price increase mitigation measures, such as extensions of contracts and rapid optimization of rentals compared to leased/purchased fleet. Large sourcing activities can drive significant change management, which will not be easy to navigate along with post-COVID-19 production ramp-up. Lease vs. buy decisions will depend mainly on the yearly budget allocation for MHE purchases. Category managers will need to formulate medium- to long-term plans for transitioning to an efficient fleet.

The MHE market is also evolving rapidly, with a slew of new-age technologies putting a greater emphasis on automation, safety and productivity. Companies should evaluate these new technologies from a long-term perspective, based on the advantages and their clients' needs.

- A major trend in this sector is rising investments in fully automated equipment, which helps reduce repetitive operational tasks. Automation also helps in offsetting equipment operating costs, which can contribute to more than 50% of the lifetime equipment spend.
- The integration of electronic intelligence, such as RFID and IoT, with material handling equipment is projected to integrate material handling equipment with the Smart Factory of the future over the next five years.
- Owing to versatile usage and maintenance demand fuelled by e-commerce and the new-age warehouse, lithium-ion battery-operated equipment is gaining traction, as it reduces TCO by being lightweight, increasing uptime, providing longer battery life, as well as faster and more flexible charging, and eliminating the need for maintenance or costly battery storage areas.
- There is a rising popularity of electric-powered forklift trucks, as they are perfect for indoor use, can load and unload big objects from ground level or docks and do not require fuel storage at their location of operation. Electric forklifts are a viable alternative to liquid-fueled lift trucks since they are more cost-effective, equally powerful, easier to maintain, safer and cleaner to run.

Diesel vs. Electric



Source: GEP

Industry 4.0

The Industry 4.0 market was valued at $70 billion in 2019 and is projected to reach $210 billion by 2026, growing at a CAGR of 17% from 2021 to 2026.[75] APAC accounted for the largest share of the market in 2021, with its growth propelled by economic upturns and the introduction of Smart Factories. Increasing demand for industrial robots in the pharmaceutical and medical device manufacturing sector is the most important factor contributing to the growth of this market.[76]

The COVID-19 pandemic has muted the demand for Industry 4.0 technology in the short term. The slump in demand and supply chain challenges across many industries, including the U.S. automotive industry and the electronics and manufacturing industries in Asia, have caused various automotive companies to downsize their manufacturing activities across regions, rendering the employed automation technologies such as IoT, AI and Blockchain ineffective.

Despite the setback, Industry 4.0 will continue to make headway across newer areas over the medium to long term, with rapid adoption of AI and IoT enhancing the efficiency of the production process in the manufacturing sector. AI and IoT integrated systems allow the optimization of manufacturing processes, send early alerts, contribute to quality control and forecast equipment failure. By gathering precise data, manufacturers can develop innovative AI applications, differentiating themselves from their competition. By 2026, industrial sensors, used to track, monitor and maintain various equipment in a Smart Factory, will become the largest contributor to the size of the Industry 4.0 market. The industrial gears connected with wireless technology, sensors and data processing equipment will help industries optimize the production rate, determine equipment's real-time state, locate possible equipment malfunctioning and organize proximity schedules for servicing and repairing of gears. The rising trend of the remote handling of industrial manufacturing processes is the leading factor in the growing adoption of IoT, which in turn propels the global Industry 4.0 market.[77]

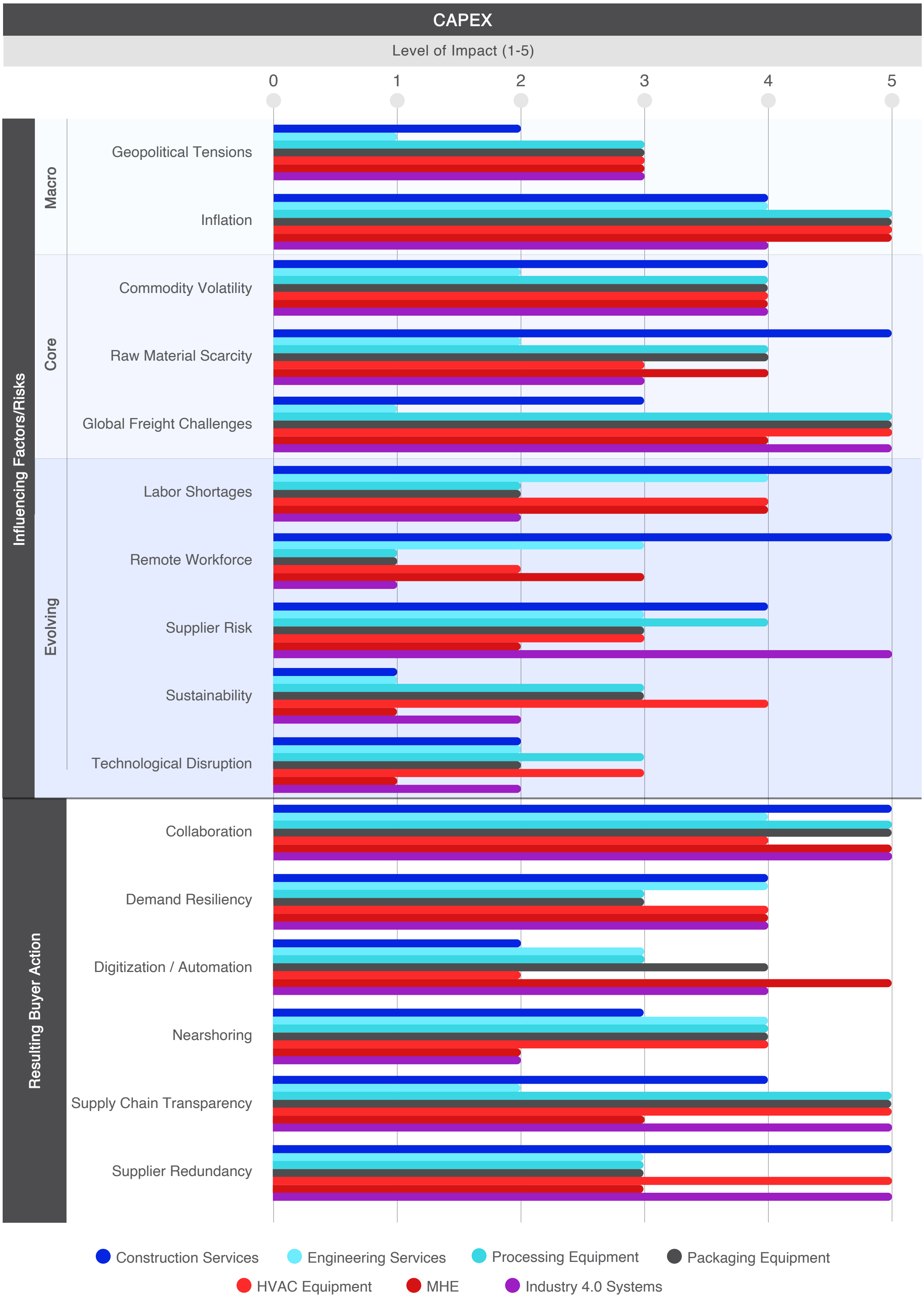
Category managers looking to implement Industry 4.0 technologies should shortlist vendors with proven technologies and a successful implementation track record to begin growing an optimal partner network. Another important consideration is ensuring IT and data security. To gain maximum benefit, companies should invest in supporting their employees through training in Industry 4.0. Begin with pilot projects and incorporate learnings from each project in the next stage.[78]

Sustainability

With growing sensitivity to environmental issues such as strong carbon emissions, construction waste in landfills, water and air pollution, excessive energy use and depleting wildlife and habitats, private organizations and governments have accelerated steps to reduce their environmental impact. Some initiatives include designing sustainable construction projects, increasing the energy efficiency of buildings, using sustainable building materials and setting emission reduction targets.[79]

Green construction is expected to become more mainstream among homebuyers and commercial tenants over the next decade because of its sustainable and eco-friendly features that provide long-term savings. Green construction includes both the technology to lower a building's carbon footprint and building models to reduce the resource use.

Capital equipment manufacturers are increasingly working to develop alternative technologies and energy-efficient solutions to meet customer's sustainability targets. Many regions are strengthening their environmental laws and sourcing managers and consumers are becoming more aware of the importance of sustainability, which is driving manufacturers to innovate. Current trends in going green include human-machine interfacing and the use of solar panels to avoid downtime caused by power outages, as well as reducing dependency on conventional energy.


CAPEX
Level of Impact (1-5)
0
1
2
3
4
5
Influencing Factors/Risks
Macro
Geopolitical Tensions
Inflation
Core
Commodity Volatility
Raw Material Scarcity
Global Freight Challenges
Evolving
Labor Shortages
Remote Workforce
Supplier Risk
Sustainability
Technological Disruption
Resulting Buyer Action
Collaboration
Demand Resiliency
Digitization / Automation
Nearshoring
Supply Chain Transparency
Supplier Redundancy
Construction Services
Engineering Services
Processing Equipment
Packaging Equipment
HVAC Equipment
MHE
Industry 4.0 Systems

ENERGY

After COVID-19 devastated North American and European economies, the recovery experienced in 2021 was a breath of fresh air.

However, the rapid rebound brought unexpected consequences. While energy markets in 2020 dealt with meager demand and surplus supply, 2021 ushered in a surge in demand that outpaced a dwindling supply, exacerbated by extreme weather patterns.

These shortages have reversed the low commodity prices of 2020, causing them to return to — or even exceed — pre-pandemic levels. Overall, price increases are expected to continue in 2022 for electricity as well as oil and gas, but at a slower rate as markets adapt to supply disruptions and build resiliency.

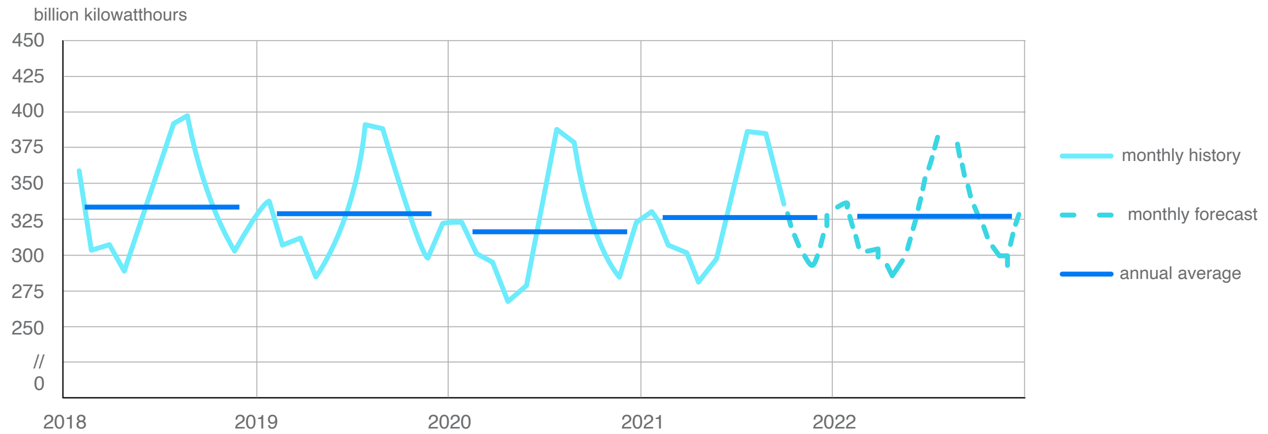
Electricity

Demand and Consumption

Electricity demand in the U.S and Europe in 2021 has gradually recovered since 2020. While this growth is expected to continue in 2022, it likely will not reach 2019 levels.[80]

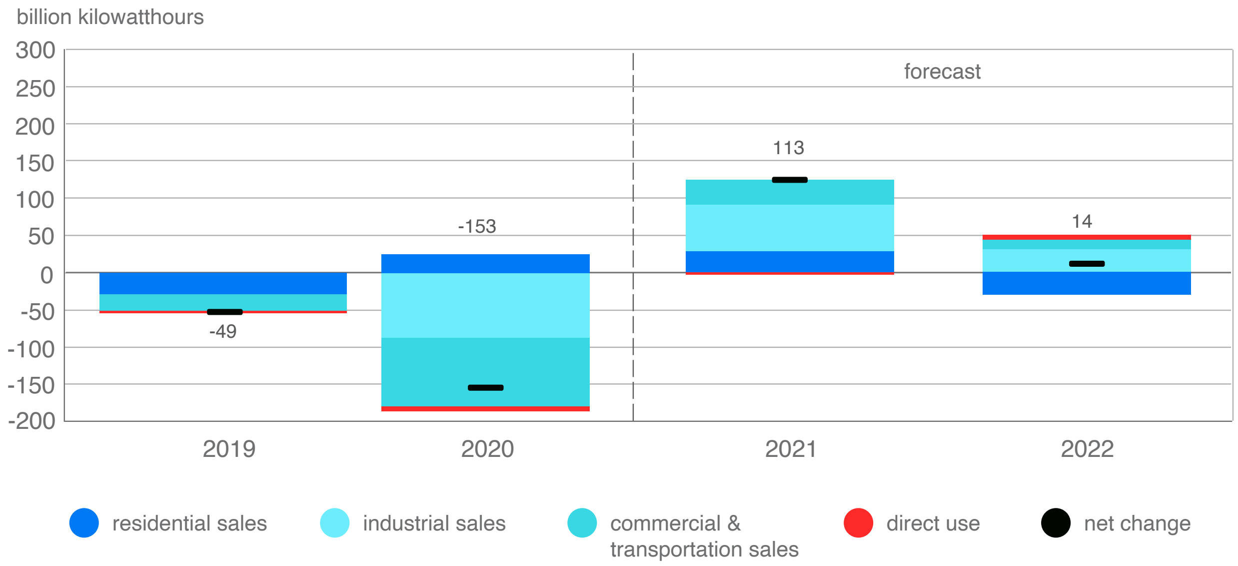
According to the EIA, retail sales of electricity in the U.S. totaled 3,780 million MWh in 2021, a 4% increase from 2020 levels. The success of vaccination programs shifted consumer behavior to pre-COVID habits, causing commercial and industrial electricity consumption to recover.[81] While recent lockdown restrictions have stalled demand recovery, meteorologists are predicting a cold winter in 2022, which will increase both electric heating and lighting usage.[82]

U.S. electricity consumption



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2021

Components of annual change



Source: U.S. Energy Information Administration, Short-Term Energy Outlook, October 2021

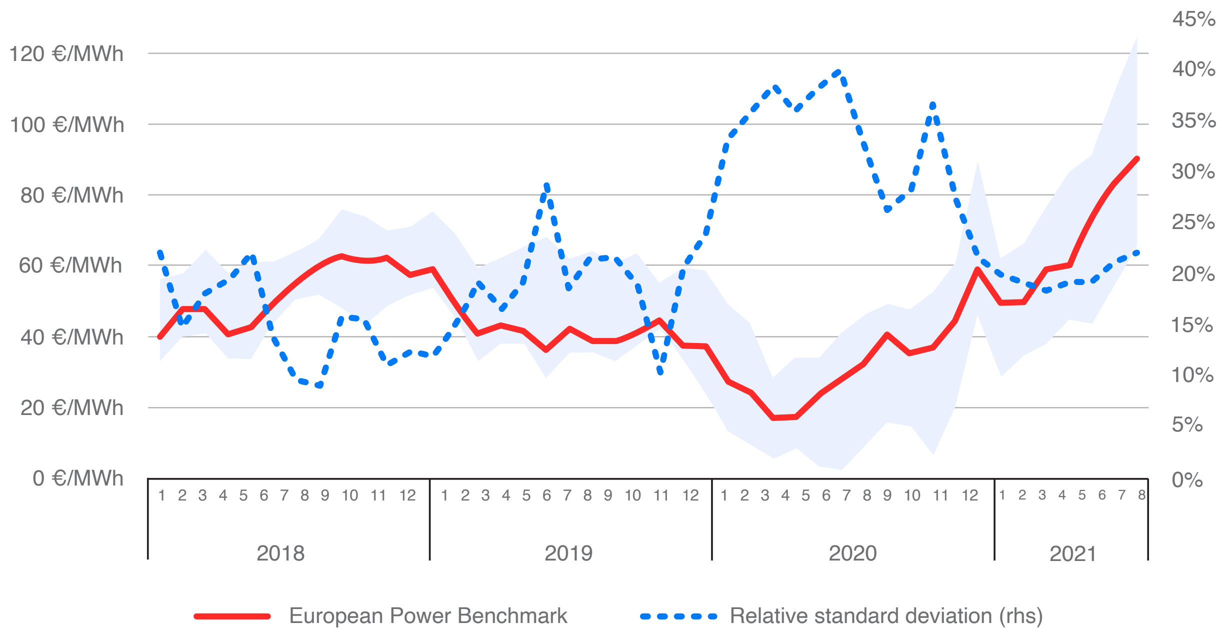
Markets and Pricing

The volatility of electricity prices in 2021 was caused by several factors: the instability of supply and soaring prices of natural gas, the messy bounce back of economic demand post-pandemic and extreme weather patterns that caused drastic fluctuations in consumption.

In deregulated U.S. markets, electricity prices rose 5% from 2020 levels.[83] Prices increased more drastically in Europe, with the Pan-EU average of day-ahead baseload prices reaching 68 €/MWh in Q2 2021, up 158% from the same period in 2020 and 58% higher than Q2 in 2019 pre-pandemic.[84]

With the continuation of these factors expected into 2022, prices are expected to increase in the short term in the U.S. and Europe, with the possibility of a winter supply shortage of natural gas.

The evolution of the lowest and the highest regional wholesale electricity prices in the European day-ahead markets and the relative standard deviation of the regional prices



Source: Platts, European power exchanges. The shaded area delineates the spectrum of prices across European regions.

Supply and Value Chain

While extreme weather events often expose the fragility of the electric grid, the most pressing concern is how governments and utilities can balance clean energy targets with increasing demand. U.S. renewable electricity capacity from wind and solar increased in 2021 by 17 GW and 16 GW, respectively, while hydropower experienced a slight reduction due to extreme drought conditions — especially in California and in the Pacific Northwest, where the majority of U.S. hydropower capacity is located.[85]

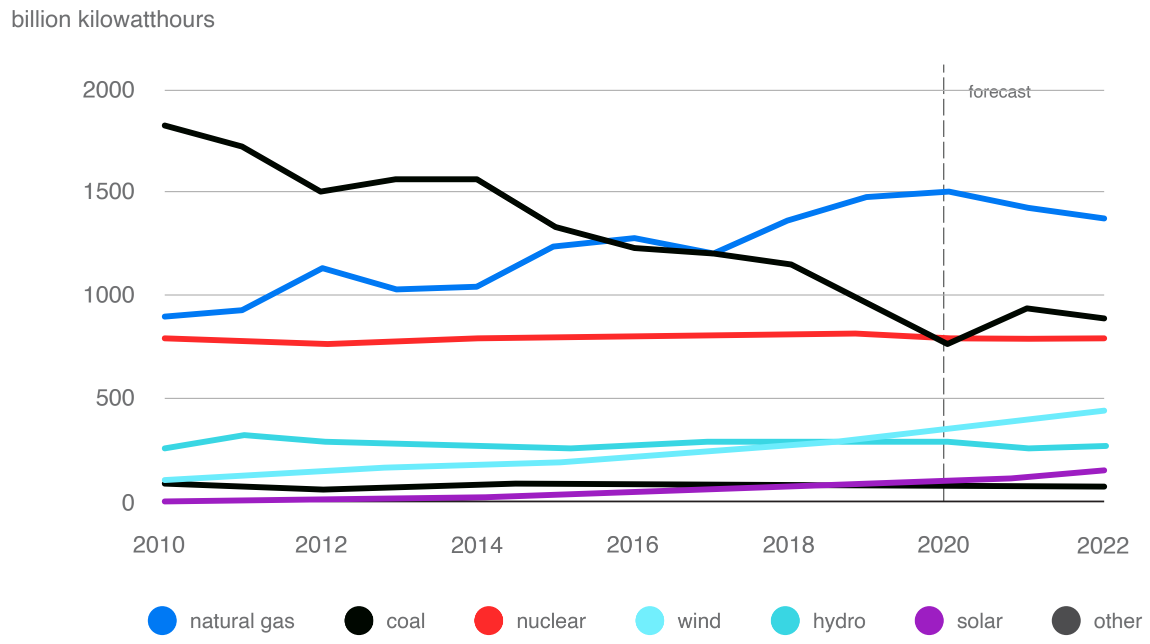
In August 2021, Lake Oroville in California hit a historic low of 35% capacity, causing the Edward Hyatt Power Plant to go offline for the first time since 1967.[86] Hydropower is likely to remain a smaller portion of the renewable energy mix as these weather patterns persist into 2022.

Nevertheless, government mandates, such as Renewable Portfolio Standards, and increasing cost competitiveness will continue to spur solar and wind capacity additions. However, such capacity additions will not be enough to address growing demand in 2022.

Soaring gas prices will increase the attractiveness of coal. While global coal generation shrunk 4% in 2020, it grew by 4.5% in 2021.[87] This trend can be observed in the U.K.'s reignition of West Burton A, a coal-powered plant in the region.[88]

The implications of even a temporary increase in coal-fired electricity herald dangerous consequences for rapidly approaching clean energy targets.

U.S. annual electric power sector generation by source (2010-2022)



Source: "Short Term Energy Outlook," U.S. Energy Information Administration, October 2021

Contracting

Amid a volatile natural gas market, key considerations for contracting electricity in 2022 include reevaluating company risk profiles and managing expectations at the CFO level. Rather than revisiting contracts at a convenient date, it is essential for companies to take a proactive approach to hedging to take advantage of market opportunities and address crucial periods of demand.

Deregulated electric markets allow for a wide variety of procurement strategies and contract structures. Fixed-price, index and blended strategies should be analyzed to identify and maximize any hedging opportunities given market risk. For companies with significant load in deregulated markets, it can also be beneficial to pool contracts with a single retail provider to lock in lower rates for a longer period.

Regulation

In the U.S., strong public support for renewable energy and domestic clean energy manufacturing from the Biden administration will power the growth of renewables into 2022. With $555 billion earmarked for an array of tax credits for the installation of new solar and wind energy systems, the retrofitting of existing infrastructure and the purchase of EVs, President Joe Biden's unveiling of the Build Back Better domestic spending bill has further cemented clean energy electrification as one of the foremost corporate considerations in today's energy economy.[89]

Like the U.S., the European Union has established a long-term vision for clean electrification. Regulation has been favorable to renewable capacity additions, resulting in exponential year-over-year growth. European governments are continuing to manage the fossil fuel reality in the short term, with temporary price caps and consumer subsidies shielding consumers from soaring natural gas prices in the face of supply shortages.[90]

While the EU and most states in the U.S. exclude nuclear power from their "clean energy" standards, the Biden administration sees nuclear as a pivotal bridge to the clean energy future. Nuclear assets are struggling to remain cost competitive, and without subsidies they are likely to face accelerated retirement in 2022.

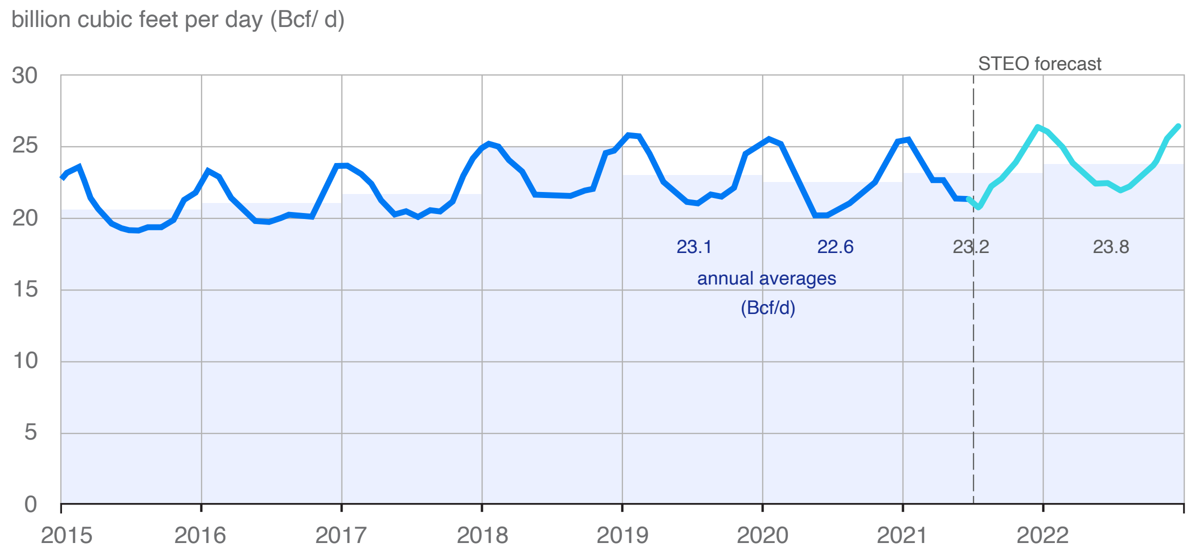
The COP26 summit demonstrated that while there is an international consensus championing the decarbonization of the global energy system, the path toward achieving this goal is anything but straightforward. In the face of this uncertainty, corporate procurement and supply chain functions find themselves poised for strategic impact as the existing regulatory favorability of renewable energy offers opportunities for budget stability, risk mitigation and competitive advantage.

Oil & Gas

Demand and Consumption

Natural gas consumption averaged 22.9 billion cubic feet per day (Bcf/d) in Q1 and Q2 of 2021 and was predicted to reach 23.2 Bcf/d at the end of the year, edging out the 23.1 Bcf/d consumed in 2019.[91] Consumption is expected to increase to 23.8 Bcf/d in 2022 as global economies recover and climate change causes more severe weather. While these trends will spark price increases, demand for natural gas is inelastic and, therefore, unlikely to be negatively impacted by future price spikes.

U.S. monthly industrial natural gas consumption (Jan 2015 - Dec 2022)

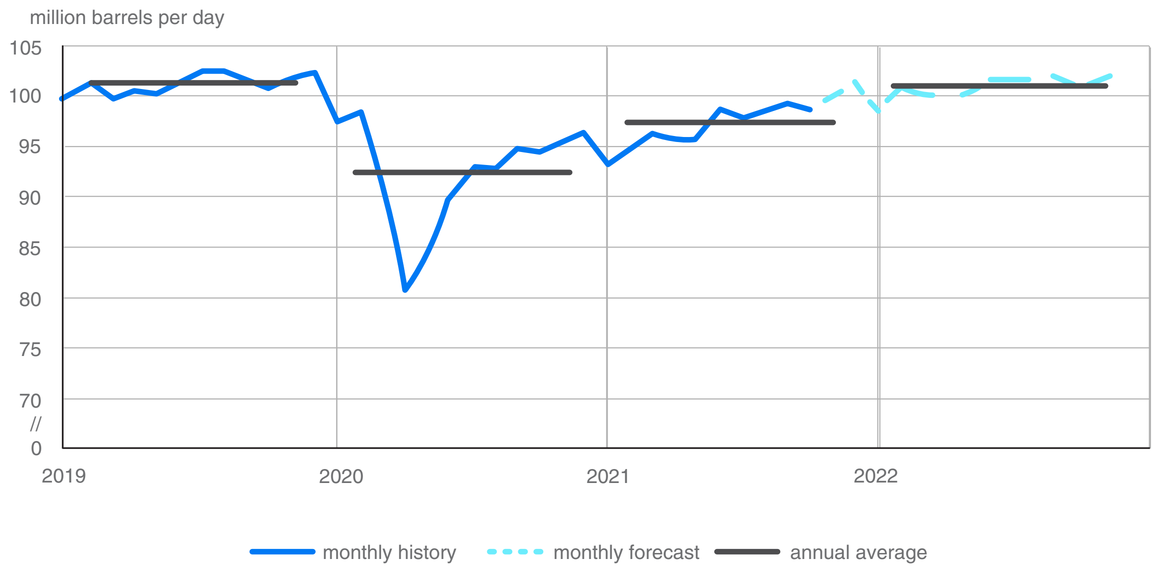


Source: "EIA expects increasing consumption of natural gas by U.S. industry in 2021 and 2022," U.S. Energy Information Administration

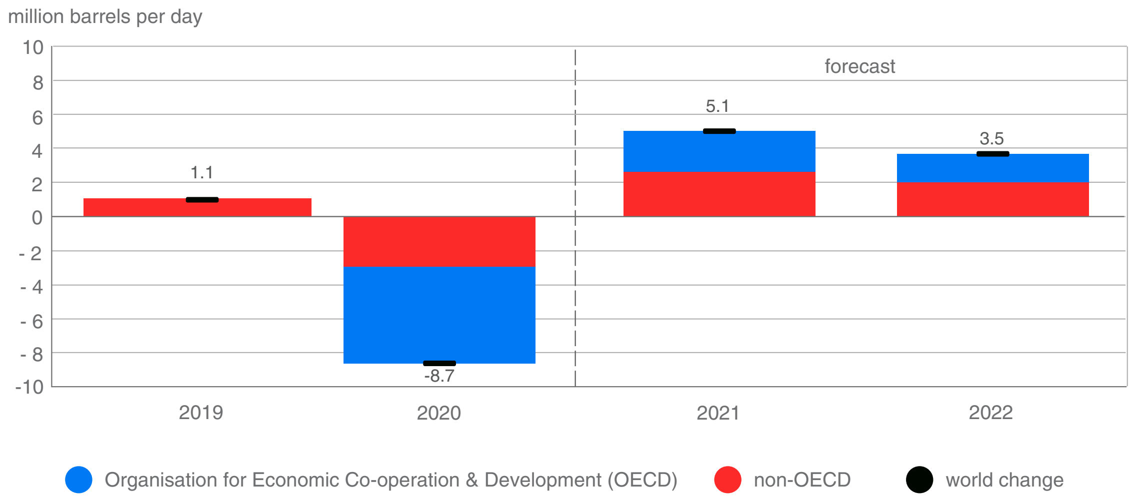
Oil consumption, on the other hand, decreased from 47.79 million barrels per day in 2019 used by the Organisation for Economic Co-operation and Development (OECD) to an estimated 44.35 million in 2021.[92] OECD consumption will rise to 45.72 million barrels per day in 2022, which will still be lower than pre-pandemic levels.

As the Delta variant became more prevalent, demand for oil fluctuated. In the U.S. and Europe, demand increased due to higher summer temperatures and a longer winter, causing increased utilization of HVAC systems. Demand will continue to rise in 2022 as travel resumes and climate change effects intensify, with temperatures becoming more severe in both directions.

World Liquid fuels consumption



Components of annual change



Source: "Short-Term Energy Outlook," U.S. Energy Information Administration

Markets and Pricing

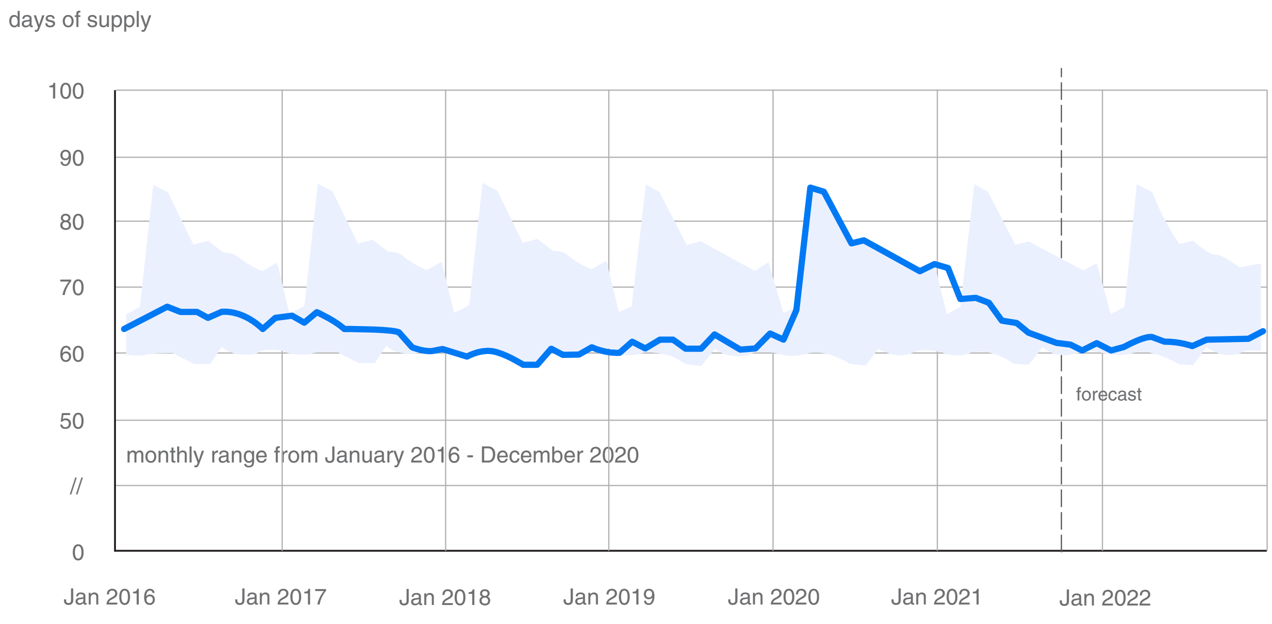
As demand exceeds supply, natural gas prices continue to rise. The commodity sat at $10.46 per thousand cubic feet in 2019 and was predicted to rise to $12.20 by 2021.[93] it has been forecasted to follow this trend to $12.95 in 2022.

Yet, because natural gas comprises 44% of industrial primary energy usage and has few viable substitutes, such price shocks are unlikely to dampen in 2022.[94]

Like gas, oil prices have skyrocketed because of low supply. Brent Crude Oil prices are expected to average around $70 per barrel in the first quarter of 2022[95] while WTI Crude Oil prices are expected to be around $66.4. This upward trend in barrel prices explains the gasoline price hike in the U.S., where price per gallon has increased by a dollar since 2020.[96] Shortages driving up oil prices in Europe are also being realized, evident in the long wait times consumers are being subjected to at the pump.

Natural phenomena experienced in 2021 such as unusually freezing temperatures in Texas, decelerated wind speeds in Europe and Hurricane Ida in the Gulf of Mexico have limited commodity production. U.S. oil rigs in operation are numbered just upwards of 500.[97] OPEC and OPEC-aligned nations limited their oil production earlier in 2021 and refused to adjust for steep demand, tightening supply. Similarly, Russia's natural gas production levels are insufficient to meet global need, taking a toll on the EU with more than 40% of its natural gas coming from Russia.[98]

Organisation for Economic Co-operation & Development (OECD) commercial inventories of crude oil and other liquids



Source: U.S. Energy Information Administration

Contracting

Amid the spread of various COVID-19 strains, the strengthening of the economy and subsequent commodity demand in the U.S. and Europe, the natural gas market — and to some degree the oil market — is volatile. To mitigate volatility in deregulated European markets, buyers can strategically hedge commodities by layering multiple purchase points. Going into spring, buyers should revisit the market and hedge an additional portion of gas to distribute risk and smooth out market volatility.

In the marketplace today, GEP is supporting clients through risk mitigation strategies across various levels of risk tolerance. GEP recently guided a global manufacturing firm through the implementation of a dynamic stop loss hedge to minimize exposure to risk. Because the company is more risk averse, it incorporated a low risk level and continues to follow the energy market down to favorable prices, hedging once the market line intersects the stop-loss line. This method facilitates consistent market observation, ensuring valuable opportunities are seized as soon as they occur.

The most impactful lever that companies can pull to secure low market prices is proactivity. Companies should partner with procurement experts who will actively monitor the market over time and buy commodities during price drops. Doing so will give firms more control over their purchases and prevent them from becoming price takers.

Regulation

U.S. policies are contributing to commodity price increases and subsequent inflation. In January 2021, Biden instituted a drilling ban for oil and gas on all public land and water. This executive order invalidated the Keystone XL pipeline permit, stopping its construction. Judges ruled much of the drilling will resume either, meaning supply is expected to build up once again in 2022 and push prices back down.

On the European front, natural gas fields in the Netherlands and Denmark are being shut down to adopt more renewable energy sources. Storage levels are 15% lower than this time in previous years.[99] These supply cuts led to shipments of liquefied natural gas from the U.S. — raising national prices — and prompted Russia to step in and capitalize on the gaps in production. With high gas prices as its basis, the Kremlin is attempting to expedite the approval of Nord Stream 2, a pipeline that would produce twice as much natural gas currently delivered to Germany.

The U.S. and some European nations have expressed concerns over the pipeline's approval, stating it would place Russia in a position of power that could pose a threat to the political landscape. However, the closures of Dutch natural gas fields and rising prices may leave Europeans without much choice in the year to come.

Sustainability

Greenhouse gas emissions have always been at the forefront of talks regarding climate change. 113 countries have set objectives that, when combined, will reduce emissions by 12% in 2030.[100]

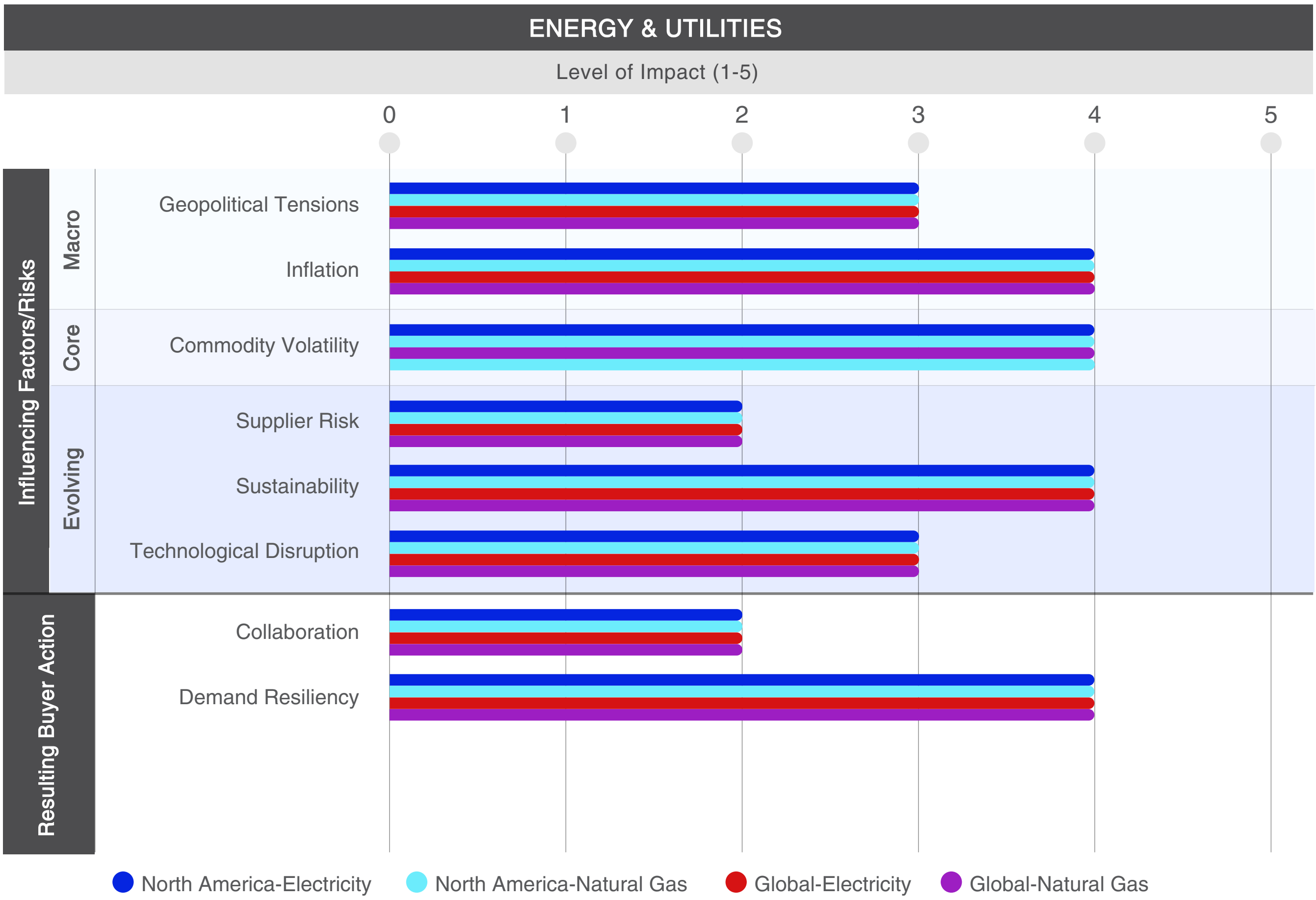
However, considering all 191 countries' Nationally Determined Contributions (NDCs), the world is, in fact, currently on track for a 16% uptick in emissions by 2030, which translates to global warming of 2.7°C. This means many countries will need to revise their NDCs and commit to more drastic measures to successfully lower emissions. Further, coal and gas usage will need to be significantly reduced to prevent a rise in global temperature of 1.5 degrees Celsius, the goal set by the Paris Agreement.

A high-priced natural gas market combined with a favorable global regulatory landscape will solidify clean electricity as a primary contributor to the ambitious 2022 emissions reduction targets. Looking forward, it will be especially important to develop renewable energy infrastructure so that quick-fix solutions to natural gas volatility — such as returning to coal-fired electricity — can be avoided in the long term.

What to Expect This Year

Overall, energy demand will continue to approach or exceed pre-pandemic levels in 2022. Extreme weather patterns must no longer be viewed as a temporary fluctuation and taken into consideration when strategically managing the global energy supply chain. Until supply stabilizes, the volatility of natural gas will continue to have widespread reverberations in the electricity and coal markets, affecting pricing and capacity for the entire energy sector. Lastly, encouraged by government-mandated sustainability objectives, renewable energy capacity additions will continue to comprise a growing proportion of the overall energy mix.

However, whether such renewable capacity additions can resolve current demand spikes remains to be seen. Declining fossil fuel investments combined with stagnating investments in renewables have contributed to an exacerbated mismatch in supply and demand. 2021 demonstrated that energy markets are not free from the sway of political developments, with Putin's announcement of transferring natural gas supply to European stores exerting strong downward pressure on prices. The potential impact of similar declarations, as well as interactions between primary government players in the global energy economy, will be crucial to consider in 2022.


ENERGY & UTILITIES
Level of Impact (1-5)
0
1
2
3
4
5
Influencing Factors/Risks
Macro
Geopolitical Tensions
Inflation
Core
Commodity Volatility
Evolving
Supplier Risk
Sustainability
Technological Disruption
Resulting Buyer Action
Collaboration
Demand Resiliency
North America-Electricity
North America-Natural Gas
Global-Electricity
Global-Natural Gas

TRAVEL & FLEET MANAGEMENT

The spread of the COVID-19 Omicron variant across the world could further delay the travel industry's recovery, just as international trips were on the upswing after a 20-month slump.

Omicron comes on the heels of the Delta variant that pushed back the anticipated return of in-person work and corporate travel.

Countries around the world rushed to issue travel restrictions and bans on several countries in December 2021. The U.K., U.S., Japan, Israel and other nations have implemented new travel restrictions. Japan entirely shut its borders to foreigners after beginning to ease restrictions. China's world-leading recovery cratered during the Delta variant amid its own wave of domestic travel restrictions and zero-COVID policies.

It may be too early to measure the Omicron variant's impact on the already stop-and-start nature of the global travel industry. However, it's safe to bet on several hits the hotel, air and greater travel industry will take from its initial emergence.

Sustainability

With travel still recovering from the impact of the pandemic, corporate travel managers must balance multiple priorities, including ensuring the safety of travelers, readying the organization for travel in the new normal, resetting traveler expectations, ensuring supply continuity and managing supplier performance. Decision-makers are looking for guidance on how to set budgets for 2022, with many uncertainties including supply constraints, varying regional recovery, increased price pressure and lack of full visibility on new travel patterns.

Cost pressures and increased focus on sustainability continue to challenge the return to pre-COVID demand levels. Many organizations are re-evaluating their travel policy and refining demand guidance to sustain the savings made from the shift to a virtual work model.

Eco-conscious customers and employees have accelerated sustainability adoption in corporate policy. While in the past, most buyers focused on carbon offset credits, there is now an increased focus on sustainably reducing the carbon footprint directly through lower emissions. Travel managers have recognized the need to positively influence traveller behavior as the key to driving sustainability in this category. Some strategies for including sustainability in the program are as follows:

- Encouraging use of alternatives to air travel
- Booking economy class wherever possible
- Optimizing meeting agendas to consolidate or reduce trips
- Innovating with solutions like providing carbon budgets for teams, functions and individuals

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Suppliers have also continued their push toward sustainability. Many major carriers have demonstrated their continued commitment to Sustainable Aviation Fuels (SAFs). United Airlines announced its investment in Alder Fuels committing to 1.5 billion gallons of SAF over 20 years, the largest publicly announced SAF agreement in aviation history. Delta announced an estimated $1B deal with Aemetis for 250 million gallons of SAF over the next decade.[101]

Through the Mission Possible Partnership program, many industry leaders in this segment are working hard to transition the industry to net zero emissions by 2050. Accelerating supply and use of SAF to 5-10% of the overall fuel usage by 2030 remains a key goal for the group.[102]

Air Travel

Air travel continues to be one of the slowest recovering segments. Air carriers across the globe continue to face significant financial pressures compounded by increased debt on their balance sheets (to sustain the loss of revenue during COVID), low passenger demand and constantly changing regulations across countries limiting travel certainties. IATA expects 2022 global demand (measured in RPK) to be ~60% of pre-Covid levels and net loss to be ~$12B (reduced from $52B in 2021)[103]

Recovery till now has largely been limited to domestic and leisure travel, with long-haul business travel return levels much lower than the former. This means that the demand recovery hasn't by and large translated into profitable revenues, as the more lucrative segments (long-haul business class) are still lagging in their recovery compared to the other non-high income generating segments.

With most suppliers struggling, consolidation (supplier and footprint) and government support look like natural next steps. In LATAM, Gol announced its plans to acquire Map Transportes Aéreos thereby strengthening its footprint across Brazil.[104] In Europe, Italy's new state-backed airline Italia Trasporto Aereo SpA bought the Alitalia name.[105] In APAC, Tata Group (which already owns Vistara — a JV with Singapore Airlines and has a stake in Air Asia) acquired Air India from the Indian government and may plan to optimize its overall portfolio and offerings.

As recovery continues, ticket prices are expected to increase in the mid-term with airlines trying to to balance operating cost pressures and increased debt burden. In addition to fare increases, airlines are continuing to look for other areas to optimize their costs, including revisiting capacity across routes, stopping meal service, etc. Even distribution/GDS costs continue to be an area of focus. Case in point: after difficult contract negotiations, discussions between Emirates and Sabre finally ended with a decision for Emirates to keep its content on the platform.

North America

With the recent announcement to reopen international travel for fully vaccinated travellers, there is optimism around increased travel activity in the U.S. This is a significant boost to airlines, as trans-Atlantic business class travel remains one of the most important business revenue generators.

Fast domestic recovery (compared to other regions) and the anticipated increase in regional and trans-Atlantic traffic are promising signs for the suppliers who are looking at 2022 as an important year in their effort to get back to some sort of normalcy. Based on IATA analysis, North America is the only region that is expected to have net profits in 2022 (currently estimated at $9B).[106]

Suppliers are ramping up their schedules to ensure availability. United Airlines plans to beef up its US - London network from next spring, including launching a previously announced new route from Boston Logan (BOS) to London Heathrow. They are also adding five new points to their route map, as well as opening flights to five more destinations, making a play for leisure traffic from the U.S. to Europe. Delta Air Lines has also strengthened its Boston hub to account for a potential increase in demand by adding about 3,800 more seats.[107]

What to Expect This Year

As Omicron cases rise in different parts of the world, many countries have adopted a cautious approach to limit the spread of virus within their borders. The policy of limiting air travel from/to certain regions, which has been effective during the emergence of previous variants, is likely to continue. This can significantly impact international travel recovery, further increasing the pressure on carriers this year. Domestic travel, however, is expected to see limited impact for now and, as such, should be a focus area for most suppliers to drive revenues.

Organizations should focus on continuously reviewing changes in their program, including footprint changes, how different routes vary in their return levels, etc. They must work closely with strategic suppliers to optimize key routes wherever possible. Reassessing the full program should only be done once there is full visibility on how the steady-state base of the new program settles. Along with ensuring the continuation of existing agreements, it is important to work with travellers to build flexibility around scheduling to manage cancellations.

Hotels

With the rollout of vaccination programs and relaxing of health and travel restrictions across the globe, the hotel industry experienced some progress over the past year, although there is still a long path to fully recover to pre-pandemic levels.

Signs of recovery have largely been underpinned by leisure travel rather than corporate. With news of travel reopening in many countries, there is hope that business travel resumption will help increase occupancy rates. When considering the uncertainty of the number of business trips that employees are likely to make over the near term, the overall market view, both from buyers and hotel suppliers, is to seek certainty.

A survey conducted by BTN showed more than half of the buyers planned to roll over portions of their hotel program portfolios, and also negotiate key partnerships. One in five buyers planned to roll over their entire portfolios, while nearly one in four planned to conduct a full RFP for the 2022 season.[108]

At the same time, supplier operations have been hit by a shortage of resources, with many employees moving to different sectors to seek job security. As hotels reopened, they struggled to recruit replacement staff. Many are now having to increase pay and rewards, by as much as 15-20% in some countries, to retain and attract staff, which ultimately will feed through hotel costs and pass on to customers.

A key trend that has emerged through the pandemic is the increased use of technology. Safety-related aspects have enhanced the use of mobile keys and contactless check-in and check-out processes as hotels continue to implement strict cleaning programs across their premises with a special focus on high-touch areas both inside the room (door handles, switches, etc.) and outside (lobby reception). Other advancements can be seen in digital payments, online check-in process, etc.

Volatility and variation at a country level are making it difficult for buyers to produce an outlook for hotel pricing with any real degree of certainty. In addition, hotel pricing tends to be more volatile than other travel costs, as hotels are unable to add or remove inventory in response to changes in demand patterns.

North America

After suffering the most severe declines in performance during 2020, hotels located in the North American markets were expected to rebound, reaching an annual occupancy level of 54%[109] by the end of 2021. With the signs of recovery continuing, the market is more likely to see increases in room rates than decreases. The Oct 2021 Consumer Price Index showed a 26% YOY rise in hotel prices in the U.S.[110] For 2022, some projections expect negotiated rates to increase by 10% to 15%[111] led by steady demand recovery, restored hotel services and sellers addressing financial challenges. Rather than actively testing the market, many are taking a conservative approach to secure room rates at current levels, or even at rates that may have been agreed in 2019.

What to Expect This Year

With rate increases projected in many parts of the world, negotiation will likely play an increasingly vital role. High BARs present uncertainty around leveraging dynamic rates alone as the go-to-strategy, so it is important to have dual-rate strategies with your hotel partners (with the fixed-rate acting as the cap) or include rate caps to avoid paying higher rates. It is also important to continue strategically consolidating the program and drive maximum value to key hotels in order to secure more buying power.

Travel Management

With Amex GBT announcing its acquisition of Egencia, CWT announcing debt restructuring to emerge out of COVID and Trip Actions acquiring Reed & Mackay, the supply landscape is consolidating and repositioning players. Like most other suppliers, travel management companies (TMCs) continue to feel the pressure of the pandemic. TMCs traditionally organize their cash flows to survive during the down season and depend on customers to make new purchases every day. During the pandemic, TMCs took on the additional role of advising travelers of any restrictions driven by COVID, including documentation required to travel between countries i.e., evidence of being vaccinated.

With TMCs evolving as a “duty of care” agent, corporates can seek their advice on any country-specific travel restrictions or health and safety-related changes that can impact specific travelers. Globally, TMCs are providing emergency out-of-hours service whereby the TMC manages missed flight amendments and repatriation in extreme circumstances.

As international travel opens in many regions, clients expect to see increased travel activities. This requires TMCs to ensure that there are sufficient travel agents on the ground (with many furloughed due to low travel activity) who are trained and up to speed. Ensuring the right staffing levels and training will be one of the key focus areas for TMCs in 2022.

An increasing share of millennials and Gen Z in the workforce has accelerated the adoption of technology, and the TMC space is a perfect example. TMCs are using technology to optimize self-service and user experience, with many using artificial intelligence and virtual reality to help discover travelers' preferences and personalize services.

Integration with assistants like Siri, Cortana, and Google Now is leading to real-time updates in itineraries and recommendations of services. Trip Actions, leveraging its acquisition of Reed & Mackay, recently introduced a Meetings & Events Solution aimed at offering enhanced solutions for varying meeting requirements, ranging from small internal meetings to complex meeting types.[112]

What to Expect This Year

M&A and advanced analytical capabilities will continue to be the driving themes across 2022. TMCs are also continuing to develop analytics capabilities and solutions to offer additional value-adds to their clients. In addition to the usual program metrics, data feed integration from non-TMC sources and reporting on sustainability are expected to be key themes from a solutions perspective. As travel resumes, it is important to closely collaborate with TMCs and ensure that they have sufficient agents/advisors to support the return to travel. Clients are advised to closely monitor performance levels and implement corrective measures wherever traveler satisfaction scores are down. In addition, collaboration with TMCs to understand recovery patterns and new-normal program behaviors across different markets of the organization will be an important area to focus on in 2022.

Meetings and Events

The pandemic has accelerated a decade of behavioral change into a couple of years. Less than 20 months ago, companies were struggling to persuade workers to adopt new digital ways of working. Most meetings occurred in person or over the phone, and no one hesitated to jump on a plane to attend a face-to-face in another state or country.

The pandemic has forced workers to suddenly shift much of what normally would have been done in-person to online. In the process, people realized virtual tools often work just fine, sometimes even better. Corporations have recognized the significant savings made due to the pressure this pandemic has exerted onto the meetings category. C-suite travel ban savings alone have made a sizeable contribution. Some of our clients have realized a 15%-20% permanent reduction in meetings and travel-related spending through the adoption of virtual means and a significant reduction in the number of attendees.

According to the GBTA study, 76%[113] of respondents feel in-person meetings are typically "somewhat more effective" or "much more effective" than virtual meetings, as compared to 96% prior to the pandemic. While in-person events do still have an upper hand, this number is much lower since the pandemic.

Forecast and Insights

The global uncertainty is creating a vicious circle for meetings professionals and their supplier partners. Corporate meetings professionals are waiting to return to work, in a more traditional sense, to begin in earnest on their meetings. However, responsibilities have been diminished and skills sets have drastically shifted. Hospitality partners are attempting to understand when those meetings professionals will return to staff up and support meetings accordingly and what will this look like.

In the interim, furloughs have created a barrier to proceeding with plans. The ending of these has driven skilled planners out of the industry. Cvent hub scoped for 200,000 attendees per annum with 40 resources to manage speakers alone.[114] This is a key example of how skills have shifted, and the focus on applying a different skillset to a meeting is significant.

In addition to widely varying and/or unknown timelines for lifting shelter-in-place orders within and outside the U.S., uncertainty about guidelines for group meetings is creating significant challenges for meetings professionals who are planning Q1 and Q2 meetings and events.

For example:

- Will the six-foot distancing guidelines remain?
- How long should a hotel room or breakout room remain empty before re-use?
- When will hotel staffs return and in what numbers?

This information will greatly impact a planner's ability to confidently orchestrate a meeting.

Meeting professionals are advised to proactively seek to understand how many of their qualifiers or colleagues are willing to attend an upcoming event prior to opening registration or sending similar event-related communications. This will not only aid in planning meetings to suit the likely attendance but will demonstrate greater empathy and understanding for those stakeholders and their individual needs and comfort or confidence levels.

GEP has deep category knowledge and experience that can be leveraged to engage tech companies and TMCs who facilitate venue sourcing and virtual webinars. A hybrid strategy is the trend for 2022, and partnering with a consultancy to support these interactions will be of significant value.

What to Expect This Year

- Q421 – In-person meetings have shifted to virtual - Q122 and Q222 – Forecasted format of meetings are likely to be hybrid
- In the last 2 years, tech platforms were nice to have – now they are saving a live environment - Security teams are overtasked in virtual meeting solutions
- There is now less focus on savings and more focus on the attendee journey and engagement, data captured, engagement time, speaking time, camera on and ROI
- Significant reduction of environmental emissions - Hybrid and virtual meetings are a strategy as part of lowering global emissions

- Meeting planners and EAs roles have now shifted to all employees – Everyone is a meeting planner and blundering through the process - Playbooks are needed on how to plan a meeting on a specific platform
- SMMP is not as significant – Digitization is the agenda - Small regional meetings than international events - Demand is still low and predicted to improve at only 25% in 2022.[115]

Recognizing that there will be varying comfort levels with attending in-person events in the coming months, there is a need for planners to host hybrid events to accommodate both those willing to come to the event and those who would prefer a virtual version. Hotel partners can assist with relationships with in-house AV companies, as some are establishing partnerships to facilitate hybrid meetings. To balance out budgets and drive value in different areas, increased AV spends are considered as part of contracted minimums if lower attendance means lower F&B and room night spending.

To help keep those who do convene in-person safe, each attendee will have to commit to abiding by certain protocols. They will need to agree to and participate in temperature checks and similar screenings as recommended by health control and prevention bodies and agree not to attend should they present COVID-19 symptoms. Meeting professionals should be prepared to accommodate those who can't attend an event due to concerns about their health. Communication about this needs to begin in advance of an event with registrants and be repeated onsite with signage. Like retail stores, that signage needs to instruct on how to distance and follow other protocols.

Meeting technologies facilitate more human connectivity between physical and virtual participants. The pandemic taught us that collaborating remotely with colleagues, clients, and others does not come naturally. It takes continuous effort and requires us to constantly interact during countless virtual calls. It's hard to find a solution that makes remote meetings as smooth as a face-to-face meeting.

There will always be a need for face-to-face interaction, but establishing the right balance between physical contact and virtual collaboration is important. If corporations can achieve this blend, supported by the right technologies, and help staff learn the skills needed, they will be fit for the future and ready to deal with the challenges of 2022.

The current global environmental pressures on corporations, coupled with the new virtual workplace, will have a defining impact on the way employees, meeting planners and suppliers deliver and experience the new meetings industry. GEP advises their clients to involve seasoned SMEs who can provide insights and strategies to support this significantly impacted vertical, which is transitioning through a high volume of change and reorganization.

Rental Car

While the early months of 2021 saw a significant collapse in demand and car rental fleet selloffs, the run up to 2022 was marked by significant increases in average daily rental charges and long queues of frustrated customers unable to rent a vehicle due to staffing and vehicle supply chain issues driven by a global semiconductor shortage.

Despite the pandemic, the short-term impact on the car rental industry has taken different forms across regions. The severity of the virus' impact on the business and the subsequent demand recovery have been driven by factors such as timely national lockdowns, mask mandates and vaccine adoption rates. Nonetheless, the latest surge in demand for travel is led by leisure travel followed by slowly recovering business travel.

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While all suppliers have had major challenges to overcome in this sector in the last 2 years, Hertz stands out with its declaration of bankruptcy in 2020 and the subsequent order of 100,000 Teslas in H2 of 2021. In 2020, Hertz leveraged the boom in the used car market and sold nearly one-third of its fleet. Benefiting from the increase in daily rentals due to high demand and an infusion of capital through new investors, Hertz ordered 100,000 Teslas, propelling the car rental industry into the electric vehicle era. This news has had a significant positive impact on the share price for both Hertz and Tesla. Additionally, the order size potentially makes it difficult for competitors to imitate Hertz in the near term.

North America

In order to preserve cash flow when the pandemic hit, the industry's big three — Avis, Hertz and Enterprise — ended up slashing new vehicle orders. Hertz and Avis reduced their fleet sizes by 200,000-250,000 vehicles, respectively. The negative outlook has been furthered by the lack of governmental funding covering the Car Rental segment as part of the $1.9 trillion American Rescue Plan.[116]

However, vaccine rollout and ongoing governmental helicopter-style individual stimulus have triggered a significant market recovery. The spike in demand, mixed with significant vehicle fleet shortage, resulted in an average daily price increase of up to 58% in the U.S.[117]

Nonetheless, the industry-wide situation illustrates that the post-pandemic recovery, while strong, may not be entirely smooth. The original forecasts that new car supply volume would correct itself by the second quarter of 2022 should now be corrected. Some experts predict that true normalcy won't happen until 2025. The major car rental providers will be lucky in 2022 with anything over 25% of a normal year.[118]

What to Expect This Year

Despite the challenges brought on by the pandemic, the US car rental market is expected to return to pre-pandemic levels in 2022-23. However, the ongoing labor and fleet shortage will lead to customer prioritization based on rental period length and time of reservation, resulting in rental booking cancellations or creation of new price points based on individual rental parameters.

Given the latest global market developments, buyers should focus on implementing service level agreements with their primary providers to ensure vehicle availability for their business travellers. However, even SLAs may not provide complete protection, as vehicle prioritization often is decided at the local branch level. Travel managers should urge travellers to book well in advance and be flexible with regard to travel dates and pick-up locations. We also suggest extending any existing contracts that are about to expire to ensure price stability and hedge against unfavorable market conditions. Alternatively, travel managers should focus their negotiations primarily on their top destinations and provide revised travel forecasts due to the new remote working arrangements to ensure fleet availability and better negotiation leverage.

From a regional perspective, one of the major factors that will turbocharge car rental market growth in APAC and particularly in China is the increasing reach of car rental operators. Changing governmental regulation will also contribute to car rental growth, with the Chinese government trying to curb a rapid increase in private vehicle ownership to reduce pollution, traffic congestion and parking restrictions.

Vehicle Fleet

The pandemic has affected many areas of the fleet industry, including fleet management companies (FMCs), original equipment manufacturers (OEMs), dealerships, transportation and logistics, service providers and others. It has greatly impacted suppliers' ability to source, lease and manage vehicles across different markets.

The global fleet industry has been recovering gradually since a sharp decline in 2020. With economic activities reviving, companies around the globe are acclimating to the new normal. The demand for commercial fleet revived in 2021, and it is expected to grow further in 2022.

However, flat to negative growth in global vehicle production YOY for 2022 due to uncertainty in the semiconductor supply chain might slow the industry's recovery. Ongoing supply chain issues combined with auto-parts (i.e microchip) shortage are preventing the industry from returning to pre-pandemic levels.

In addition to production uncertainty, supplier consolidation continues to be an ongoing trend. With the latest news of ALD acquiring LeasePlan, the combined entity is expected to be a leading global player in mobility with a total combined fleet of around 3.5 million vehicles. This acquisition further consolidates the global/regional supply base, which will result in limited choices for corporate customers.

In the post-pandemic era, companies will be looking for more flexible contracts, innovative solutions, cheaper personal mobility modes, private and short-term leases, and less expensive models to stay afloat with working capital management. A majority of companies will shift to a hybrid model of working from home as well as offices for their employees. Given this hybrid working model and vehicle supply disruption, corporates will be pushing for modification in their existing leasing contract clauses in term of annual miles driven and contract duration, which will influence the total cost of ownership.

North America

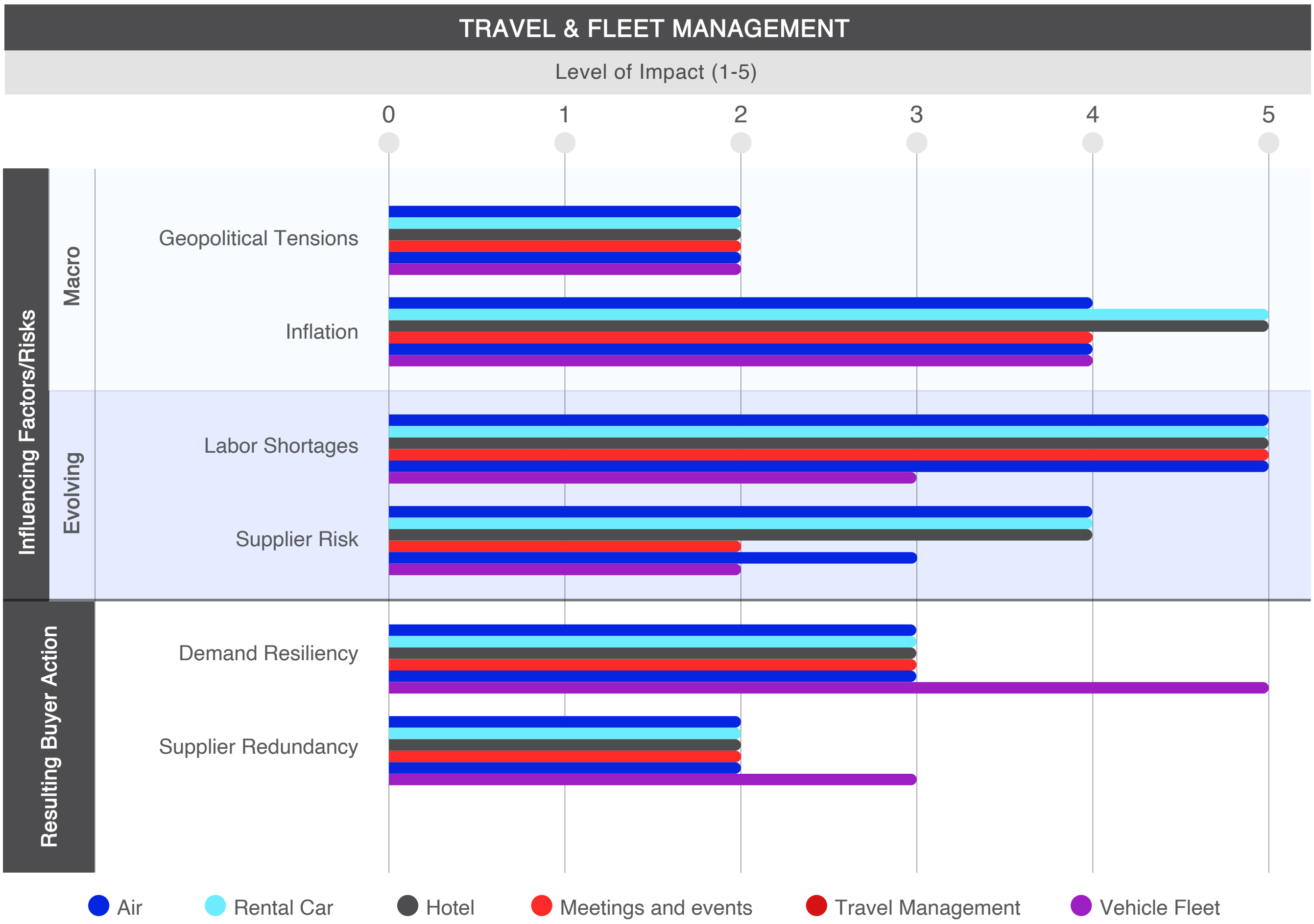
The fleet management market of North America was valued at $2.2 billion in 2020 and is expected to reach $6.72 billion by 2026, at a CAGR of 20%[119] during the forecast period of 2021-2026. The global fleet market is expected to grow at a CAGR of 10.4% from 2021 – 2031.[120] Major factors that are driving growth are the increasing adoption of wireless technology, clients' appetite to spend more on fleet management solutions to optimize operating expenses in the long run and the rise in international trades.

COVID-19 has had significant economic impact on financial and industrial sectors, including manufacturing, energy, transportation and logistics, oil and gas and aviation. This sudden impact has forced a lot of companies to rethink their fleet expenditure and find ways to optimize to get cost savings.

North America will emerge as the largest market for fleet management owing to the strong presence of service providers in the region. Factors contributing to this include rising demand from various industrial verticals post COVID-19 impact and increasing demand for full-service leasing. Continuous innovation in big-data analytics, especially in the U.S., is resulting in enhanced choice and cost-saving solutions for fleet management.

What to Expect This Year

Going forward, fleet managers will continue to focus on operational efficiency, technology advancement, driver safety and sustainability. There will be emphasis on exploring new revenue streams such as mobility-as-a-service (i.e shared mobility services, car sharing apps) and fleet electrification, enabling fleet operators to switch to electric vehicles to reduce costs, cut emissions, and reduce their carbon footprint. The U.S. government, as part of a large infrastructure investment bill, is planning to invest $15 billion in the construction of a national network of 500,000 EV charging stations by 2030.



PROFESSIONAL SERVICES

Consulting Services

The global consulting market has grown tremendously over the last decade, to approximately $250 billion. While the industry experienced a 6.3% decrease in 2020 due to reduced downstream demand,[121] industry revenue was expected to grow by 8.6% in 2021 as the economy gradually recovers from the pandemic.[122]

Companies worldwide are making strategic changes in their business models, with digitization, rebranding and investing in innovation emerging as key priorities. They are increasingly partnering with consulting firms for leveraging customized solutions across a wide spectrum of service offerings, albeit at reasonable costs. This will open doors for enhanced collaboration with freelance/boutique firms, since they can provide lower quotes and 'no-frills' services compared to consulting behemoths in the market.

Traditional billing structures such as billable hours or time-based business models are also being challenged extensively. Companies are seeking more actionable advice, quantifiable return on investment and proof of quality in the services. This will push consulting firms to rethink their pricing models, resulting in measurable service outcomes. Companies are also exploring ways to meet their requirements internally before partnering with consulting firms.

Recruitment is expected to remain strong for consulting firms due to economic recovery. Forecasters assumed that wages in the consulting sector would be slashed due to COVID-19 and inflationary pressures. Even though bonuses were low in 2020, income from clients rose above pre-pandemic levels in 2021. This revenue is likely to influence wages as well.[123]

With the world adapting to the virtual working model, the talent pool for a region has increased, as employers can now leverage a larger set of candidates for hiring without relocation constraints. However, pandemic burnout is causing a rise in the attrition rate. The labor market is drained, and pay rates are not enough to retain talent. Companies are leveraging supplier relationship management (SRM) programs to acquire and retain the best talent as well as to build strategic relationships with consulting partners.

Key Trends

North America is the largest consulting market, followed by Europe. The U.S. comprises 93% of the North American market, with Canada capturing the remaining share.[124] Thanks to the sheer size of its economy and the fact that it has the headquarters of major consulting firms such as MBB and The Big Four, this market is more mature compared to other regions and ahead in aspects like firm professionalization, offerings and innovation.

In North America, analytics and automation are revolutionizing the way consultants examine data, making them faster and more efficient. Because of their investments in technology, consulting firms have hiked their rates recently. Companies will have to gauge the impact of such investments in their consulting engagements and reassess the opportunities for cost reductions.

Enterprises must evaluate whether to invest in regular operations or consultants based on the impact on their industry and the nature of the engagement. For example, the leisure and travel industry may be less willing to invest in consultants than the health care industry at present, due to the respective impacts of the pandemic.

Finally, companies are expected to accelerate adoption of digital channels in response to evolving customer needs, as well as use AI and automation to remain competitive. Procurement offices must be proactive in understanding the digital needs of internal functions, focus on building strategic partnerships with consulting firms that have relevant capabilities and leverage their expanding offshore COE for cost benefits.

What to Expect This Year

Overall, there is inflationary pressure from clients seeking more advice from consulting firms and 'The Great Resignation' driving up human capital costs (wages, recruitment, training), which account for ~50% of the consulting category cost structure. Procurement teams and clients must focus on shifting away from the large consulting players and traditional time- and materials-based price structures.

Financial Professional Services

The global financial professional services industry was estimated at more than $350 billion in 2021[125] and is likely to grow at a CAGR of around 6% in the period 2021-2026.[126] Financial professional services include auditing, accounting, taxation, financial advisory and M&A advisory.

The pandemic has triggered a fundamental shift from the traditional working model to a hybrid model. Such a model allows auditing and taxation services to be executed from remote locations, creating savings opportunities for service providers and clients. Moreover, Latin America has become increasingly competitive with the APAC region for cost-effective offshore resources.[129] Procurement teams need to leverage right-shoring models to unlock cost benefits.

Increased regulation around corporate taxation and tax avoidance suggests an increased need for tax consulting services in the coming years. One of the regulations at the forefront will be the G20 global tax reform, aimed at eliminating tax havens. Although reforms may be delayed due to local implementation, we will see multinational corporations starting to plan for the likelihood as early as 2022.

Internal audit teams have risen in importance, shifting from a reporting role to becoming trusted advisors to key decision makers. The pandemic has further increased the dependence on internal audit due to disruption of processes and substantial new risks. There is also greater pressure on internal audit teams to identify forward-looking risks.[128]

The widespread implementation of AI applications, diagnostic tools, workflow systems and analytics will reduce the workload of internal as well as external auditing firms. This will allow auditing teams and firms to shift from supporting activities (such as gathering and cleansing evidence and samples) to more strategic reviews while reducing the overall time needed.

Employee attrition for financial professional services is currently >15%, which is higher than the average across other industries.[129] Financial professional services firms were expected to hire in large numbers in the latter half of 2021 to bridge the gap in attrition. 'The Great Resignation' will have an inflationary impact on financial professional services due to increased pay, recruitment and training costs. This is especially critical since approximately 50% of the financial professional services cost base is from personnel-related costs.

Overall, clients that do not leverage digitization and right shoring will see financial professional services costs rise this year.

Key Trends

The financial professional services market in the U.S. is aided by the financial planning and advisory market in the region, which reached a value of nearly $57 billion in 2020.[130]

Most of the global corporations use the Big Four firms for their internal and external auditing services. This is common in the U.S., where these firms alone collectively service 97% of the total U.S. S&P 500 market capitalization.[131]

Financial professional services firms are committing to remote working for their employees. In October 2021, PwC announced that it has given the choice to all their 40,000+ employees who work in U.S. client servicing to work remotely in perpetuity. They are one of the biggest employers who have accepted the new normal.[132] Remote working could create savings opportunities in operational expenses. Procurement professionals should work in tandem with finance to evaluate the cash benefits from reduced overhead costs as a result of remote working.

There has been an upswing in the demand for M&A advisory in the U.S. In September 2021 alone, there were nearly 150 large deals and acquisitions of a transaction value of above $65 billion. Goldman Sachs, JP Morgan, Morgan Stanley, Citigroup and Bank of America Securities are the leaders in the financial advisory space.[133] Technology and commercial services are industries where M&A activity is predicted to increase further. Expertise in the same could be beneficial to financial advisors.

Most of the large firms in the U.S. have adopted early foundation stages of the automation continuum with respect to internal audit, including data integration and analytics. Comparatively fewer organizations have reached maturity on this spectrum by fully leveraging machine learning and artificial intelligence. As more organizations deploy these technologies, clients will need to focus on internal audit firms that can complement the implementation of these solutions.[134]

The Public Company Accounting Oversight Board (PCAOB) will issue more stringent evaluations on lead auditors for larger audits involving multiple firms. This will have cost pressure on the large audit requirements.[135] North American firms can focus on digitization for managing financial professional services costs.

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What to Expect This Year

Overall, the financial professional services industry is facing inflationary pressures from The Great Resignation and increased expectations from firms. In such an environment, clients should focus on leveraging digitization and right-shoring to control costs. However, this may be challenging since these levers may change the current service delivery models in place. Annual budget planning and close coordination with procurement will be critical to controlling costs.

Sustainability

The goals of professional services firms include not only financial goals but also environmental, social and governance (ESG) objectives. Many organizations now conduct "energy audits" to understand where resources are being wasted and how to reduce the wastage. For example, installing motion light sensors to turn off lights when not in use, which would have the added benefit of reducing the cost of utilities.

Diversity has become an important goal for all professional services firms, and suppliers are taking several approaches to address the issue. First, they are educating their employees to accept and celebrate differences through training. Secondly, companies are creating diversity goals. Some companies are adopting diversity goals in various stages of recruitment. The Big Four have strongly emphasized inclusivity for women, hiring people with diverse cultures, backgrounds, and nationalities and pushing for gender equality at work. Some companies have a goal of awarding business to diverse suppliers, including women-owned, black/Hispanic-owned, veteran-owned as well as LGBTQ-owned businesses.

Governance in the consulting industry has also gained immense traction in light of insider trading in large professional services organizations. Governments all around are imposing strict penalties for the same. The U.S. Securities and Exchange Commission has organized a new Climate and ESG Taskforce to examine material gaps and misstatements in ESG-related corporate disclosures. The European Commission has proposed including large, unlisted companies as well in its Corporate Sustainability Reporting Directive rules. This would double the number of businesses required to disclose their detailed ESG reports. Sustainability has become a key consideration for CXOs and their business goals.[136]

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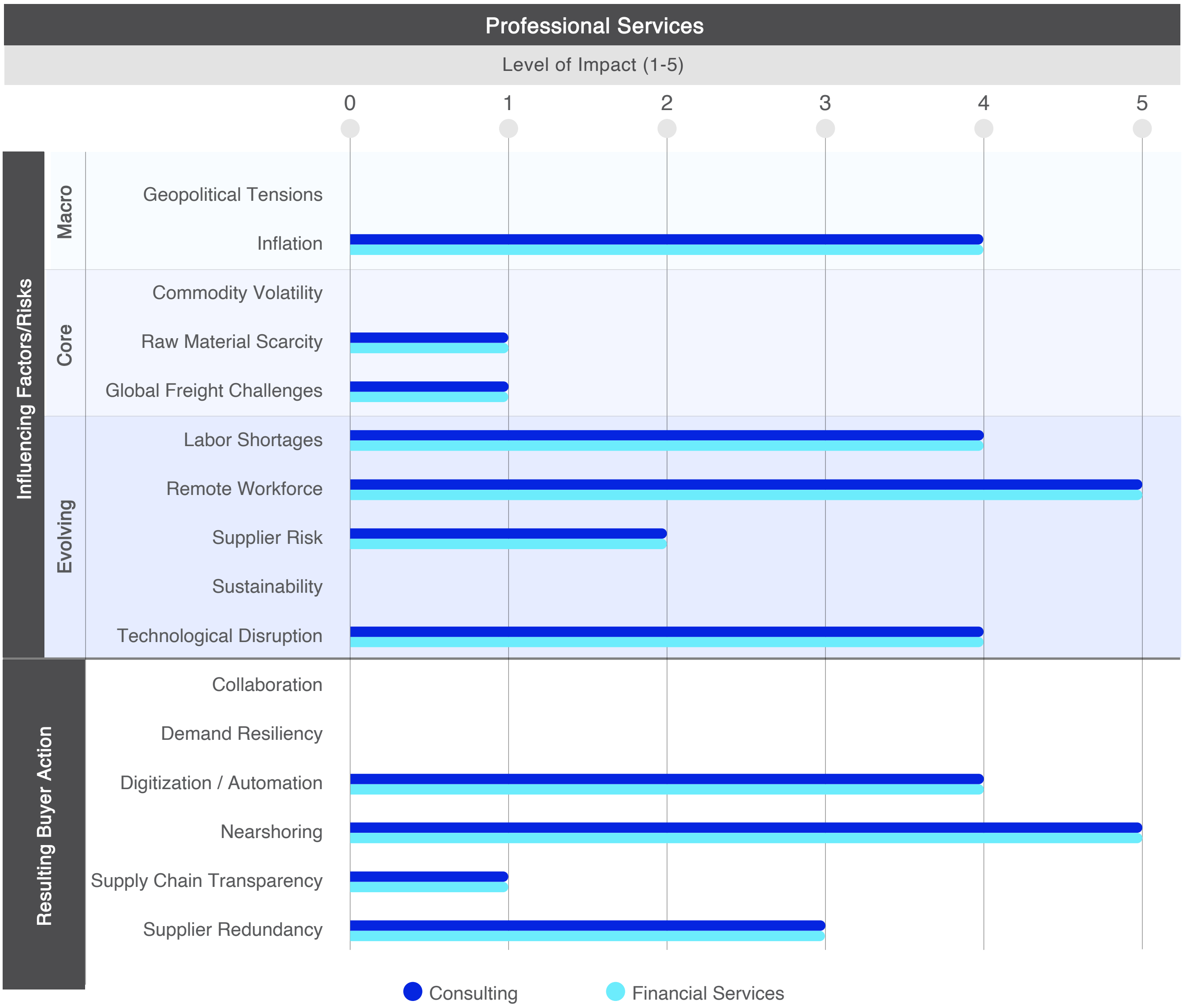

Professional Services
Level of Impact (1-5)
0
1
2
3
4
5
Influencing Factors/Risks
Macro
Geopolitical Tensions
Inflation
Core
Commodity Volatility
Raw Material Scarcity
Global Freight Challenges
Evolving
Labor Shortages
Remote Workforce
Supplier Risk
Sustainability
Technological Disruption
Resulting Buyer Action
Collaboration
Demand Resiliency
Digitization / Automation
Nearshoring
Supply Chain Transparency
Supplier Redundancy
Consulting
Financial Services

HR & BENEFITS

While the world grappled with peak unemployment in 2020, the in-progress economic recovery has today led to an acute talent shortage across all sectors. Jobseekers in the new normal are prioritizing organizations that have a strong focus on diversity, equity, and inclusion, sustainability, work flexibility and employee benefits. Organizations that understand these trends and actively drive changes to transform their processes and culture to be more inclusive and flexible, will win the war for talent.

Employee Benefits

It is evident that the future of work will be flexible, and employee benefits will need to evolve to cater to this. During the pandemic, HR leaders have catered to a large volume of employee requests and grievances. As economies globally recover, HR leaders are realizing that each segment of their multi-generational employee base has a unique set of needs, drawing a direct link to their health and welfare benefits.

Workforce needs vary in chronology from the Silent Generation, Baby Boomers, Generation X, Generation Z and Millennials. They also vary between a single parent, large families, early career individuals, people with disabilities and those with pets. Each segment has different needs and challenges that were amplified during the pandemic and now demand a customized and accommodative benefits plan that offers the right mix and flexibility.

In 2022, the new challenge is to balance plans for returning to work with employee satisfaction. HR leaders have been tasked with providing specific tools to employees to ease the transition.

As return to work materializes and changes the status quo, increased stress in the workplace is inevitable, making it necessary to reassess Employee Assistance Program (EAP) benefits. EAPs are typically funded fully by the employer and, when utilized, can offer benefits to employees through increased productivity, improved retention and health outcome improvements, resulting in overall health care cost savings. Sourcing professionals should partner with HR leaders to ensure EAP benefits are comprehensive, optimized and well socialized with the employee base.

Looking ahead, companies should spend more time to gather, analyze and generate insights to create wellness programs and flexible benefits offering that fit the expectations and needs of a multi-generational and diverse workforce. Sourcing professionals in collaboration with HR should identify opportunities with innovative suppliers to help transform benefits offerings.

United States

The future of corporate working culture has never been more unclear. 'The Great Resignation' has put a spotlight on the need for flexibility in employee benefits. Organizations that are agile and drive meaningful changes to their total rewards programs will be able to attract and retain talent. To enable this, it is critical for HR leaders to collaborate with cross-functional teams to assess employee needs and rethink benefit programs to provide more flexibility, support and tools to their workforce. Customized benefit packages are more important than ever as a diverse workforce returns to work and looks for support in managing workplace stress and mental health. We expect hybrid working models, mental health and EAP offerings to further evolve and become a standard offering.

Remote Work and Care

The first signs of flexible and ad hoc benefit offerings came early in the pandemic through expense reimbursements or stipends for work-from-home setups, electronic devices and internet needs to ensure employee productivity in a remote environment. While technological requirements may have been fulfilled, the growing need for work-life balance will continue to be a top priority. With the backdrop of closures of schools and daycares, measured flexibility in working hours was offered to parents – which will continue in the form of flexible days as workplaces re-open for in-person attendance. The inertia is evident, and employers have resorted to a hybrid model, giving employees ample time to assess and prepare for a gradual return to work or even continue to work remotely in some cases.

Healthcare and Mental Wellness

Healthcare offerings that metamorphized to virtually serve employees during the pandemic will continue to see further implementation and upgrades in the form of telemedicine and virtual therapy. Unemployment, COVID-19 deaths, strict public health restrictions and the economic downturn caused by the pandemic have increased stress for over 70% of Americans, according to the American Psychological Association (APA). Employers must recognize that the effects of the pandemic would continue to impact their workforce in the long term and only a robust and evolving healthcare plan can ensure basic employee wellbeing. In the foreseeable future, other offerings including mindfulness apps, EAP services and counseling and gym and fitness subscriptions will see greater inclusion in employee benefits. Floating holidays or extended weekends for burn-out recovery have also seen increased adoption.

Financial Wellbeing

While the unemployment figures have eased, there will continue to be residual financial stress and uncertainty once the pandemic ends. Economic downturns, inflation and the tapering of government and rental support schemes are only some of the macro factors that contribute to financial stress. This has a direct impact on employee productivity and absenteeism, in addition to the physical and mental wellbeing of the employee. Employees have started to gauge their financial health and look for avenues to hone their financial literacy. To that end, financial literacy options such as self-service tools, e-learning options, debt management counseling and interactive forums have gained popularity in the workplace, primarily offered through benefits. For individuals and families that fear potential educational loans in their future, corporates have started to offer low interest loans, tuition fee reimbursements and discounted education fees through partner colleges to attract talent looking at higher education or vocational courses.

Pet Insurance

Nearly one-third of the U.S. population have become "pet parents" during the COVID-19 pandemic, which is expected to fuel growth and demand for employer-offered pet insurance policies.[137]

In the age of the 'The Great Resignation,' benefits such as pet insurance can add competitive edge for organizations to retain and attract talent. In addition, implementing pet insurance can encourage employees to adopt a pet, which has proven to reduce anxiety and positively impact mental health.

Enterprises should expect to hear demand from potential employees for pet insurance and should be prepared to answer. Sourcing professionals should proactively drive market intelligence efforts to help identify the right partners and collaborate with HR to implement.

Preventative Health Benefits

In 2021, there was an increase in the need for preventative physical and mental health services and a deeper dive into early onset of chronic diseases, leading to further exploration of factors that affect social determinants of health (SDoH). With increasing mental health awareness during the pandemic, nurturing mental wellness and promoting early diagnosis and self-care have become focal points for employers. In 2021, there was a lot of focus on patient education on benefits utilization, new voluntary benefits and hospital indemnity to lower the overall health care cost.

Temp Labor

As the Omicron wave wanes, vaccination rates improve, economies reopen, and governments' fiscal and monetary measures help spur economic growth, global GDP is expected to catch up. Temporary labor employment is also expected to rise globally. The global staffing industry was expected to grow by 12% in 2021 to $ 445 billion, following a decline of 11% in 2020 as the market continued to recover from COVID-19.[138] Similarly, hiring increased 20% in Q1 2021 compared to Q1 2019, implying signs of recovery in the temp labor market.[139]

The main reasons for increase in the demand for temp staffing are:[140]

1. **Need to adapt to economic uncertainty:** Although rollout of the vaccination program is underway globally, there is no denying that there is potential uncertainty in the future.
2. **Ability to scale up and down quickly, as needed:** Organizations offering temp labor are quick to ramp up and down, adapting faster than the internal recruitment process and enabling quicker responses to changing conditions.

3. Cost savings: By increasing utilization of temp labor, employers can avoid the additional costs of permanent recruitment.
4. The gig economy: The flexibility and remote working opportunities within the gig economy appeal to the current workforce. Employers acknowledge this trend and are looking to leverage this talent pool as they struggle with labor shortages.

The pandemic has brought unprecedented disruption to the category and as we see signs of recovery, procurement professionals will need to step up their partnering and support businesses to manage through these uncertain times. Below are some key levers that GEP has identified that will help organizations define their strategies around the future of contingent labor.

1) Omni-channel recruiting: Companies should look beyond traditional channels like job boards, company career pages, employee referrals and social media and engage potential employees across all relevant touchpoints. Omni-channel recruiting involves teaming up with other companies in the same industry or region to identify relevant skills, investing in developing curricula for skill building and providing on-the-job training.

2) Direct sourcing: 2021 witnessed 'The Great Resignation' that resulted in a massive talent shortage. Some of this shortage is attributed to many employees seeking voluntary retirement early to avoid the uncertainty from the pandemic as well as changes in employee priorities. Organizations will need to develop their own talent pools for skilled contingent workforce to tap into retirees, alumni and freelance workers who are ready for short-term assignments. This would result in faster hiring, reduced costs, and protection of employer brand.

3) Remote working: Remote work is now well established, and the future of work is expected to be a hybrid model. In the new normal, HR and procurement teams should look for nearshore opportunities, especially in IT, engineering and white-collar roles. This new talent pool will help alleviate talent shortages while helping contain costs driven by wage inflation.

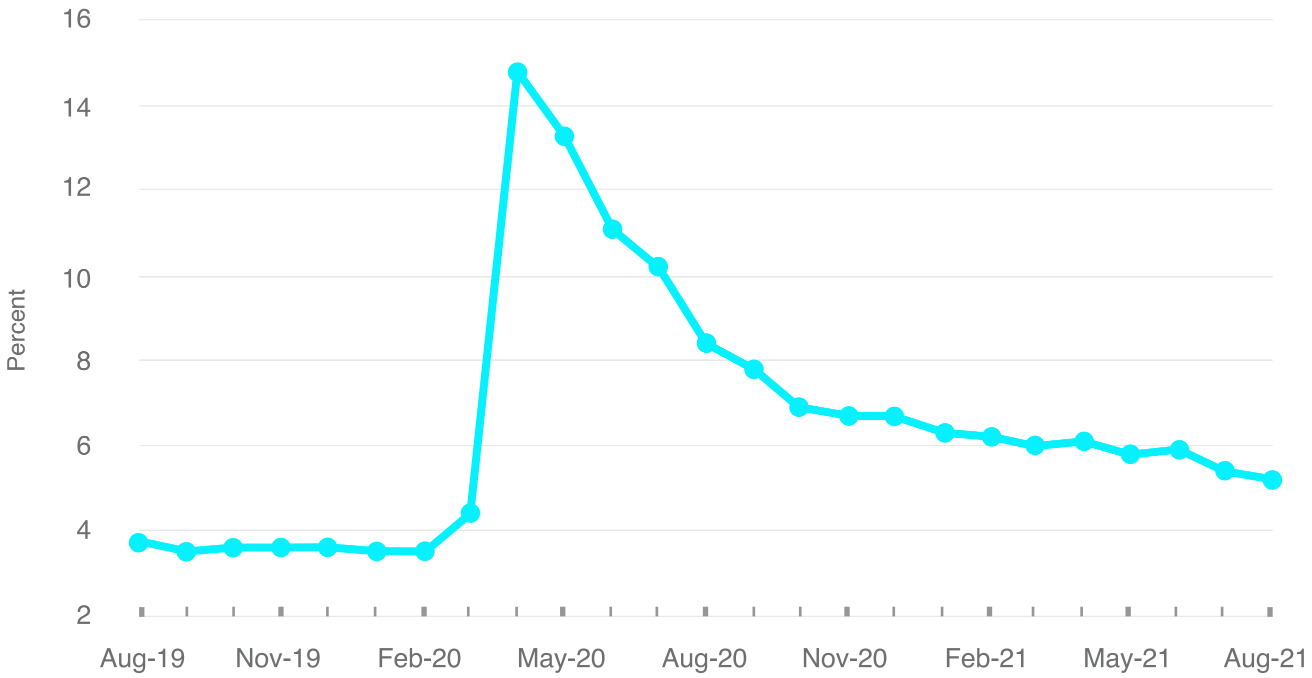
4) Technology adoption: Technology will play an increasingly important role in how organizations meet their talent needs. Technologies like artificial intelligence (AI) can aid in vertically integrating across the value chain, from shortlisting candidates to providing people analytics, helping organizations be more efficient.

5) Supplier relationship management: Procurement teams should leverage supplier relationship management frameworks to discuss and align priorities, create workstreams in collaboration with MSPs and track progress by meeting regularly. These frameworks should be designed to benefit both organizations to drive successful outcomes.

United States

After a year of uncertainty, shock and survival, the U.S. is beginning to relay old foundations. With companies adapting to new ways of working and markets reopening, unemployment rates have declined rapidly, with increased recovery in temporary staffing. In addition to the 9.7M workers officially reported as unemployed, Bank of America estimates that another 4.6M workers are no longer in the labor force due to the pandemic.[141] A recent surge in retirements and long-term demographic trends will also make it difficult for the labor force participation rate to return to pre-pandemic levels.

Unemployment rate in U.S.

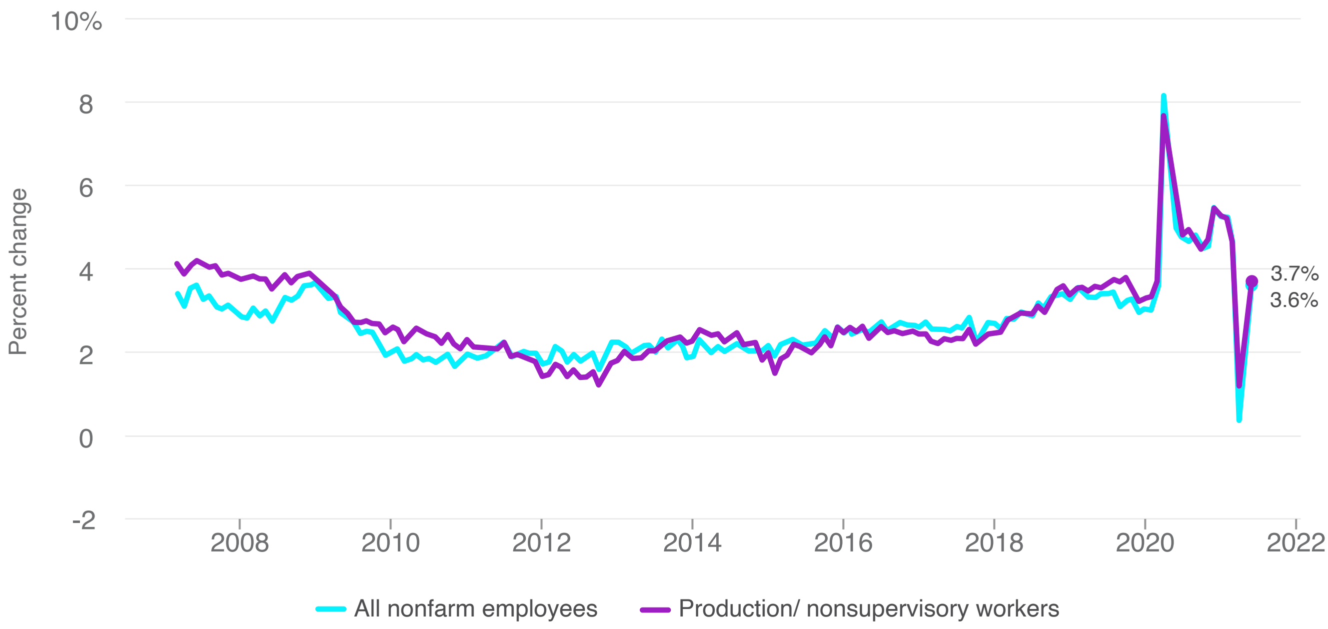


Source: Bureau of Labor Statistics

The Bureau of Labor Statistics estimates that there are roughly 1.5 million workers on the sidelines because of issues related to COVID, and many workers — particularly women — have dropped out of the workforce due to challenges with childcare.

Talent shortages in the U.S. have more than tripled in the last 10 years, with 69% of employers struggling to fill positions.[142] This has led to a significant increase in wages for workers in the U.S. Average hourly earnings rose 3.6%, to $30.40, in June 2021 compared with the same month in 2020. The average wage is forecasted to increase further by 3-4% in 2022. Wage increases will continue, largely because of the low labor force participation rate, continued fears of the virus, childcare issues, skills mismatches and the allure of enhanced unemployment benefits compared to the salaries companies are offering.

YOY % Change in Hourly Wages in the U.S.



Source: Bureau of Labor Statistics

Temporary staffing in health, finance, engineering and IT were up double digits in 2021. It is no surprise that these sectors have experienced increased demand for temporary workers as vaccination rates improved. Temporary hours in commercial occupations, such as industrial and clerical work, were also up 11% year on year. However, many businesses are still struggling to find labor owing to wage inflation, skills gap and changed employee preferences. With a mismatch between supply and demand and continuously increasing wages, employers are pivoting to technologies such as robotic process automation (RPA) to reduce menial and rote tasks.

The concept of total talent management has been around for over 10 years with little adoption. Now, though, companies will start finding value in incorporating the contingent workforce (CW) into their strategic workforce planning efforts and investing in maturing areas of CW management such as independent contractor and statement-of-work arrangements.

Hiring has become extremely competitive and complex, and it will continue to be so this year. To combat the current challenges, procurement and HR teams should work with suppliers and MSPs to create innovative talent attraction campaigns, adopt the latest hiring technologies, offer flexible and hybrid work options and focus on customizing hiring strategy for each segment.

Recruitment

As economies reopened in 2021, the demand for talent put a lot of pressure on acquisition teams and recruitment agencies. Additionally, skill gaps and a mass exodus of employees quitting stable jobs without securing another job have created havoc for organizations. The pandemic has driven employees to reassess their priorities and pushed some employees to leave low-wage jobs. These hiring challenges are expected to linger into 2022. Technology adoption, as well as sign-on and retention bonuses helped some organizations to partly replace this workforce in the short term.

From a long-term sustainability perspective, employers need to implement programs and policies that enhance employee experience, reimagine career opportunities and accommodate the needs of their increasingly diverse workforces.

With the integration of automation and AI in the recruitment process, 2022 is expected to witness a major impact on traditional hiring and recruiting practices. Replacing human recruiters altogether is highly unlikely, but certain areas under recruitment will see significant changes. AI-powered recruitment tools are already being used in application scanning, screening and interview scheduling. Tools that can eliminate unconscious bias are also gaining interest amongst recruiters as diversity and inclusion becomes a key focus for many organizations.

Recruitment Customization and Tech Innovation

To meet the needs of a diverse future workforce, there is a growing demand for personalization and customization. Job seekers desire an individualized, high-touch approach to finding jobs. As processes become more data-driven, hyper-personalization will boost employee engagement. Data analytics tools and applicant monitoring software are seeing greater adoption, allowing hiring managers to find patterns in candidate search, selection and hiring.

In an age where candidates have multiple opportunities, a speedy recruitment process is the key to attracting the right talent. According to LinkedIn, automation can make the recruitment process up to 90% faster and can also lead to a 30% reduction in cost per hire.[142] Recruiters are increasingly using HR automation solutions for their work. Video interviewing software has become an important part of recruiting tech stack, with companies like HireVue, Modern Hire and VidCruiter leading the transition. New technologies like Metaview and Luma, which provide interview intelligence and analytics, are changing the way employers connect with talent.[143]

Recruitment Process Outsourcing

A recent study by Everest Group shows an increase in global recruitment process outsourcing (RPO) activities since Q4 2020 and continued growth in 2021.[144] This uptick in RPO is driven by pent-up demand and by organizations scaling back internal recruitment resources during the pandemic. As economies reopened, companies experienced dramatic shifts in business, driving an upsurge in workforce needs. To counter such disruptions, companies are relying on RPO services that offer the flexibility and agility to scale up and down.

Diversity and Inclusion Sourcing

Diverse workplaces have long been associated with higher revenue growth, more innovation and increased productivity. Diversity, equity, and inclusivity (DEI) hiring initiatives have been on the rise recently and are likely to become more common in 2022.

Social media platforms have also gained traction as recruiters look to attract talent across geographies and diversities. Beyond aspects such as race and gender, companies also need to consider factors such as remote and flex workers as part of their diversity initiatives. Incorporating remote workers has benefits for both employee and employer – a recent study found that 64% of workers would rather work remotely than receive a $30k salary increase.[145]

The face of recruitment is changing, and HR must discover ways to quickly adjust to this change. Looking ahead, procurement should collaborate with HR to highlight innovations and leading suppliers within the recruitment landscape. Organizing a supplier day where shortlisted suppliers can share insights and demo technology capabilities across key stakeholders within the organization will help HR and key decision makers consider opportunities to transform the recruitment process. Collaboration with preferred recruitment partners and strategies to improve brand identity and online reputation will help attract and retain top talent.

Sustainability and Recruitment

According to a study by Russell Reynolds, 15% of role specifications referenced the company as sustainable, and, more importantly, 3% of role specifications incorporated sustainability in the job requirements.[146] The upward trend in hiring for sustainability roles impacts recruitment and talent acquisition in two ways – building talent that is experienced and doing so with sustainable recruitment methods (e.g., by partnering with sustainability focused suppliers) to ensure the two are complementary to the overall sustainability goals and vision of the company.

Talent acquisition will need to build a company's sustainability network from the bottom up – from entry level to executives – to develop climate change management strategies, sustainability audits and energy efficiency strategies. Partnering with preferred vendors that share expertise in maintaining a global talent pool of climate change and sustainability professionals is critical for success in the long term (examples of sustainability focused recruitment agencies in the U.S. include Weinreb Group, Hobson Associates, Common Good Careers Now, Koya Partners, Bright Green Talent, Gaia Human Capital and Webuildstaffing.[147])

To ensure sustainability in their recruitment practices and conserve energy and resources, talent acquisition teams should first look to upskill or reskill internal talent. Leveraging technology for scheduling and conducting remote interviews could significantly reduce the carbon footprint for talent acquisition teams. To ensure this does not impact the quality of recruitment, vendors like The Predictive Index allow recruiters to evaluate cognitive abilities and behavioral tendencies of potential employees in this remote environment.

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North America

Remote work has pushed HR to explore and innovate different ways of working, but the impact of COVID on talent acquisition strategy has been broader and much more drastic. While the number of job openings in 2021 skyrocketed to approximately 10.9 million, hiring numbers remained low at close to 6.7 million. Talent shortages can be attributed to pent-up turnover demand due to reduced quit rate last year (approximately 54% less in 2020 than "normal" turnover rates in U.S.),[148] employee disengagement and burnout (46% of U.S. employees feel less connected to their company),[149] and shift in employee priorities motivating them to pursue their dream jobs/ career journey. Demand for talent is at an all-time high, and the market lacks the right talent to meet this demand. Bridging this gap was both a priority and a challenge for talent acquisition in 2021, and the market is predicted to continue to be candidate-driven in 2022.[150]

Given the current scenario, talent acquisition teams need to revisit their sourcing strategies. Procurement has seen recruiters' increased reliance on job boards, talent acquisition platforms and recruitment marketing (e.g., referrals, social media, sourcing events, websites, etc.). Out of 6,300 companies in the U.S., over 50% relied on job boards or platforms and are leveraging referrals (70.6%), social media (57.0%) and websites (50.2%) to source talent.[151]

Organizations can leverage key lessons they learned in 2021 to plan for 2022. Demand planning will help lay out volume and characteristics (globally and regionally) that inform the sourcing strategy for the year. Talent acquisition should lay out an overview of roles they plan to recruit for, with a special callout for niche specialized role requirements. By doing so, procurement can plan for strategic sourcing initiatives to onboard vendors (e.g., marketing partners, platforms and pipelining agencies) and build a third-party network that can support the increased volumes and fulfill the need for these specialized niche roles.

Nearly 49% of recruiters have been asked about their company's DEI initiatives by prospective candidates, an increase of 16 percentage points from 2020. As DEI remains a focus for candidates, recruiters should look to partner with diverse-owned vendors that understand the talent pool well as well as specific niche market players, agencies and platforms that specialize in recruiting diverse talent and specifically cater to the company's required talent pool.

Planning and partnering correctly are central to recruiting the right talent, but innovating and involving the Learning & Development program will be central to retaining current talent. 88% of candidates confirmed investigating the L&D technology the company uses while searching for jobs.[152] Companies should look to have agile, collaborative and attractive technology in place to attract and retain talent, as reskilling and upskilling will remain critical factors in the job market.

The key is to build a robust sourcing strategy to ensure talent acquisition is well equipped and better prepared to recruit the best talent, at an adequate time to hire and at the best value. Planning and strategizing now will help recruiters prepare and match the right talent to the right fit.

Looking forward, key lessons from 2021 for companies are to invest in technology and partner with tech platforms to build a robust remote hiring strategy.

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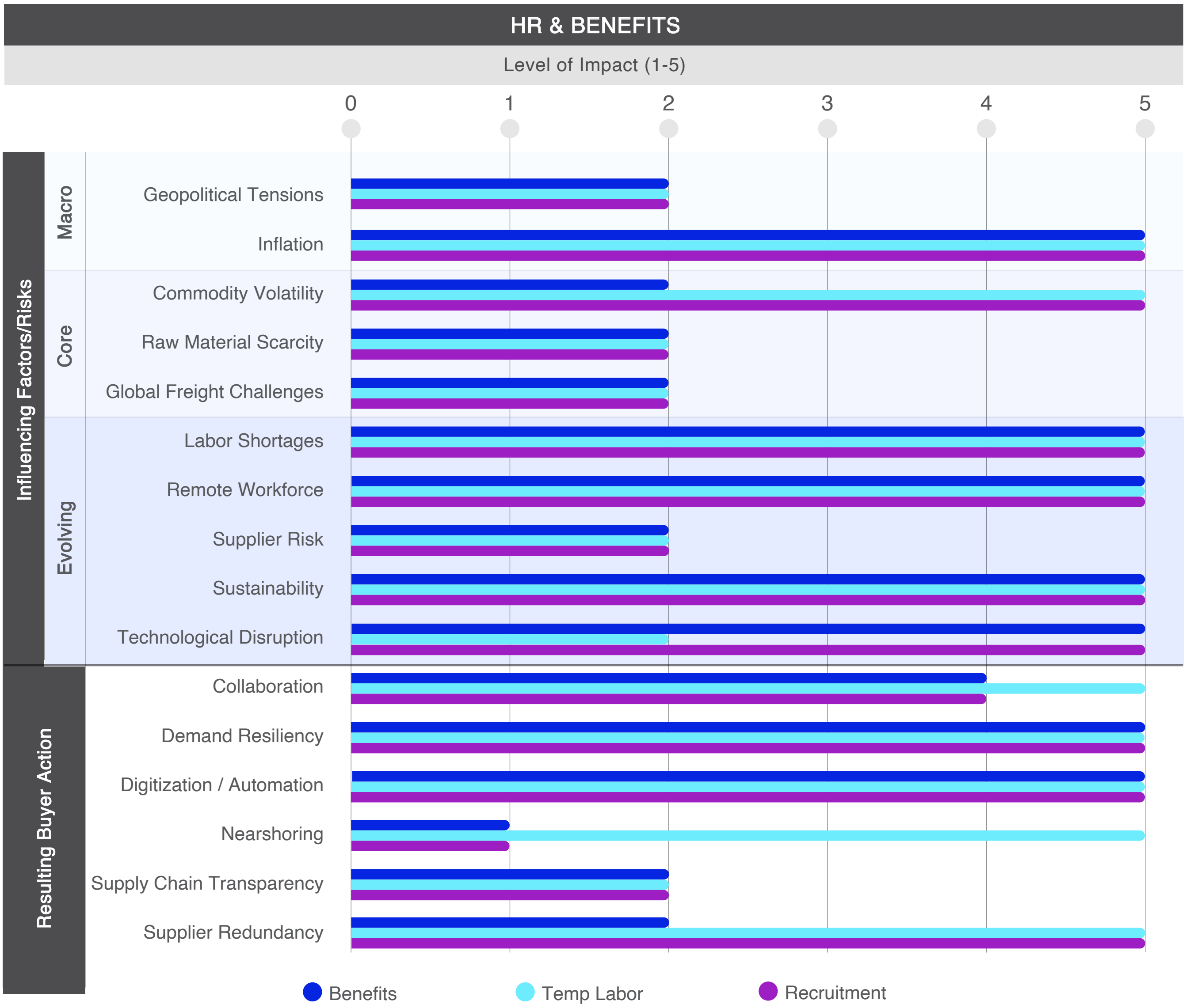

HR & BENEFITS
Level of Impact (1-5)
0
1
2
3
4
5
Influencing Factors/Risks
Macro
Geopolitical Tensions
Inflation
Core
Commodity Volatility
Raw Material Scarcity
Global Freight Challenges
Evolving
Labor Shortages
Remote Workforce
Supplier Risk
Sustainability
Technological Disruption
Resulting Buyer Action
Collaboration
Demand Resiliency
Digitization / Automation
Nearshoring
Supply Chain Transparency
Supplier Redundancy
Benefits
Temp Labor
Recruitment

LEGAL SERVICES

The corporate law business saw a broad-based rebound in 2021 following the COVID-19-induced disruptions throughout 2020.

We expect demand for legal services to continue to grow across most regions and sectors in 2022 amid projections of rising year-on-year demand in real estate law (+13%), corporate law (+9%), and M&A/transaction law (+9%). All these practices show strong growth even compared to pre-pandemic levels.[153]

This demand uptick will further shift the balance of buyer-supplier power back toward large law firms.

As demand outpaces supply, we expect many law firms to resume their push for higher fees — a trend briefly attenuated during the worst of the pandemic — particularly given the inflationary pressures across white-collar labor markets in most regions.

Most law firms are bullish about their 2022 performance and expect continued moderate-to-strong growth in profits, as measured on the basis of per lawyer and per equity partner and driven by higher levels of lawyer utilization and rising billable rates.[154]

From a cost perspective, GEP's conversations with general counsels indicate that law firms are concerned about employee retention and rising wage expectations amid a rising talent demand and above-average attrition and staff turnover rates.

Salaries of attorneys can account for over 40% of a typical law firm's cost structure, while other staff-related costs can account for a further 10-15%.

In the fight for top talent, law firms will continue to use salaries, bonuses, and other perks to attract top candidates and discourage their core staff from joining competitors. In the third quarter of 2021, associate-level compensation had already risen 10% on an annual basis and will likely continue to rise.[155]

Rising labor costs will be only slightly offset by further reduction in facility-related and general overhead costs of law firms, which have already cut costs in these areas. In the early months of the pandemic, firms quickly reduced their real estate footprint and dismissed unproductive staffers.

As a result, 2022 will see rising legal budgets and a continued C-suite focus on controlling overall legal expenses wherever possible.

We expect to see our clients explore modern alternatives to time and material billings from top law firms and ensure efficient legal operations.

Practice Areas Poised for Growth

As mentioned above, the rise in demand for corporate law services in 2022 will be broad-based but certain sectors are poised to outperform others.

Corporate and Commercial Law

The outlook for commercial and corporate law work is positive (+9% year-on-year), reflecting robust economic performance in the corporate sectors.[156] 2022 should see this trend continue as major industrial segments experience high growth, fuelled in part by the $1-trillion infrastructure bill in the U.S.

Real Estate Law

Similarly, expectations for real estate law are positive (+13% year-on-year) due to a booming housing market in the U.S., China and beyond, and a continued influx of commercial real estate transactions as companies reevaluate their work-from-home and facility footprint strategies.[157]

M&A Law

M&A activity is anticipated to grow substantially in 2022 (+9% year-on-year) and is forecasted to exceed 2019 levels -- both in terms of deal volume and value.[158]

We expect an uptick in opportunistic acquisitions aimed at consolidating certain sectors along with continued M&A investments to boost digital capabilities and competitiveness.

Labor and Employment Law

The pandemic brought a surge in employment-related legal work as companies wrestled with issues ranging from health and liability issues, work-from-home policies, compensation challenges and labor disputes. 2022 will see a continued focus is this area with growth rates in the range of 3-4% compared to 2021 levels.[159]

Cyber Law

2021 saw unprecedented levels of cyber threats impact corporate and government agencies. Protection from these threats will continue to dominate CEO and CIO priorities in 2022. Complicated and expensive to litigate, we expect this law practice to see healthy growth in 2022 and beyond.

Digital Innovations

While law firms have traditionally been slow to adopt new technologies, we are seeing a growing inclination to test digital innovations.

Indeed, the Big Four consultancies along with some notable AMLAW 100 firms have invested in building or acquiring Alternative Legal Service Provider (ALSP) capabilities. Many firms have also explored partnerships with legal tech providers to reduce the cost to serve in routine law matters such as e-discovery, IP management, and early case assessments.

Additionally, growth in predictive case analytics and legal outcome forecasting is possible. Machine learning on large and publicly available datasets can help improve decision-making around settlement strategies, litigation plans, and overall matter management and bring in the promise of significant and sustainable legal cost reduction strategies beyond basic hourly rate negotiations.[160]

Associate Compensation Growth

All Segments I Rolling 12-Month Change

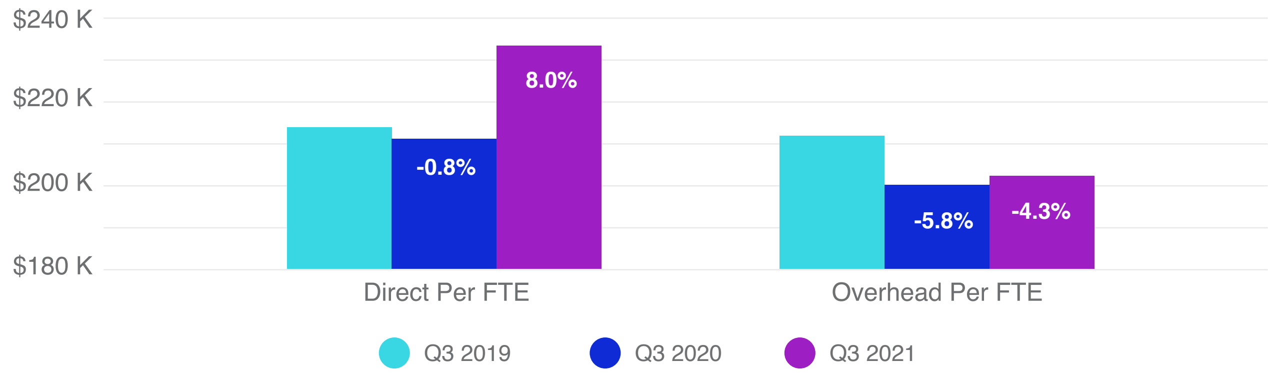
Q1 2021	2.1%
Q2 2021	5.9%
Q3 2021	9.9%

Associate Compensation Growth: Associate Compensation divided by Associate FTEs

Source: Peer Monitor Index, Thomson Reuters Institute

Expenses Per FTE

All Segments I Rolling 12-Month Values



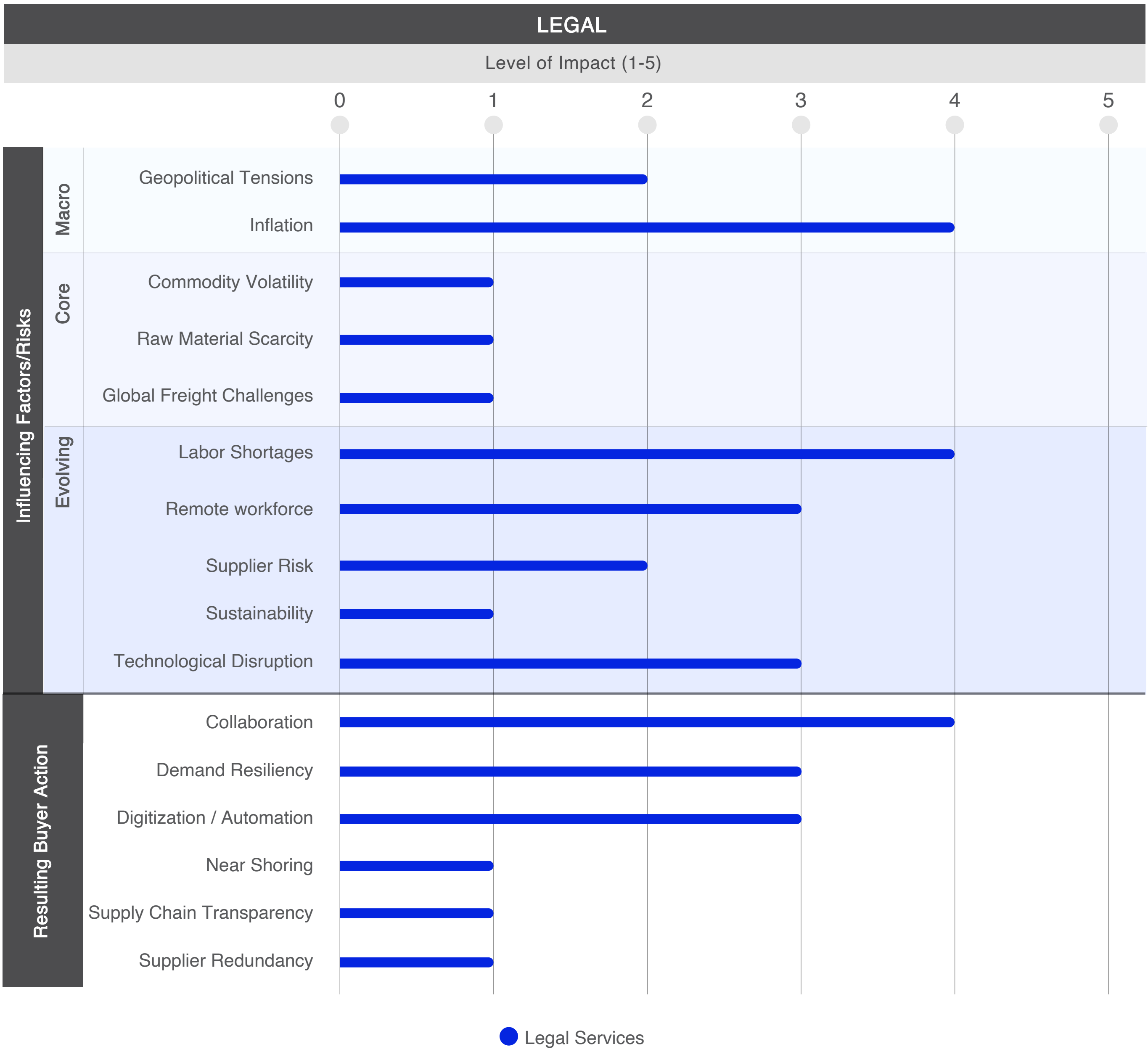
*Percentage measures change from Q3 2019 values

Source: Peer Monitor Index, Thomson Reuters Institute

What to Expect This Year

Top actions that procurement teams supporting their legal departments should take include:

- **Active legal panel management**: Drive law firm consolidation and spend concentration to a pre-selected legal panel organized by practice area. Managing a legal panel well will deliver improved hourly rates, higher volume-based discounts and stronger attention and responsiveness from the preferred law firms. Concentrating more legal spend within the law panel is still one of the strongest techniques for securing preferential rates and locking them in for several years.
- **Legal risk management:** Given the risk of critical lawyers supporting active matters leaving the firm, work with your panel law firms to ensure that proactive retention measures and contingency plans are in place, especially for high-risk and highly niche legal matters where unique expertise is vital for success.
- **Make vs buy analysis:** As legal workload increases, procurement teams should partner with the general counsel to use analytics to evaluate in-sourcing opportunities across different practice areas and legal activities. There are several models available — including from GEP — that can accurately estimate the level of insourcing that is possible based on historic trends and industry benchmarks. The cost savings from moving just one full-time equivalent's worth of work from top law firms to a qualified in-house attorney can exceed $500,000.
- **Flexible/virtual service delivery:** Capture the lessons learned from the pandemic to make permanent the virtual working models that have been proven to be effective and efficient. Start with the assumption that unless really needed, collaboration will be done virtually to minimize discretionary expenses.
- **Evaluate digital innovations:** Continue to test your digital providers through periodic competitive tenders and ensure these tools are configured and adopted to achieve full-scale benefits. Additionally, clients should "lean in" on piloting with ALSPs and legal process outsourcing firms to test and learn the art-of-the-possible quickly.


LEGAL
Level of Impact (1-5)
0
1
2
3
4
5
Influencing Factors/Risks
Macro
Geopolitical Tensions
Inflation
Core
Commodity Volatility
Raw Material Scarcity
Global Freight Challenges
Evolving
Labor Shortages
Remote workforce
Supplier Risk
Sustainability
Technological Disruption
Resulting Buyer Action
Collaboration
Demand Resiliency
Digitization / Automation
Near Shoring
Supply Chain Transparency
Supplier Redundancy
Legal Services

IT & TELECOM

The information technology sector is expected to return to moderate growth in 2022, with many companies revamping their focus on transformative efforts, having worked through the many reactive measures that were required in 2020 and 2021.

This growth will be most pronounced in enterprise software, IT professional services and infrastructure as a service (IaaS) and tempered somewhat by areas like end-user computing, print and on-premise infrastructure, which we see continuing to struggle in 2022.

Events like "The Great Resignation" that impacted IT professional services and the supply chain shortages that rocked equipment manufacturers in 2021 have set the stage for both challenges and opportunities in 2022.

We expect to see an abundance of M&A activity due to the uneven landscape that saw some providers flourishing while others struggling through changes brought about by the pandemic. GEP also expects to see companies develop more sustainable remote and hybrid work strategies after grappling with challenges and trial and error over the past two years.

Customer experience and order management will continue to dominate digital transformation efforts as the world increasingly sees the world remotely, through computer screens. This will fuel growth of cloud-native technology solutions, as well as the need to double down on IT security capabilities because of the continued success of cyberattacks that plague both businesses and consumers.

To prepare for the benefits and potential risks associated with IT in 2022, we are seeing organizations develop strength and focus on six key areas we believe will impact all regions, industries and IT categories.

Key IT Sector Priorities for 2022

Holistic (but Agile) Digital Transformation	Automation Expansion	Scalable End-to-End Security
Shift to Cloud-Native & Everything as a Service		Transparency, Governance & Accountability
Substantive Social Responsibility & Sustainability Policies		

Source: GEP

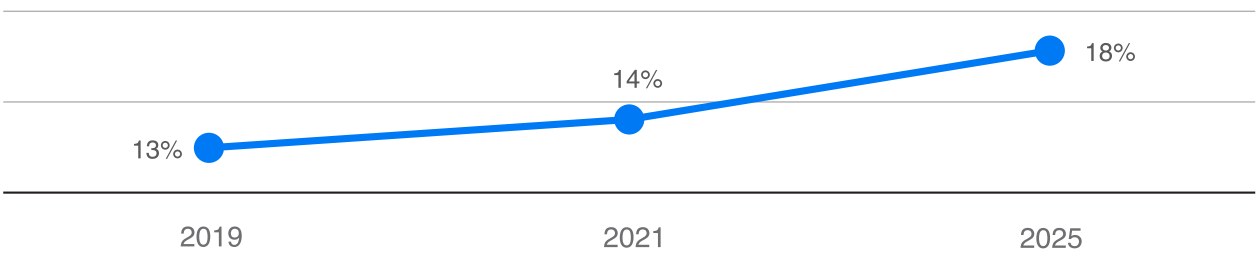
By leveraging digital toolsets, developing critical talent and adopting agile ways of working, procurement can partner with both IT and business unit stakeholders, working proactively to mitigate the challenges and take advantage of the opportunities that lie ahead in 2022.

Software

GEP has observed a direct correlation between global events and the need for new types of software to manage the change they introduce. This was evidenced in 2020 and 2021 by growth and expansion in areas such as cloud-based video conferencing, e-signature and COVID-19-related applications.

Continued social, political and economic change will boost software growth significantly over the next several years, adding to what has already been a top segment in terms of growth rate for several years running.

Software's Changing Share in the IT Market (2019-2025)



Source: Gartner

Here are four IT segments where we expect significant growth in 2022:

1. Order management and B2B & B2C software as brands work to compete with online retailers.
2. Social and collaboration platforms and human capital management software due to increased focus on employee experience and well-being.
3. Low-code platforms that essentially allow users to become developers. These are expected to clock CAGR of up to 30% during 2020-2030.[161]
4. Security software investments to enable the fortification of network, endpoint, cloud, mobile and penetration testing.

Software is the largest area of concern for our customers and where many spend the bulk of their time. Enterprise software is becoming increasingly problematic from a budgeting and forecast perspective as clients are constantly confronted with price increases, giving the perception that they have a general lack of control and leverage over enterprise providers.

Most of our clients are transitioning their on-premise and legacy applications to modernized, cloud-native software as a service (SaaS) platforms. Along with their numerous benefits comes a modernized form of “vendor lock-in” that can be difficult to combat.

GEP has observed enterprise software providers adopting a “growth no matter what” mentality with their clients, resulting in continued price increases and more expensive new models at the time of renewal.

In many cases, clients are facing these price hikes even when they have taken measures to significantly reduce the number of licenses or subscriptions they require.

In addition to pricing concerns, managing subscriptions and licenses coming from end users all over the business has made software asset management a key concern for the bulk of our clients. This is not a new development, but the skills required to manage it effectively are changing.

SaaS is rapidly becoming the de-facto licensing model for enterprise applications, mandating the tracking of subscription licenses as opposed to the traditional license and maintenance.

GEP has also observed a spike in business-unit-based SaaS purchasing, further expanding the stakeholder base and increasing the complexity surrounding management in the space. We are developing strategies with our clients to proactively address the challenges they are facing in the software category.

Cost-Control Measures

- Develop a methodology to calculate software pricing (internally) based on the value it provides to the organization and work with vendors to adopt new ways of thinking as it relates to seemingly monolithic pricing structures.
- Engage with suppliers to force conversations surrounding pricing (prior to making significant financial investment). This requires providers to explain in advance how much the prices will increase from one contract cycle to the next. Of course, suppliers still have creative license to “call an audible” at the time of renewal, but having these conversations and reflecting the outcomes contractually are key.
- If price increases are expected or agreed upon, socialize them across the organization so that everyone isn’t surprised each time price increases are passed down.

Ongoing Management of Software Assets

- Accept nothing less than complete visibility into all software data via digital toolsets. This includes asset entitlements, contracts, renewal data, new projects and purchases, as well as budgetary plans.
- Develop new capabilities or extend existing ones around the management of SaaS, including utilization, demand and costs. Create and distribute SaaS management principles to technology end users across the organization.
- Procurement organizations need to continuously assess internal capabilities and consider partnerships relating to software asset management and audit defense services.

IT Professional Services

In contrast to the height of the pandemic, many projects put on hold are moving forward, creating heavy demand in the marketplace for skilled IT resources. Organizations are now vying for precious and scarce experienced IT professional services (ITPS) resources to staff the overflow of projects in the backlog. At the same time, the world market availability for ITPS resources is at an all-time low due to:

- Lower numbers of college graduates with technology-related degrees
- The talent pool to fill open positions has become small because of attrition rates in the range of 25-75%
- Global restrictions on immigration due to COVID-19 and other government restrictions on work visas

These factors coupled with an overabundance of demand by customers is causing significant stress in the market. The deep chasm of ITPS availability and the need for third-party resources have shifted the once buyer-controlled ITPS market to a supplier-controlled market, which, of course, includes increasing prices across the board.

Price increases are also being driven by inflationary influences caused by unprecedented monetary stimulus and supply chain and travel disruptions of both goods and people.

Overwhelmingly, Big Tech is the primary landing spot for skilled IT talent because of which non-technical organizations are struggling to attract and retain quality IT talent. This is causing chief information officers to rely more on their ITPS suppliers for applications and infrastructure projects, as well as maintenance and support work.

We are seeing a shift in corporate IT departmental in-house staffing with a focus on retaining key strategic positions such as architects, program/project managers and governance experts, with IT generalist positions being filled via preferred ITPS suppliers.

Organizations are accelerating outsourcing initiatives of non-core IT work that had existed before the pandemic but have now taken on greater importance as the shift to IT as a service (ITaaS) gains further traction.

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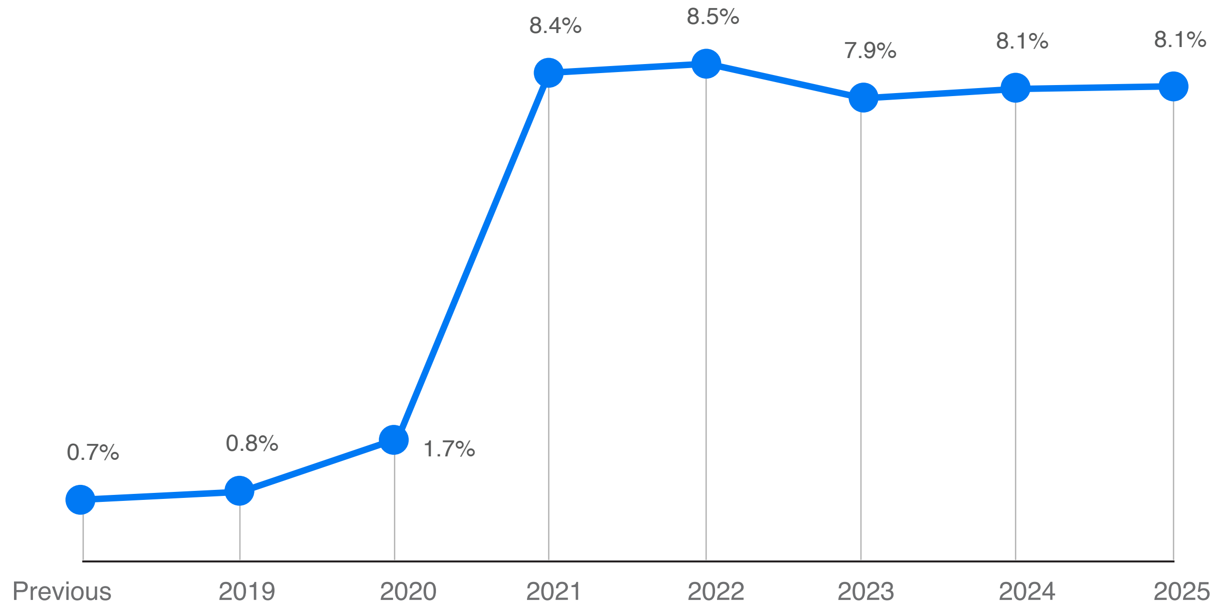
Spending on IT by Technology Segment: IT Services



Source: Gartner

While IT industry analyst firms are predicting substantial increases in ITPS spending in the next five years, the reality is that any increase in organizational spending is reliant on earnings growth. This is predicted to be muted over the next five years with some sectors benefitting more than others.

Should inflationary forces prove persistent, buying power of customers may erode due to higher internal costs (such as IT wages) as well as higher external costs for third-party labor. The worst-case scenario is that these economic forces would be bearish for sustained growth as we have seen in the past several years which would mute any increases available for much-needed ITPS spending.[162]

This perfect storm – a combination of low ITPS availability, high demand, and increasing prices of resources – may lead to organizations asking their IT procurement professionals to ensure that third-party ITPS pricing remains competitive to stretch every dollar available.

With heavier reliance on third-party suppliers in the ITPS space, supplier relationship management (SRM) will become a focus area for all organizations to ensure the monitoring, measurement, and governance of third-party suppliers, and to ensure they are providing measurable value to the organization for every dollar spent.

Savings tracking will take a back seat to measuring and reporting the value achieved by investments in the third-party spending in the ITPS space. A potential reciprocal factor may be the impact of increased automation of activities previously performed by humans to reduce reliance and spending on ITPS resources.

Hardware

The end-user and data center hardware space became tumultuous in 2021, primarily due to a confluence of factors — a constrained supply chain, natural disasters and unforeseen shipping delays. These were coupled with huge changes in both corporate and consumer buying patterns due to lockdowns and remote work.

The result is an ongoing supply chain disruption that has caused scarcity of microchips and other components, impacting finished hardware goods across all major IT equipment types (end user, mobile, compute, network, store, security appliances, etc.). This led to many unfamiliar and uncomfortable conversations with suppliers in 2021, where both cost increases and supply shortages were cited as compounding issues.

These never-before-seen circumstances have necessitated new thinking on how to leverage existing equipment and acquire new ones. The need for equipment is there. It all comes down to timing, planning and developing a strategy that encompasses potential delays and cost increases that potentially cannot be controlled.

With some, or all their infrastructure in the hands of managed service providers (MSPs), clients who have outsourced this space have also had to adopt and develop new approaches to working with providers who share the same challenges as they do in pricing and equipment availability.

This disruption has made GEP's clients explore the following alternative scenarios in the end-user computing space:

- Bulk buys, or accelerating refresh strategies to secure more favorable pricing
- Looking to manufacturers, resellers and MSPs for warehousing alternatives
- Reducing their refresh by the same percentage that suppliers raised unit pricing to mitigate the increase
- Completely stalling out refresh cycles and adding PCs only as needed (and hoping the situation will improve before the refresh is too far behind)

Many of the clients found the pricing language they had in place with providers did not hold in conditions like these. With no end in sight to these supply challenges, a multitude of strategies can be employed. But "putting it off" is not a viable one. A more proactive approach to keeping up with end-user needs is required, or organizations will find themselves with heavily outdated equipment and will struggle to recover without significant investments in new units down the road.

None of the factors that shook up hardware across segments impacted the infrastructure as a service (IaaS) market in a negative way. In fact, quite the opposite, happened. With the groundswell of remote connectivity requirements and new ways of working, IaaS providers have grown consistently and met both pandemic and supply chain challenges head on. According to Cisco's Global Networking Trends report, by 2022, more than 50% of enterprise data (as compared to below 10% in 2019) will be created and processed outside the data center or cloud.[163]

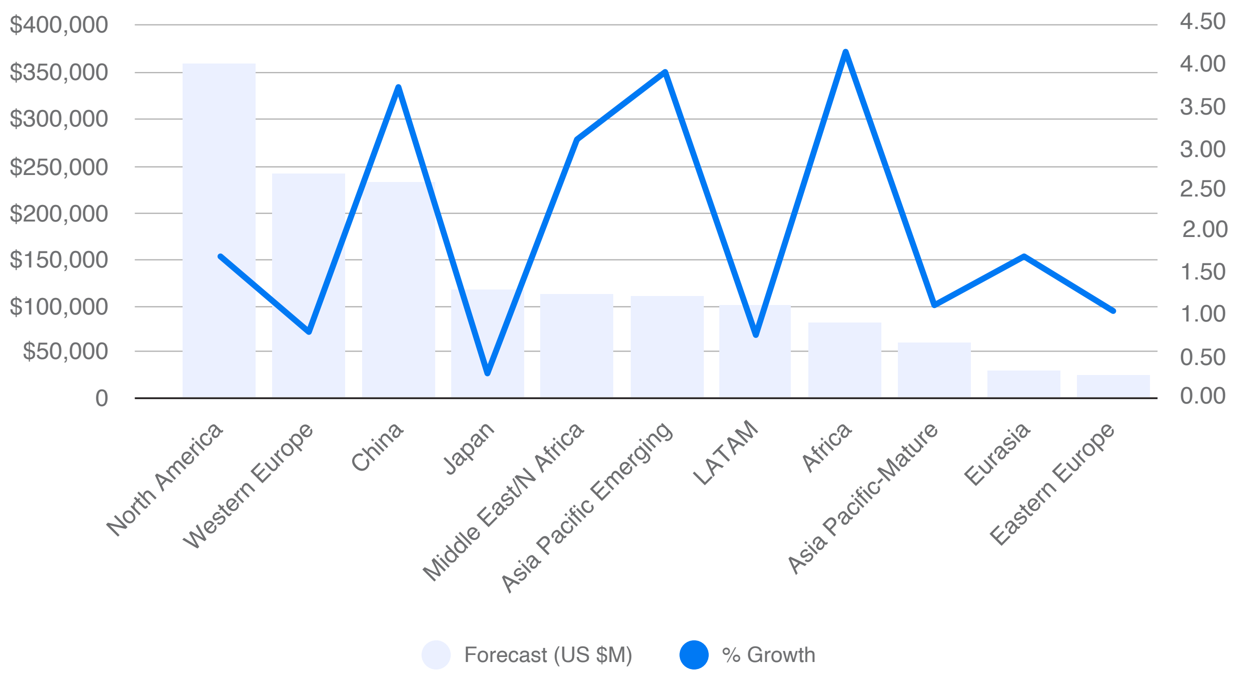
How organizations address and react to some of these uncontrollable market factors will differentiate them from the competition. GEP is working with clients across these key areas within IaaS to better prepare for 2022:

- As more and more infrastructure transitions to an “as-a-service” model, it is critical for organizations to get better at capacity and utilization planning as well as communicating that to procurement when it’s time to negotiate.
- The on-prem hardware landscape may be giving way to cloud, but asset management, developing robust pricing methodologies, and requiring value adds from hardware providers will be critical even if the amount of “gear” on-site is decreasing.
- Organizations should develop personas for end-user computing, create multiple scenarios and spell out how equipment and desktop licensing can be used, reused or cascaded in the event of continued desktop and laptop shortages.
- IT departments should work with procurement to conduct a holistic, 360-degree cloud assessment, analyzing factors such as operating model, usage, waste and cost optimization. Not all organizations have the resource or expertise to manage all these functions effectively internally. So considering partners for elements of the lifecycle could boost productivity while lowering costs (especially in situations where cloud optimization providers can significantly reduce spend by helping clients to buy and use cloud in a more cost-effective manner).
- IT and procurement should work together to get ahead of change, developing commercial and sourcing strategies to accommodate advancements like agile infrastructure, platform as a service (PaaS), edge computing and containers, all of which we see playing a larger role in 2022.

Telecommunications

The 2022 Communications Services regional spend forecast from Gartner is $1,482,324 million, with an average growth of 2.07%. Regional spend (56%) is largely concentrated in the more developed countries within North America, Western Europe, and in China. Regions forecasted to have the highest level of growth are largely concentrated in the emerging markets of Asia-Pacific and Africa.[164]

2022 Communications Services Regional Forecast



Source: Gartner

Many large enterprises are turning to private wireless networks because of the limitations of public wireless networks. Public wireless network limitations include poor security, restricted network speeds and limited geographic availability for higher speeds. Enterprises in the utility, defense and local government verticals have announced plans for private wireless networks.

Many of these enterprises are willing to invest further to improve their current state and transform their business for growth. In some cases, the near-term budget has been increased for long-term operating improvement brought about by the transformation.

Many business cases are built around delivering capacity improvements to where the enterprise needs it, and when it needs it, and under a security umbrella protecting mission-critical applications. Utilities, for example, require higher speeds for metering and other automation applications in their operating territory within a tight security environment.

Other examples of private wireless networks are found in industrial LAN upgrades for higher capacities required by new applications. These projects upgrade the factory/warehouse floor to improve connectivity to multiple sensors and equipment. Projects are a hybrid of technology-specific service providers combined with in-house expertise in specific industrial applications.

Enterprises prefer to build their private network with partner specialists rather than procure it from a public operator in many cases. For sourcing executives, this puts an emphasis on three sourcing strategies:

- First is the cross-functional team of technical, operations and financial members.
- Second, the project plan needs to have adequate time to procure the services required.
- In wireless WANs, this might include private spectrum acquisition and identifying the manufacturer of the core LTE technology. For private LANs, this might include the access point manufacturer and any internal cabling upgrades to support the higher LAN capacities. Therefore, third is the requirement for proof of concept and technology evaluation in the procurement process.

Another sourcing topic for 2022 is the continuing business environment for the enterprise. Each enterprise will have different views on the return to normal. Many consider that a large portion of the workforce will continue in a work-from-home or hybrid model. This continues the increased emphasis on connectivity and security services to remote workers.

There is also an increased need for telecom buyers to collaborate with other category leaders. When IT and business applications are hosted in the cloud, there are multiple dimensions to the sourcing problem. No longer are a finite set of company locations to be served. Multiple “homes” and smartphones become end points to serve securely.

The sourcing strategy for the connectivity requirements can be served through wired and wireless technologies. Enterprises want a seamless security environment across the connectivity services since an employee could make use of wired access in the office and separately at home and wireless access when mobile. Cloud-based security services are preferred to those dependent on physical location.

Most customers have accelerated their move to cloud-based security to enable multi-location working environments. Secure access service edge (SASE) in an example of enterprise security architecture, which addresses enterprise and cloud applications accessible from a variety of locations with varying security profiles. Internet-only access over the public internet is increasingly being used for cloud applications.

What to Expect This Year

- The continued deployment of SD-WAN architecture employing ethernet and broadband access to cloud-based applications using the internet as the transport network. Legacy architecture, such as MPLS, will continue to decline.
- Fixed wireless 5G LTE technology will be used to supplement SD-WAN access and replace lower-speed broadband connections where available.
- WAN security is an important SD-WAN requirement and will be an element of the appliance and service provider offering.

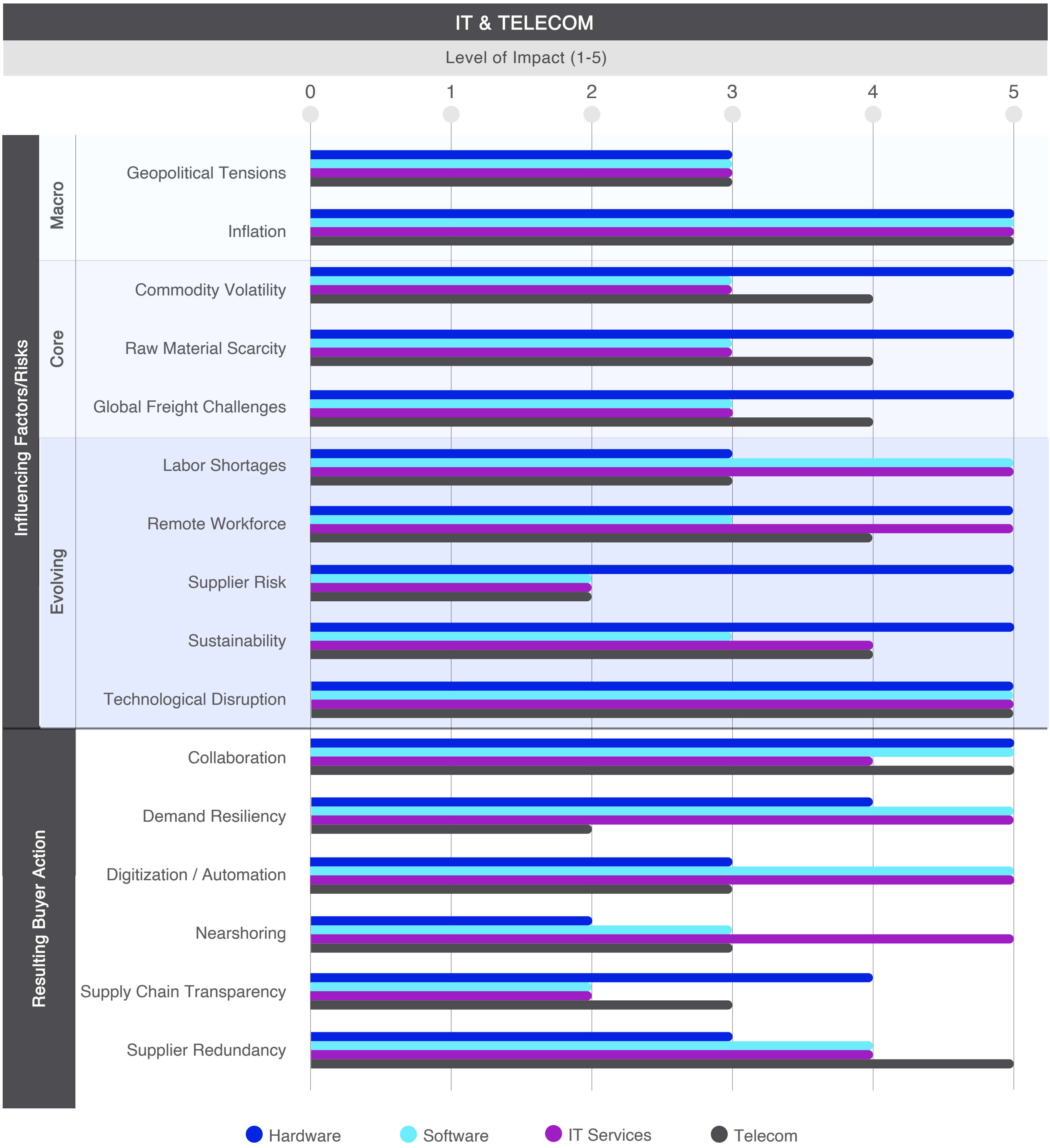
- There are several SD-WAN offerings from OEMs such as VMWare, Versa Networks, Silver Peak, and Cisco, offered through many partner and resale channels. Service elements include the appliance hardware and software license. Carriers and service providers offer managed services, which include the design, deployment and on-going operations of the SD-WAN.

Sustainability

Most enterprise IT providers have developed goals and mission statements surrounding environmental and social sustainability, many of which include aggressive targets to bring about change. We encourage procurement professionals to carefully review and compare these goals to those of their organization, then partner with key strategic suppliers to enact positive change.

GEP has seen increasing interest in sustainability efforts across multiple areas in the IT space. Some of the areas where we see the most traction include print/document output, data center and on-premise energy efficiency optimization, and the inclusion of diversity partners in the value-added reseller & IT professional services spaces.

IT procurement is uniquely positioned at the center of IT and business unit technology purchases. In the same way that this creates opportunities for collaboration and rationalization across business functions, it also makes it possible to identify new ways to drive sustainability solutions.


IT & TELECOM
Level of Impact (1-5)
0
1
2
3
4
5
Influencing Factors/Risks
Macro
Geopolitical Tensions
Inflation
Core
Commodity Volatility
Raw Material Scarcity
Global Freight Challenges
Evolving
Labor Shortages
Remote Workforce
Supplier Risk
Sustainability
Technological Disruption
Resulting Buyer Action
Collaboration
Demand Resiliency
Digitization / Automation
Nearshoring
Supply Chain Transparency
Supplier Redundancy
Hardware
Software
IT Services
Telecom

MARKETING

Marketing & advertising investments will see strong growth in 2022 as pandemic-driven changes become normalized and advertisers adapt to the accelerating digitization of consumers' path to purchase. The pandemic revealed the strengths, weaknesses and opportunities across every global supply chain, with vastly different impacts based on the industry. Brands had to develop and scale new products, services and delivery channels on the fly while dealing with demand surges and supply shortages.

Procurement has been critical during this period, as brands and suppliers have had to adjust contracts based on new demand patterns and source a myriad of new tools and services to adapt to new customer buying journeys.

Marketing agencies went through major layoffs during the pandemic due to large cuts in marketing budgets, and media suppliers saw major volatility in both supply and demand. Technology firms had to accelerate their pace of development by 3-5 years to satisfy the new demands of a socially distant society. As we settle into the new normal, the following list shows the top priorities for marketers in 2022, according to the Salesforce State of Marketing report:

- Innovation in Marketing
- Engaging Customers in Real Time
- Creating Cohesive Customer Journeys Across Channels and Devices
- Improving Marketing ROI & Attribution
- Improving Collaboration
- Improving Organizational Structures & Processes

Marketing procurement should focus on learning and sourcing the capabilities that enable brands to deliver on these priorities. They must evolve the creative supply chain to be more agile, cost-effective and growth-enabling in a world of personalization and omnichannel marketing. They must be able to see where customers are in their purchase journeys, reach them with timely, relevant content on any device or platform and affordably produce all the content needed. They also need to track, measure and attribute the performance of their marketing investments across all channels. Procurement should know where these investments are flowing and be involved in spending that money wisely.

Disruption in the marketplace has highlighted the need for well-thought-out sourcing and risk mitigation strategies and a new level of transparency and collaboration between brands and suppliers. A major power shift between workers and employers has pushed up wages, broadened remote work options and increased competition for skilled labor. This dynamic, along with disruptive technologies requiring new skills, is making it difficult for agencies and brands to fully staff teams.

Since mid-2020, diversity & inclusion in advertising has gained and lost momentum as advertisers rushed to increase inclusion across all aspects of marketing, including talent, suppliers and content. Procurement, which typically owns the diverse supplier agenda, should take action on inclusion commitments by leading sourcing initiatives that proactively include and spend budget with diverse suppliers and publis hers to further their development.

Agency Management

The pandemic squeezed brand budgets to levels never seen before, resulting in major layoffs in marketing agencies and a shift to a remote work model. This sparked a surge in the use of collaboration and workflow tools that enabled agency teams to successfully work from home, causing more agencies to adopt hybrid staffing models to improve staff retention and reduce overhead costs.

To improve quality of life, many creatives are choosing the flexibility of freelancing rather than going back to full-time office jobs; 18.5% of all content marketing positions are now fully remote.

Another key driver of change at agencies and brands is the automation of tasks and the use of artificial intelligence to improve workflows, creative development, audience building, campaign planning and performance monitoring. Those who have not pursued automation are struggling to maintain digital offerings, seeing workforce fatigue and experiencing high attrition. According to Gartner, brands moved 29% of their pre-pandemic work to in-house agencies, putting further pressure on agency income statements.

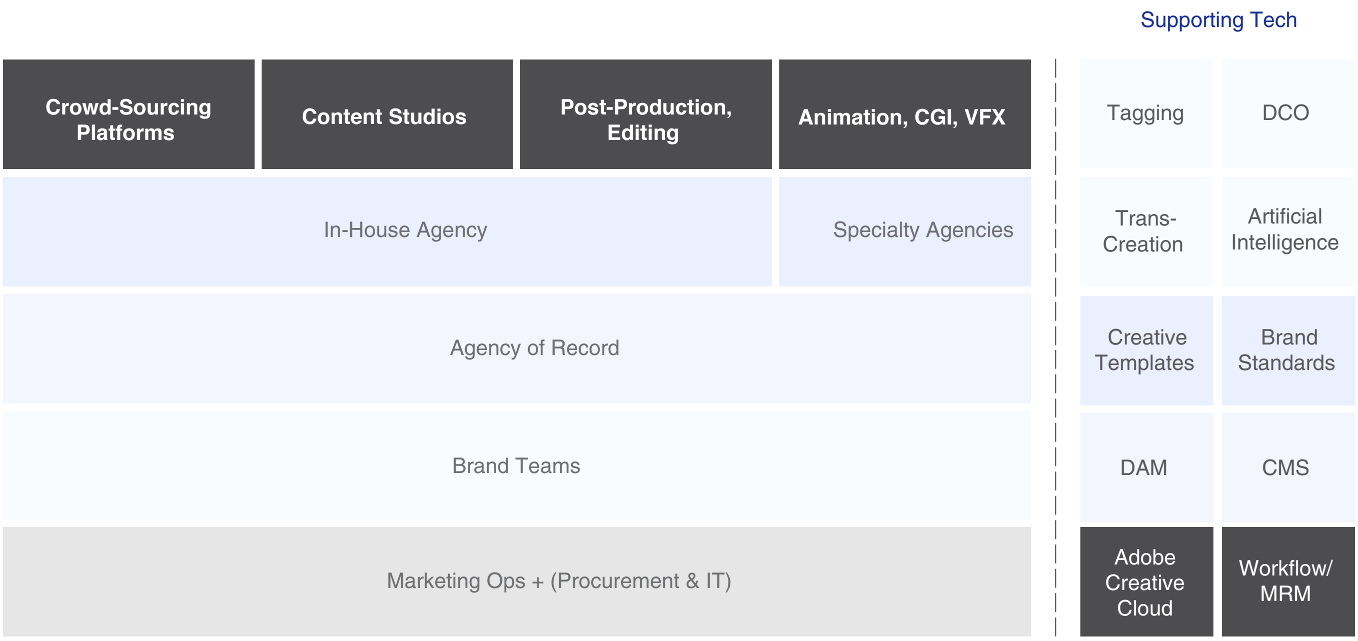
Now more than ever, procurement should be adopting “agency relationship management” best practices to drive agency performance and eliminate wasteful activity. Setting contractual KPIs tied to predictive in-process metrics and business outcomes, and then tying them to incentive payments, can be an effective way to maximize value and develop strong agency partnerships.

Creative/Content Marketing

The creative services industry has seen many new entrants that are challenging the conventional agency model. There are now production decouplers, global content studios, professional crowd-sourcing platforms and outsourcing partners who build and run in-house agencies for brands. These providers offer quality content with agility and cost-effectiveness, and should be integrated into creative supply chains.

Procurement should tap this “new creative economy” to assemble a robust and agile set of partners for different scopes, timing and budgets. A common model is to reduce the scope of work for the creative AOR down to Tier 1 insights, strategy and creative while tapping more cost-effective players for Tier 2 and 3 creative, content production, social media management, etc. Use the Creative Services Stack image below as a reference point for understanding the key components of a robust creative supply chain:

The Creative Service Pack



Source: GEP

Production

Video is the fastest-growing and most effective format in advertising across all channels and devices, so there is increasing demand for production services. This is a sensitive area for marketers and agencies when it comes to their anthem productions; they have a lot invested in their ideas and how they come to life on film, so they typically don't want the procurement team 'haggling' with their agency and putting the quality of the final product at risk.

Procurement can add tremendous value to the production process by taking a holistic category management approach that drives smart decision-making, transparency and better outcomes. First, identify all sources of cost and waste across each stage of the production and build a decision-making framework for all creative choices that impact cost and timing. This forces marketing to make and justify conscious choices on items such as talent, location, visual effects, etc.

Procurement should also establish preferred vendors and rate cards for the full range of film production services consumed regularly, using a triple-bid selection strategy. They can create a roster of vendors from the new creative economy to cover the full range of film requirements below Tier 1 video, like social media and 'how-to' videos.

Film production is entering a new era of virtual and augmented realities thanks to the emergence of new, sophisticated technologies. Artificial intelligence and machine learning are driving improvements in speech-to-text captioning, storage costs, video assembly, video compression, color grading, lighting and rendering.[165] Virtual productions are in big demand and require new skillsets. Procurement should learn how these new tools are being used by their suppliers and ensure the value is being fully realized.

Stealth Tip

Use a tool like Octerra to manage third-party productions:

- Single workflow shared across all involved parties
- Vendor roster to match with 'best-fit' producers
- Share creative briefs and other documents
- Dynamic bidding allows multiple proposals simultaneously
- Contracting and payment for all productions
- Tracks diverse supplier spend
- Single source of truth production cost database
- Provides full audit trail

Procurement can round out its creative supply chain by tapping other players in the new creative economy. Brands can typically move 40%-80% of external work in-house and save 25%-40% on that work. They can also put rate cards in place with other crowd-source platforms like Contently and NewsCred, which have global networks of professional writers and journalists. They can also tap global content studios like Creative Drive, which has a network of creative studios that produces consistent global content campaigns. Procurement should also look at U-Test, which taps a global network of tech-savvy first movers to conduct user testing of new digital experiences.

Each of these players has different core competencies and can play different roles in your supply chain, and cumulatively should give you access to most of the creative resources you'll need to meet all of your content needs.

Paid Media

Paid Media is experiencing significant volatility, driving new risks and promoting creative buying. Unique supply and demand factors and inflation are driving prices higher. Controlling media costs has become more challenging as the pandemic immediately cut ad space from canceled TV programs, sports, live events and movies.

This market also saw demand rise from new entrants buying ad space in both the up-front and scatter markets, which has increased demand and driven premiums over 270%[166] in the scatter markets because of targeting and competition. Audiences are more fragmented and want personalized and useful marketing communications. As such, network and program offerings have scaled up their digital and programmatic offerings. Networks and agencies are implementing software to monitor their ad coverage and ensure it reaches their targeted audiences more precisely. While the pandemic drove price deflation across media — newspapers -7%, magazines -7%, radio -9%, TV -5% and OOH -2% — the resilience of the market, coupled with excited new entrants in the digital landscape, will drive inflation north of 3%.[167]

Consistently evaluating media suppliers' operational and financial risks is required to keep control of expected ad spend and ROI. Additionally, determining how media suppliers are driving their business across the multiple media channels will help clarify the impact of cost drivers and ensure ads maintain the expected exposure. Procurement needs to proactively inspect contracts and ensure target audience metrics and KPIs are tied to performance incentives or supplier evaluations.

Digital Marketing – (Owned & Earned Media)

The pandemic led to major shifts in the customer's path to purchase and the role that digital plays at each stage of the buying journey. This dynamic has accelerated the evolution of all digital channels by 3-5 years as they've scrambled to enable these new buying journeys in a socially distant society. Paid, owned, earned, shared and ecommerce channels are all key touchpoints along the buying journey, so brands need integrated campaign capabilities to effectively connect with consumers and convert them into loyal customers.

Brands should accelerate their time from research to actionable insights to keep pace with a fluid environment. They will need better data to improve audience building, segmenting and targeting. Brands must reimagine their creative supply chains to increase agility, capacity and cost-effectiveness in order to produce effective content. They will have to improve how they select, implement, integrate and operate marketing technology to execute better campaigns and improve cross-platform measurement and attribution to inform better decision making and ROI.

Marketing Procurement can play a key role in creating and executing the sourcing strategies to build and manage these capabilities and play an advisory role to marketing leadership. To do this effectively they should build market and functional expertise in key categories by reading whitepapers, getting vendor demos, joining webinars, and talking to stakeholders. This knowledge will enable marketing procurement professionals to lead the sourcing process from a position of strength. They should focus on the following:

e-commerce

The IBM U.S. Retail Index projects that the pandemic accelerated the shift to e-commerce channels by five years,[168] evidenced by a 34% YOY increase in online spending in early 2021 vs. 2020.[169] This shift prompted the rapid development of many new capabilities to support that demand and accelerated the paid retail media options for brands.

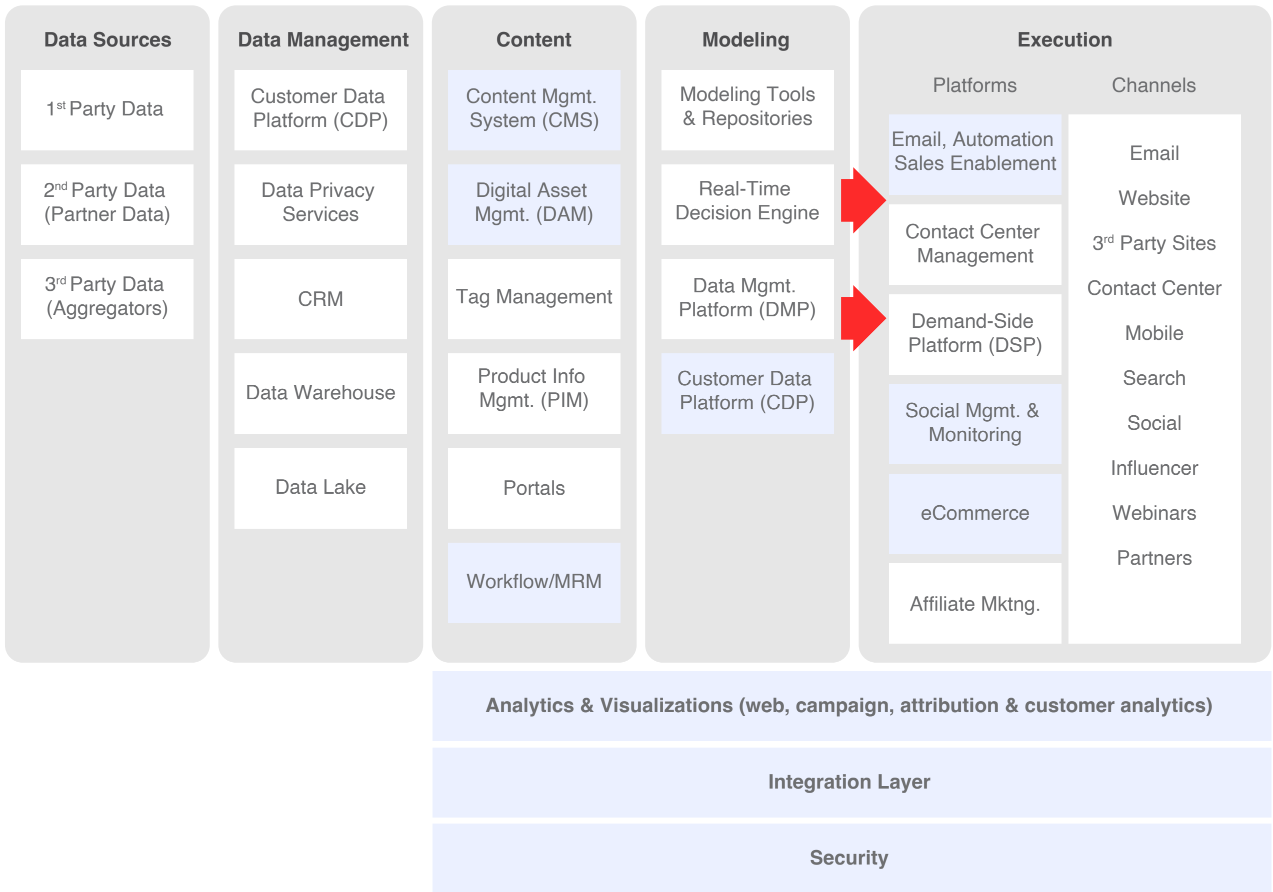
Brands must stay on top of trends like voice search and augmented reality to remain competitive. They must have mobile-optimized digital experiences to support the large role that mobile plays in the shopping journey. They should also consider subscription models and new payment methods like "Buy Now Pay Later" as well as expand customer support and fulfillment options.

Furthermore, brands need tools for real-time analytics and machine learning to optimize operations. Procurement should align with the e-commerce team to understand the tools and services that are most needed to support the business's goals.

Nano-marketing is an emerging e-commerce trend that uses AI-based research on consumer trends and buying habits to create customized online boutique shopping experiences as an alternative to the online big-box retail experience that caters to all at once. Procurement can utilize research firms with this capability to gain competitive advantage.

Marketing Technology

A high-functioning MarTech stack is key to success in the modern environment. Marketers in 2022 will select tools and data sources based on how well they support the brand's user stories and customer journeys. Learning the role, functionality and impact of each tool in the stack will give procurement more influence over the strategy, roadmap and vendor choices. Brands should select software that is built on modern coding standards like microservices and hypergraph databases. Below is a reference architectural diagram for a typical MarTech stack:



Source: GEP

Marketing procurement can play a lead role in building the MarTech stack by designing a highly effective selection process that includes the following features:

1. A budget allocated by the CMO to fund the work and building of the stack
2. A selection team and steering committee with all key user groups represented with clear roles
3. The proper discovery of current state – technology, data, integrations, talent and workflows
4. Developed user stories and customer journeys that describe how marketers do their jobs and how they will use the tool, along with any other functional and technical requirements
5. Vendor demos and proposals based on the user stories and journeys to show how well they support specific needs
6. A clear rating and decision-making process that gives appropriate weight to key users based on their roles

Procurement should also align with the head of marketing operations, as they are the conduit into marketing decision-making. By assisting in the building of an agile, cost-effective creative supply chain and a high-performing MarTech stack, procurement can help stretch the budget further and improve ROI on marketing investments.

Stealth Tip

Marketing operations should be seen as a key partner to procurement in operationalizing the sourcing strategies that support digital marketing. A tight alliance will lead to better decisions and business outcomes.

Market Research

As a result of the pandemic, brands are investing in new research to understand the shifts in the customer buying journey so they can adjust their marketing strategy. At the same time, research and technology providers have had to rethink how it gathers audience insights in an appropriate socially distanced way.

Traditional research projects are labor intensive, time consuming and expensive. Brands need real-time feedback from their research and data to get actionable insights, track sentiment and build personas, audiences and customer journeys that inform strategy. Brands should also invest in building an online customer community to conduct direct research to lower research costs, shorten the time to insights and enable a zero-party data strategy. The following list illustrates the type of research that can be in-housed with platforms like Qualtrics and Jebbit:

- Voice of Customer
- NPS
- Digital CX
- Brand Tracking
- Ad Testing
- Employee Engagement
- Pricing Research
- Market Segmentation
- Concept Testing
- Surveys, Research & Insights, Conjoint Analysis
- Online Sample

AI and ML are changing research in fundamental ways, improving on time, costs, application and distribution. Timelines can be reduced from weeks and months to hours and days, making it possible to apply AI-driven research to day-to-day decision-making. These capabilities can be a source of value and competitive advantage for brands, particularly in the FMCG, retail and food service verticals.

Procurement should work with research stakeholders and suppliers to develop solutions that leverage these advanced capabilities, focus on specific business challenges and offer faster turnaround times. They should leverage mobile, video and other survey tools that give respondents a better user experience through feedback and reach broader and more diverse audiences to get better research samples and create new opportunities in terms of the types of projects that can be undertaken. Technology will fundamentally reshape the market research sector in 2022 with tools that unlock greater levels of insights and value, and procurement should play a key role in sourcing these capabilities.

Data & Analytics

Good data improves audience building, targeting and media buying efficiency; powers personalization; increases accuracy and trust; and enables better decision-making. The chart below shows the various types of data sources used to build B2B customer profiles.

B2B Data Sources

Demographic	Firmographic	Technographic	Chronographic	Quantitative	Qualitative
Name	Company Name	ID's technologies that the employee/ company is using	Location Move	Website browsing/ clicks	Social media activity
Age/DOB	Company Location	Device ID/Cross Device Matching	Job join/leave	Web form & survey completions	Notes from previous conversations
Email Address	Industry	IP Address	Company Funding	Event appearances	Questionnaire completions
Social Media Handle	Number of Employees		Company IPO	Email open rates	Product Feedback
Phone Number	Company Revenue		Company Acquisition	Email opt-ins	Preference Data
Location			Company event appearance	Click-through rates	
Mailing Address			Company hiring	File Downloads	
Employment History				Current customer information	
Skills					

Source: GEP

Accurate real-time insights, effective audience-building and personalization skills are essential for competitive advantage in the modern environment. The deprecation of third-party cookies and Apple's mobile ad ID known as IDFA (ID for Advertisers) will change how targeting is done. Marketing will increase the number of data sources it uses by 40% in 2022, despite saying their top challenge is the manual integration of disparate data sources and poor quality of many third-party data sources.[170] Brand should be moving towards a 'zero-party' data strategy to improve data performance and privacy compliance.

Data Maturity Model

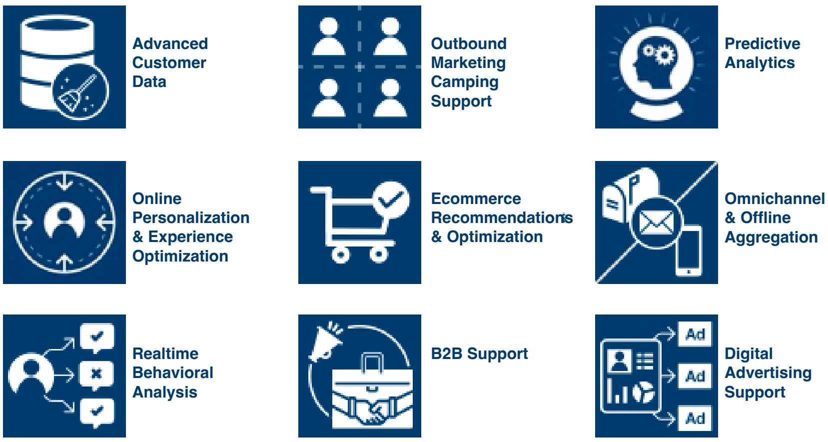
	Getting started	Laying Foundation	Leveraging Data	Tactical Excellence	Strategic Function
Data Gathering & Storage	Data in spreadsheets	Sales Automation Platform in use	Add Marketing Automation	Expert use of automation tools Automated data gathering from multiple sources Investment in a data repository	Unified Data available across stack Sales activity used for analysis and forecasting 3rd party intent data part of scoring
Data Quality	Manual ad hoc data cleansing	Annual cleansing A few key fields like state and number are standardized Uses data provider to enrich data	Data cleansed twice per year manually Uses more than one enrichment vendor Regularly purging & de-duping records Patchwork of data quality & Mgmt. tools	Single platform for data quality & management Finely-tuned data enrichment strategy Data is normalized & unified Governance standards widely implemented and automated Database can be easily segmented	Data optimized for each business process vs. "single view" Able to leverage open & public data sources Data Steward assigned
Funnel Management	Manual management in a spreadsheet	Sales funnel tracked in CRM Process for hand-off from Marketing to Sales	MQL, SQL, SAL are in active use Accurate funnel stages are maintained Basic behavior and demo scoring	Lead w/missing fields autoflagged & fixed SLA's for funnel stages in place (Mktg+Sales) Ideal Customer Profile used to qualify leads Buying Centers introduced	Pipeline modeled for each buying center BC's scored to drive account penetration Database whitespace analysis Prospect models Lookalike analysis

Source: The Data Governance Institute

Procurement should align with analytics and marketing operations on sourcing the capabilities to build an effective data strategy. They should organize demos for marketing, analytics and IT stakeholders of tools that manage data quality and automate the ingestion, cleansing, normalizing, integrating, enhancing and activating of the data. Procurement should also develop a method for assessing third-party data source quality and weeding out low-value sources. They can also refer to the Data Maturity Model (on page 95) to learn how an enterprise should grow its data capabilities over time and plan supporting sourcing activities.

Procurement should pay also particular attention to Customer Data Platforms (CDP), a core component of a high-performing MarTech stack, and learn how to differentiate the solutions on the market before any sourcing event occurs. There are over 100 vendors that claim to have a CDP, so procurement must know the business's needs and primary use cases in order to select the best CDP.

CDPs are the key to managing and activating your customer profile data but they specialize in different areas:



Source: CMSWire

In a world where third-party cookies go away and 85% of iPhone users don't allow apps to track their online activities, brands should consider using online platforms to build a direct research community and activate a "zero-party" data strategy. This will improve audience building and targeting capabilities. Zero-party data is compliant with privacy regulations and thus serves as a risk mitigation strategy. Procurement needs to understand data structuring requirements and specialized workforce requirements (i.e., data science), and that speed is key for driving analysis.

Measurement & Attribution

Cross-platform campaign measurement and attribution are critical capabilities for brands to harness to make better marketing investment decisions, and the digital media landscape presents a myriad of measurement challenges.

How should brands respond to these challenges? First, they must invest in sound data management practices and measurement and attribution capabilities. An example: Building a “zero-party” + “first-party” data strategy is a critical response to Google Chrome phasing out third-party cookies and Apple’s IDFA, which require a user’s consent to have their activities tracked. Second, brands should invest in an “identity resolution” solution to connect disparate data sets and build good customer profiles. Third, they should increase spending on “contextual” advertising and look at the new Project Pegasus solution developed jointly by Google and Essence, which uses publisher data, AI and image recognition to serve contextual ads without using consumer data.

Procurement should also become familiar with marketing-mix modeling and attribution tools on the market, understand their enterprise’s commitment to investing in these capabilities and engage suppliers in the space to educate stakeholders on how these models work, and what investments in tools and talent would be required to build an effective measurement and attribution strategy.

Event/Experiential Marketing

The pandemic has caused attrition and consolidation among providers in the conference and event space at all levels. The industry began to slowly rebound in 2021, and it will continue to do so into 2022. Remaining firms will be spread thin as demand rebounds. Issues finding venues, lodging and logistics will drive down capacity for in-person events and, in turn, potential revenue, which could deter growth in the short-to-medium term. Moreover, the fear of travel will make hybrid events a common practice going forward, which will expand audiences but may also increase production costs.

Procurement should learn new hybrid event best practices and technologies and find the most advanced players in the space to secure both capacity and favorable deal terms. They should partner with an experiential marketing team to design new specifications and guidelines for effective virtual and hybrid brand experiences.

Promotion and Fulfillment

Demand for consumer sampling, in-store promotions, and POS displays has declined over the past two years. Prices for these in-store direct marketing activities are now rising, mainly due to a shortage of labor resources increase in material costs, Brexit impact with brands outside the U.K. needing to look for alternative suppliers, increased border taxes, and increased logistics costs due to higher fuel costs and a shortage of truck drivers.

To succeed in marketing fulfillment, organizations must deploy the right tools that empower efficiency, automation and fast turnaround times. The increase in stay-at-home orders boosted e-commerce and made fulfillment even more important. Increased online orders resulted in greater challenges of keeping shelves stocked and deliveries on time. This has resulted in accelerated automation and modernization of the direct marketing and fulfillment industry.

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We predict more customers will return to the traditional ways of shopping and interacting with brands within brick-and-mortar retail units. Thus, there will be a steady increase in in-store direct marketing activities like POS, in-store promotions and consumer sampling. With the return to increased capacity for PR events, trade fairs and conferences, direct marketing can eventually return to normal. Although the pandemic has disrupted both direct marketing and fulfillment activities, it has also brought about and accelerated different ways for brands to carry out direct marketing activities.

Marketing Sustainability

Consumers, employees and investors are increasingly aligning with purpose-driven brands that have strong sustainable and ethical business practices. Investors know that businesses that focus on sustainability by focusing on the 3Ps — people, planet and profit — deliver long-term growth and shareholder returns.

Measuring and understanding their company's sustainability goals helps brands be more authentic and effective in their communications as they focus on social and human capital issues like customer privacy, selling practices, product labeling, employee engagement and diversity and inclusion.[171]

Procurement should find communications agencies with a strong track record of developing successful sustainability campaigns and crisis management to work on their firm's sustainability messaging.

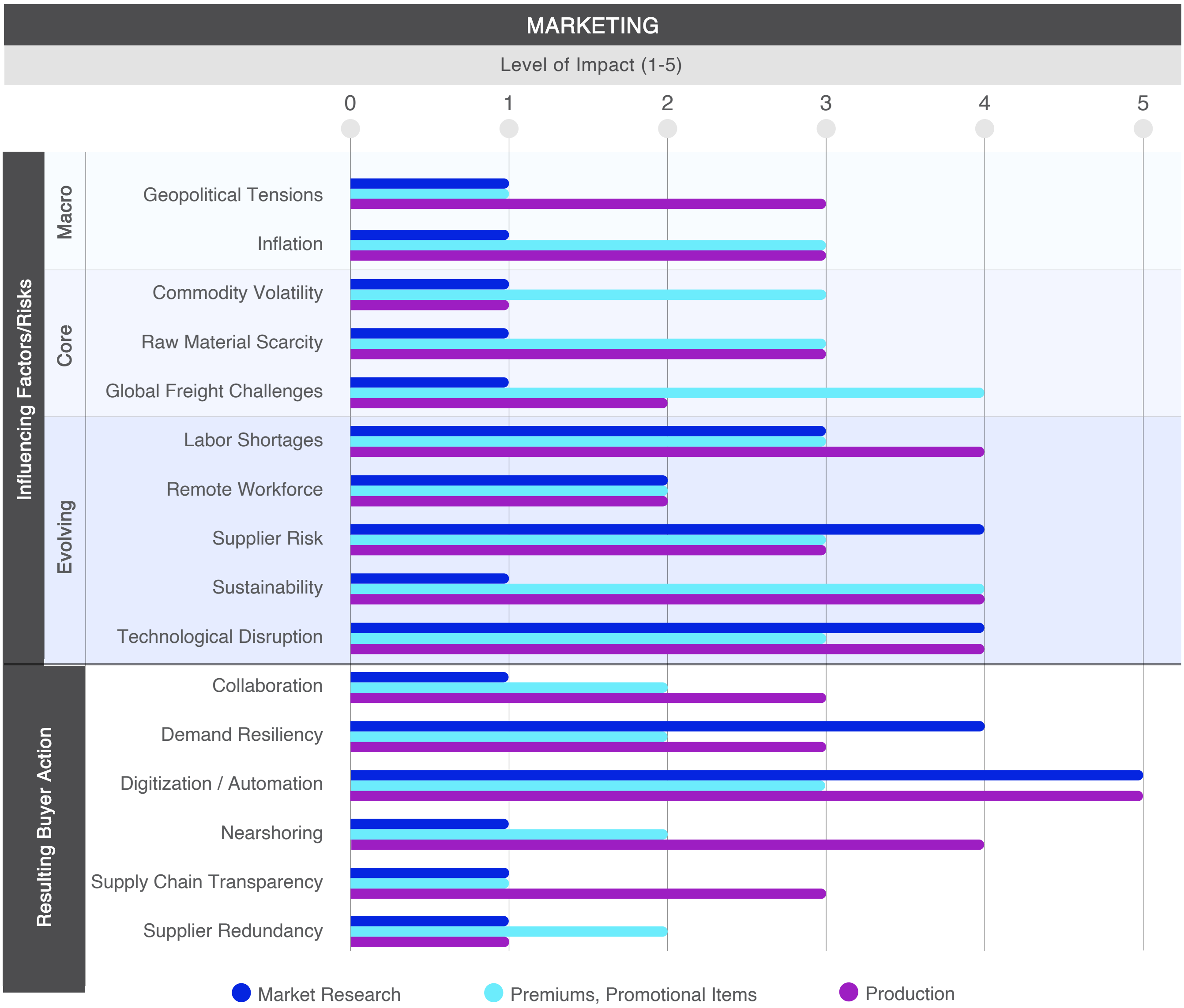
They can audit their supply base for representation in staffing, leadership and ownership as well as audit their creative work for representation. They can also audit their efforts to spend media dollars to find diverse audiences and spend with diverse vendors and publishers. The Sustainability Accounting Standards Board's (SASB) Materiality Map can help procurement teams identify which ESG metrics correlate with their industry.

What to Expect This Year

Buyers must enhance collaboration to collect the required information to make informed decisions. They must research the market to understand current pricing and the top risks coming out of the pandemic. To do so, they must obtain information from other internal buyers, create strong relationships with suppliers and create evaluation criteria.

Organizations need to partner with suppliers to promote transparency. Controlling costs will always be the role of procurement and, today, promoting transparency with suppliers and agencies is more important than ever. The digital environment has brought increased risk. Enterprises can create more transparent relationships and better understand cost drivers by allowing suppliers to grow as they do. This will create stronger partnerships and ensure the expected and contract ROI is reached.

Supply chain and procurement professionals are upscaling protocols to vet, evaluate and monitor suppliers. Instituting processes to inspect supplier fragmentation across media channels is necessary to maintain adequate supplier bases in volatile markets. Procurement needs to understand and routinely monitor the financial, operational, legal and supply chain risks of its suppliers. One of the most important requirements for 2022 is the need to evaluate and understand the risks of the supplier's supplier. Procurement must comprehend the complete supply chain to understand how shortages in raw materials, logistics concerns or the fall of an organization may impact their company.


MARKETING
Level of Impact (1-5)
0
1
2
3
4
5
Influencing Factors/Risks
Macro
Geopolitical Tensions
Inflation
Core
Commodity Volatility
Raw Material Scarcity
Global Freight Challenges
Evolving
Labor Shortages
Remote Workforce
Supplier Risk
Sustainability
Technological Disruption
Resulting Buyer Action
Collaboration
Demand Resiliency
Digitization / Automation
Nearshoring
Supply Chain Transparency
Supplier Redundancy
Market Research
Premiums, Promotional Items
Production

MAINTENANCE, REPAIR AND OPERATIONS

The global MRO market is facing a variety of challenges as it enters the new year. While there has been a resurgence in demand for MRO in the last few quarters, supply has not been able to keep up with the demand.

The global MRO market is today marked by supply chain disruptions, high commodity prices and high shipping and logistics charges, raw material and labor shortages, wage rate increases, and pandemic-driven factory and port closures.

All of this is contributing to significant supply continuity issues and inflation for MRO supplies and services.

These supply chain challenges are expected to continue until the end of 2022, but their severity will ease off through the course of the year.

Customers can mitigate these challenges through stronger supplier relationship management, renewal or extension of existing contracts for the near term (2022), controlled price increases that are in accordance with inflation levels, implementation of alternative items and suppliers where possible, effective demand forecasting and management, restructuring of supply chains (nearshoring, for example) to improve parts availability and lead times, amongst others.

From a technology standpoint, the pandemic-induced remote work and limited access to facilities will continue to accelerate the adoption of smart technologies and digital tools for many aspects of MRO management (ordering of goods, lead time reduction, increased parts availability, inventory management, maintenance planning and provision of maintenance services). These technologies include 3D printing, IoT sensors, AI, augmented reality and robotics. There is also a strong push toward predictive maintenance. There has also been an increased adoption of e-commerce and e-marketplace channels for MRO purchasing. MRO providers are developing/upgrading their offerings in line with the above trends as well.

Lastly, sustainability is an area of increasing focus for organizations, and we will see a shift toward deployment of green solutions in both MRO customer and service provider organizations.

MRO Supplies: Global Insights

The MRO supplies industry is expected to achieve moderate growth in 2022 with supply continuity challenges, mitigation of price increases and the adoption of new technologies and e-commerce.

Supply Disruptions

The COVID-19 pandemic has led to challenges in parts availability and supply continuity globally. We have advised customers to address these issues by establishing stronger supplier relationship management processes, evaluating substitute items and suppliers, effective demand planning, and use of demand management automation tools.

3D Printing

Usage of 3D printing technologies has been an ongoing trend in the MRO space for several years. The utilization of 3D printing platforms is expected to accelerate in 2022. We can see a competitive advantage primarily in prototyping and customized parts production. Reducing lead time, logistics costs and inventory requirements, avoiding supply disruptions, design enhancements, and product customization are key benefits of this technology. The biggest challenges to adopting 3D printing technology are cost and limitations in producing at scale. Some of the global providers have increased investment in 3D solutions for MRO and OEM spare parts. This allows their customers to take advantage of the 3D printing capability available in the supply chain, leaving out investments needed for in-house 3D printing solutions. The ability of 3D printing technology solves many MRO-related challenges.

E-commerce and E-marketplace Channels

There is an acceleration in the adoption of e-commerce by MRO distributors, wherein more distributors are providing online ordering facilities. This is supported by the availability of cheap online platforms and improved data capabilities. The share of revenue for distributors from e-commerce channels has been steadily increasing.

Similarly, e-marketplace channels are a compelling proposition for MRO buyers because of easy ordering and the huge assortment of stock keeping units available with some providers. Overall, players adopting e-commerce are expected to take away market share from traditional distributors. MRO buyer teams should consider using these channels for purchasing non-contracted parts.

MRO Supplies: North America

For the past several years, an increasing number of MRO components used for manufacturing operations in the U.S. are being obtained from overseas, primarily owing to lower labor costs. But this also adds to supply chain complexity and risk. A significant number of components are being built in Asia. And consequently, the impact of supply chain challenges is greater in western geographies such as North America.

There were many supply chain challenges in 2021, causing huge disruptions. The prices of shipping containers have shot up. The cost of transportation within the U.S. has also increased substantially. COVID-19-related factory shutdowns and port closures have impacted part availability. Many manufacturers are experiencing raw material shortages. Labor shortages have caused disruptions at various points in the supply chains (like delays in unloading of material at ports). Labor shortages are expected to sustain in the near term.

Inflation: Metal price indices reached record highs in Q3 2021. Similarly, steel prices have seen an upward swing; coal shortage is also impacting steel prices. All this has resulted in significant price increases from MRO parts manufacturers and MRO distributors. There have been double-digit price increases for many MRO item categories.

These challenges have led to overstocking by high-spend customers, with distributors prioritizing these customers. Some distributors and manufacturers have declared force majeure being unable to fulfill demand. This is adding to the complexity of supply chain challenges and causing more pain and increased risks.

Here are some strategies to mitigate these challenges:

- Work with distributors/integrators to gain more visibility into the supply chain/sources of products with possible mitigating options
- Develop alternative sources of supply from a different region/through nearshoring
- Identify substitute items as back-up
- Get better visibility into lead times
- Increase min/max levels based on lead times/criticality

To meet inflation challenges, ensure compliance to current contracts and pricing mechanisms. For contracts due for renewal, negotiate extensions of six months or renew for a maximum of one year.

MRO Services: Global Insights

In the last two years, the global repair and maintenance services market moved from a demand slump because of closed facilities, scope reductions, and freeze on capacity expansion to supply side troubles. Labor shortages, rising inflation and supply chain constraints have raised costs and impacted supplier capacities in most markets.

The MRO services global market is expected to expand at a compound annual growth rate of 7.6% in 2022.[172] In the longer term, we can expect accelerated growth driven by a robust investment forecast, stringent rules by regulatory bodies regarding equipment safety, emerging trends such as predictive maintenance (expected to grow at a CAGR of 26.1% between 2020 and 2027),[173] and organizations looking to defer new equipment purchases by increasing the uptime of existing assets.

The key global trends over the next year include

- **Labor market challenges:** Around the world, labor shortages associated with post-COVID restrictions and migration of employees are conspicuous. This has pushed up labor costs in some markets by as much as 10%, while others have been more resilient.
- **Growth in demand for predictive maintenance:** The growth is associated with the need to minimize maintenance costs and increase the uptime of assets. It is also associated with directives from organizations for lesser personnel presence in factories. This growth will be enabled by the availability of smart sensors and smart diagnostics, and their rapid adoption in production plants. Usage of AI-based sensors has significantly increased over the past few years for inspection and monitoring, and for improving productivity, quality and process consistency.
- **Use of industry 4.0 technologies:** With the rising influence of digital technology and automation in this space, services providers are scrambling to come up with digital technology solution-based business models in the next 1–2 years. In the long-term (over 5 years), machine learning, artificial intelligence, and other technologies, such as robotics and drones, have the potential to become standard and necessary components of advanced maintenance solutions.

MRO Services: North America

The North American maintenance services market is poised to grow at a moderate to high rate for the next 3-4 years, driven by rising levels of outsourcing, and the value proposition offered by service provider companies.

However, the path to recovery will involve considerable challenges in the short to medium term. During and after COVID-19, there has been a shortage of labor in North America that is expected to continue until the end of 2022. There is a record 9 million vacancies, and hiring has not kept pace with the requirements.[174] Limited international migration and a wave of retirements and mismatches in the labor market will keep fueling this trend into 2022.

The shortfalls in labor have led to a progressive increase in the bargaining power of labor, putting sustained upward pressure on wages and pushing average hourly wage rates up by 3.6% to $30.40 in June 2021 compared with June 2020. That was the biggest wage spike since January 2009, according to the Economic Policy Institute. Meanwhile, consumer inflation jumped to 5.4% over the same period — the highest since August 2008.[175]

To guard against labor shortages and inflation, many organizations are postponing non-critical maintenance activities and capital investments in new equipment until the end of 2022. This will come with increased dependence on existing equipment. Uptime of the existing equipment can be increased by investing in predictive and preventive maintenance as well as refurbishment.

In the short to medium term, the primary focus of sourcing organizations should be on ensuring business continuity. Companies will benefit from long-term supplier relationships that will ensure continuity of services from their long-term partners and controlled price rises. In some cases, it may be helpful to extend existing contracts until the beginning of 2023.

Companies entering new business relationships need to ensure supplier commitment through appropriate insurance covers, key performance indicators and service-level agreements, emergency lead times and labor turnover.

However, duration of the contracts awarded at current high prices needs to be carefully chosen. Procurement teams must build an annual price increase cap indexed to labor inflation levels into these contracts to protect themselves from unfounded price rise requests from suppliers.

Another key trend in North America is the growing use of robots in manufacturing and non-manufacturing environments, like hospitals, where automatic guided vehicles transport food, linen, and hospital stores in a safe, hygienic, and efficient way. Adoption of these technologies will only grow in the future and providers will need to expand their expertise to offer maintenance services for such equipment as it starts falling out of warranty.

MRO Supplies

The obvious risks associated with MRO supplies currently are commodity price increases, which we have observed to peak over the last two quarters of 2021. We can see increases in almost all types of raw materials used in MRO, but especially so for steel and metal commodities. We have also seen significant challenges associated with the global air and ocean freight market and consequent price increase. Strengthening collaboration with vendors through SRM, effective demand forecasting, automation, and contractual coverage will help in overcoming these challenges.

MRO Services

In many locations around the world, we are seeing labor shortages associated with restrictions due to the pandemic and migration of employees. Also, the COVID-19 situation has caused limitations on the free entry of service providers to clients' facilities to provide value-added/inventory management services. Clients should maximize the opportunity for robotization, AI, and usage of other digital tools to reduce human intervention. These measures should help increase the cost-effectiveness and reliability of these operations.

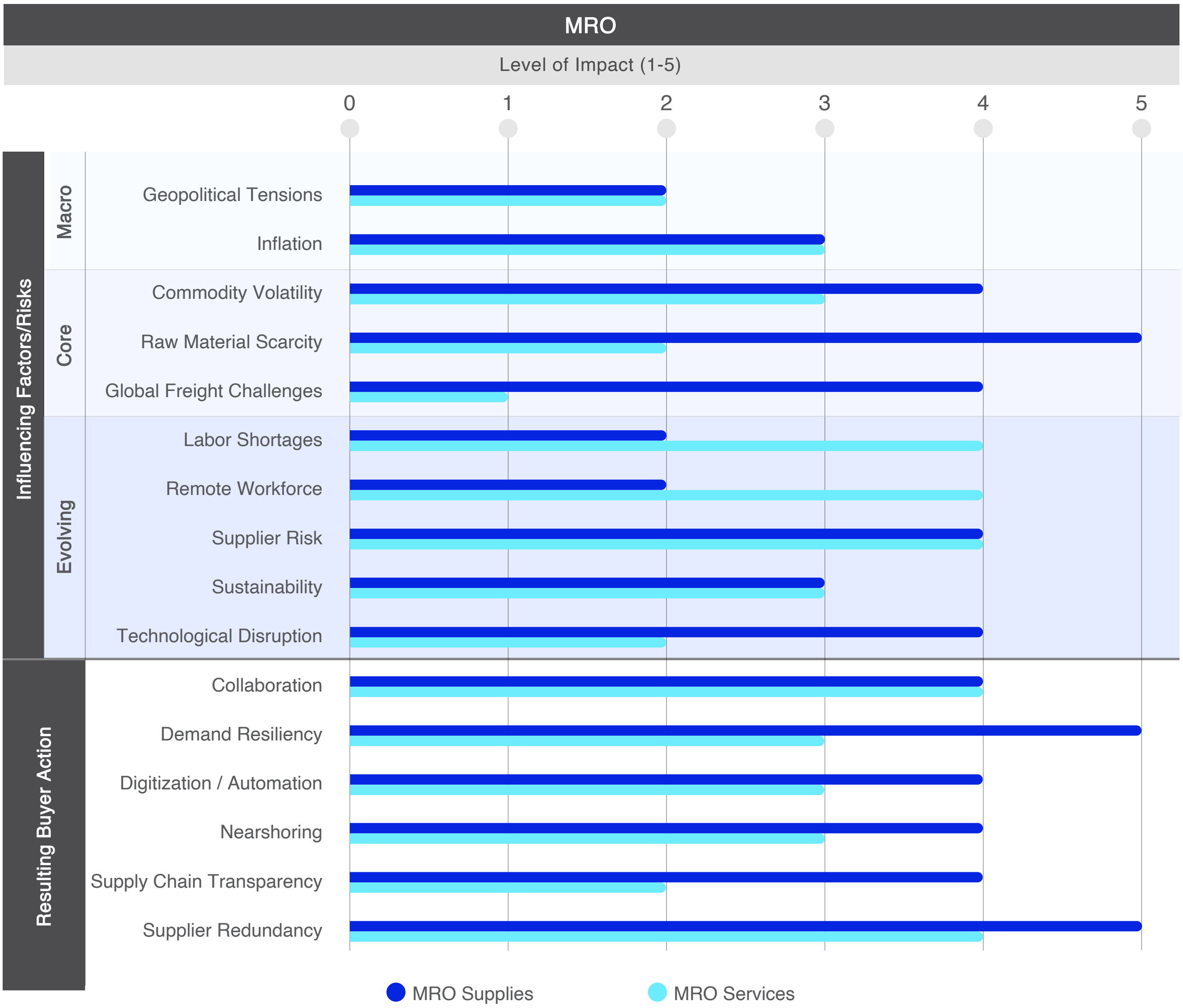
Sustainability

Organizations will continue to increasingly focus on sustainability goals in the coming years, and this is no different when it comes to consumption of MRO products. Customer organizations should look to work with suppliers incorporating sustainability measures in their supply chains and manufacturing processes and bringing new sustainability solutions to customers.

Following are some of the ideas that could be explored and implemented to achieve these goals:

- Identifying value levers to optimize material consumptions as well as energy usage by driving efficiency measures across the supply chain.
- Focus on refurbishment instead of new parts consumption allows for cost reduction and expansion of the lifecycle of products. Products like valves and cutting tools are good examples of products that could be considered for refurbishment programs.
- Innovate and conceptualize low-carbon supply chain opportunities by establishing category management around low-carbon materials and services.
- Deployment of energy-efficient premium motors (termed as NEMA motors in the U.S.) to achieve energy consumption reduction by up to 70% (throughout the operating life of a motor), when compared to a standard motor.

On the MRO services front, the growing awareness of sustainability will significantly impact the market's value propositions and service needs. MRO services need to evolve to match sustainability needs, such as minimizing water, energy, and material use, reducing impact on the environment, increased recycling, and the impact of services on human health. Service providers are pushing for service innovation, new value propositions, and better business models that incorporate sustainability and energy efficiency as key themes. Manufacturing companies seeking support from their MRO services suppliers on their journey toward sustainability can benefit from these green offerings. Although there may be a short-term cost impact due to sustainability practices, these will bear dividends in the longer term.


MRO
Level of Impact (1-5)
0
1
2
3
4
5
Influencing Factors/Risks
Macro
Geopolitical Tensions
Inflation
Core
Commodity Volatility
Raw Material Scarcity
Global Freight Challenges
Evolving
Labor Shortages
Remote Workforce
Supplier Risk
Sustainability
Technological Disruption
Resulting Buyer Action
Collaboration
Demand Resiliency
Digitization / Automation
Nearshoring
Supply Chain Transparency
Supplier Redundancy
MRO Supplies
MRO Services

RESEARCH & DEVELOPMENT

Over the past 12 months, R&D leaders around the world have been in risk management mode to protect their people, customers and enterprises.

A particular vulnerability of R&D that the pandemic has exposed is in the supply chains, which have been stressed hugely because of overwhelming demand from the health care sector, as well as the need for nearshoring critical supplies and services.

As economies transition into the next normal, signs of industrywide growth are starting to return. R&D organizations are applying hard-won lessons learned from an extraordinary time. Business leaders are now striving to accelerate delayed R&D activities, leveraging digital technologies to reimagine R&D procurement as the forefront that can lead efforts toward a sustainable R&D strategy.

However, certain trends that procurement professionals are experiencing have been visible even before the pandemic, and have drastically changed the way organizations look at the road ahead.

R&D Supplies and Services: Market Size and Trends

Parameter	Sub-category	
	R&D supplies	R&D services
Spend	$64.4 B[176]	$44 B[177]
CAGR	4%[178]	8% from 2021 to 2025[179]
Highest spend contributing region	North America	North America[180] (~ 45% contribution)
Fastest growing region	Asia Pacific	Asia Pacific [181] (CAGR 11.2%)
Demand	↑	↑
Supply	↑	↔
Pricing	↑	↔

There are three key trends we observe in the R&D space.

The first is patient-centricity and custom medications, i.e., the demand for low-volume, custom medications has shifted the focus away from the historic bulk production to multi-product facilities spread regionally or locally.

The second trend is the need for speed at which the product enters the market. Thus, research teams have been stressing not just new product development but also sustained competitive advantage through more timely launches.

The third trend has been the acceleration of R&D with digitalization, facilitating increased information sharing.

R&D Supplies

Events of 2021 such as the Suez Canal blockage, harsh weather conditions in the U.S., significant increase in inflation, pandemic posed procurement challenges, disrupted supply chains have led to global shortages in the R&D consumables industry. Lockdowns, plant closures and export bans on certain materials led to global shortages and increased lead times for several key items, including sterile gloves and lab apparel, pipette tips, serological pipettes and PETG square media bottles.

However, several emerging trends fueled the growth of the R&D supplies industry.

Biopharma and life sciences industries have played a pivotal role in tackling the pandemic, which has translated into one of the biggest factors fueling R&D growth.

Significant investments have been made to upgrade lab infrastructure and equipment. These investments are expected to facilitate progress of the pharma lab equipment market globally.[182] With focus centered toward COVID-related pipeline in 2021, the product pipeline for non-COVID products has been pushed back.

In 2022, the situation is more optimistic. An expedited product pipeline is expected, leading to significant increase in the demand for lab equipment. This outlook has shaped the industry to become more resilient and agile.

In view of these trends, we highlight three emerging strategies:

Nearshoring

To gain cost efficiency, decreased lead times, increased control over business-critical supplies and reduced risks due to the inflexibility of just-in-time supply chains, life sciences companies are pivoting toward nearshoring. With operating costs rising in popular manufacturing centers like China and India, we have recently seen costs for freight skyrocket.[183] Shorter supply chains have become more cost effective, less risky, and more transparent leading companies to leverage nearshoring. Even in China and other Asia Pacific countries, companies would rather choose local manufacturing equipment or lab consumables because of long delivery times and shortage of imported raw materials, such as plasticware and glassware.

Increased Demand for Disposable Lab Equipment

Demand for disposable benchtop equipment has been on the rise because of increasing concerns over cross contamination and safety. Apart from benchtop equipment, single-use bioprocessing technologies are widely used as alternatives to stainless steel bioreactors and fermentation vessels in fine chemical and pharmaceutical manufacturing. Because of the benefits – cost optimization, risk mitigation of cross contamination and improvements in process speed – both large and small pharma companies are looking at single-use lab equipment as a viable option.[184]

Improved Forecasting and Inventory Management

While the R&D supplies industry traditionally has been a buyer's market, the paradigm has now shifted in favor of suppliers. The new normal requires buyers to proactively plan their requirements and collaborate with suppliers to ensure continuous supply. Consignment or vendor-managed inventory is leveraged to relieve R&D supplies inventory management burden and labor cost. This commitment and collaborative effort from both the buyer and the supplier have been seen as a response to the shortages and are expected to continue further.

Given the nature of this sub-category, R&D supplies have been severely affected by inflation, commodity volatility and raw material scarcity. This has been observed for specific lab consumables sub-categories where prices have increased because of increased demand and supply chain disruptions leading to lead time delays. These risks have been mitigated by innovative approaches through nearshoring, demand resiliency and creative inventory management. R&D supplies are a critical area for pharma, life sciences and health care organizations. So procurement organizations must implement these new collaborative engagement models to achieve constant supply and efficient turnaround times.

R&D Services

Deciding the balance between in-house R&D and outsourcing has been a challenge. However, to navigate current market constraints like R&D supplies shortage, inflation rates, and resource unavailability, we expect an accelerated demand for R&D outsourcing services in 2022. Companies are increasingly outsourcing non-core capabilities to contract research organizations (CROs) to reduce financial risk and gain competitive advantage by increasing speed to market of new products. CROs are also evolving from being additional research capacity providers to becoming strategic partners. Through the innovative use of digital tools, they are helping sponsors expand operations globally, optimize processes and manage risks effectively. This increase in the number of outsourced R&D projects, coupled with innovation in the industry, is driving market growth.

The supply market for R&D services is fragmented and is experiencing consolidation due to growing M&A activity. Some CRO giants have actively built new labs or merged with niche CRO players to enlarge market share and strengthen the partnership with strategic R&D organizations.

Despite the promising growth rate and opportunities, the industry is facing challenges like high attrition rates resulting in project delays. For example, the turnover rates of clinical research associates working for various CROs is nearly 30% in the U.S.[185] and even higher in Switzerland and China. Concurrently, the industry must deal with regulatory obstacles and data security concerns.

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To navigate these data privacy issues, labor shortages and market constraints, we highlight two trends the industry is heading toward:

Increased Adoption of Digital Technologies

CROs are making huge investments in digital technologies. These include cognitive tools (AI/ML), wearable sensors, connected devices, analytics, and blockchain, among others. These technologies, when used collectively, can revolutionize data collection, analysis, and response. They also mitigate privacy research concerns, optimize scientific staff utilization, improve patient experience, and help achieve efficiency in terms of reduced R&D project time and cost. For example, a leading clinical trial patient recruitment platform, Antidote, employs ML to make it easier for patients to enroll in the right studies and improve their experience. Patients fill a feasibility questionnaire and depending on the responses, the algorithm directs them to trials they are eligible for.[186] Bloqcube, a clinical trial software platform uses blockchain technology to ease data privacy concerns. It stores a large number of patients' electronic medical records and transfers them securely using Self Sovereign Identity (SSID) technology. It is tamper-proof with robust governance mechanisms.[187]

Decentralized Service Models

The adoption of these models enables R&D organizations to gain global expertise access. It also helps in achieving flexibility and agility by ensuring continuity of services. Decentralized clinical trials has become the new norm because of patients' disinclination to travel to clinical sites and avoid face-to-face interactions. These modifications from traditional clinical trials are patient-centric and bring various elements of clinical trials to the comfort of patients' homes rather than trial facilities.

Decentralized trials can be fully virtual or hybrid depending on the situation, and leverage digital technologies to obtain consent, and collect data for monitoring and diagnostics. A leading CRO service provider, IQVIA, is actively conducting fully decentralized trials engaging patients in 40 countries across 20 indications. This helps trial sponsors expand their reach by tapping into different geographies, diverse populations and difficult-to-reach candidates. It also accelerates patient recruitment, improves safety and quality, reduces complexity and study timelines.[188]

R&D services sub-categories have been affected mainly by workforce dynamics. Attrition has led to personnel shortage and the requirement to work remotely on different tasks has resulted in higher utilization and implementation of digital best practices.

Going forward, companies will focus on identifying non-core areas to outsource and optimize resources. In the current scenario, where R&D outsourcing is becoming a must-have rather than a "good-to-have" strategy, forging strong partnerships to meet long-term business requirements and embracing decentralization will be key.

Enabling Sustainability-Oriented R&D Strategy

R&D organizations are creatively working toward driving a sustainable approach to their supply chain models with environmental, social and governance (ESG) frameworks. They are working with their supplier base to become more efficient in their delivery while jointly reducing their carbon footprint and greenhouse gas emissions. They are also instituting methods to become more energy-efficient while increasing the use of renewable energy sources and reducing the use of plastics. The infrastructure of supplier partnerships enables a more mindful operation of precious and finite resource depletion, and higher commitment to socially and ethically engaging with original producers and small and minority-owned firms.

Many suppliers associated with life sciences companies are actively investing in ways to improve their EcoVadis ratings as a key indicator of sustainability and R&D procurement is at the heart of driving this change.

What to Expect This Year

As R&D organizations navigate volatile market conditions, their reliance on innovation has gained traction. Many countries, including the U.S., have proposed nearly 10% boost in R&D spending to stimulate global economic recovery.[189] This increases market pressure given that current trends are shifting from a buyer-driven market to a supplier-driven market making reliance on risk mitigation and ensuring supply as critical business needs.

As supply becomes more constrained, the ability to have dependable R&D supplies and services is critical. We foresee organizations jostling to secure supply to address the spike in demand driven by current market conditions.

Now more than ever, procurement and supply chain organizations supporting R&D must collaborate with key market participants, make short-term volume commitments, and secure dependable supply.

One popular approach to capitalize on this recovery phase is to boldly invest in innovation and R&D to develop new revenue streams through products and services. Companies that boldly commit to investing in R&D to develop competitive advantages are setting up significant barriers to entry and developing their own moats to effectively navigate global volatility.

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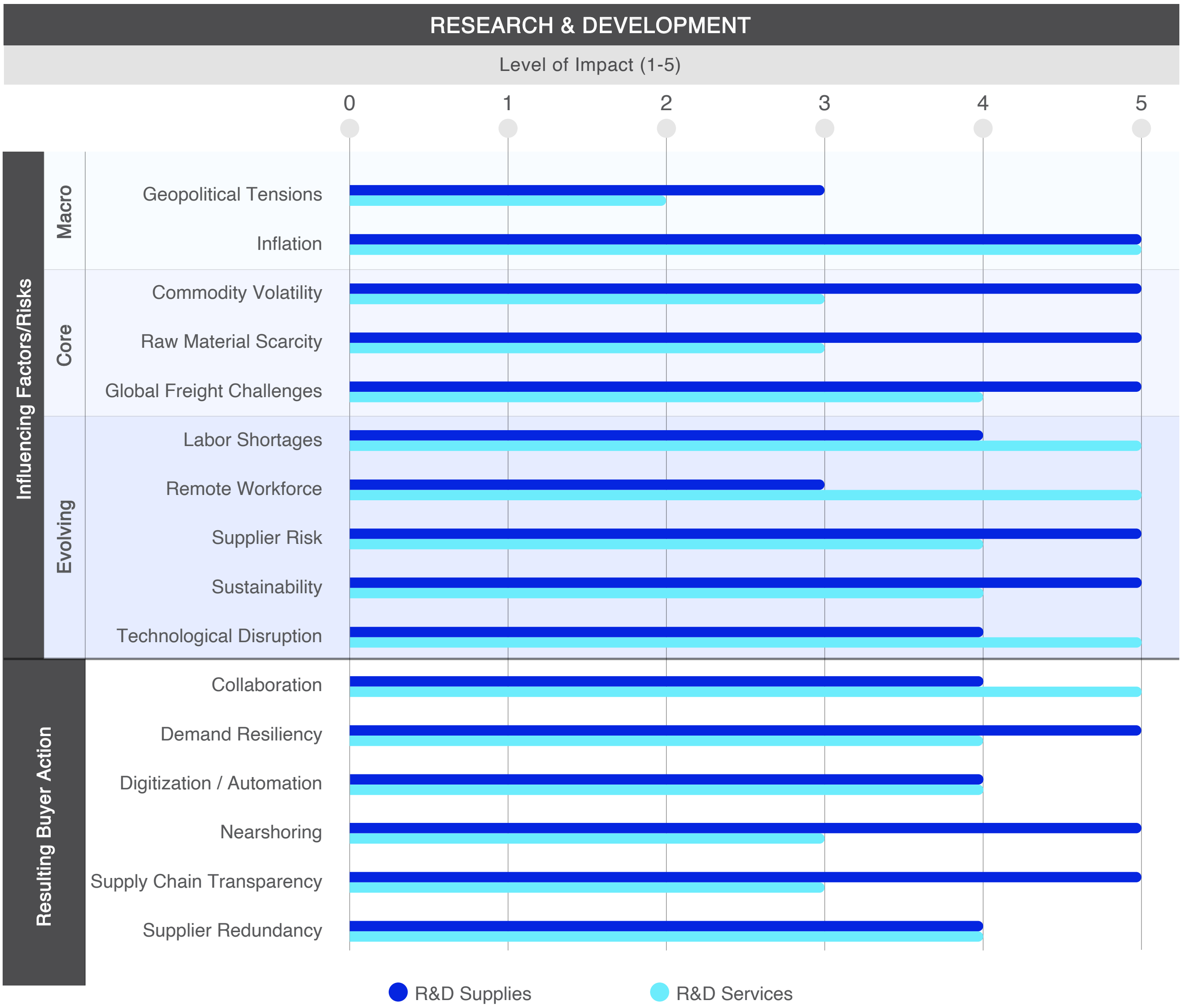
RESEARCH & DEVELOPMENT
Level of Impact (1-5)
0
1
2
3
4
5
Influencing Factors/Risks
Macro
Geopolitical Tensions
Inflation
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Commodity Volatility
Raw Material Scarcity
Global Freight Challenges
Evolving
Labor Shortages
Remote Workforce
Supplier Risk
Sustainability
Technological Disruption
Resulting Buyer Action
Collaboration
Demand Resiliency
Digitization / Automation
Nearshoring
Supply Chain Transparency
Supplier Redundancy
R&D Supplies
R&D Services

REAL ESTATE AND FACILITIES MANAGEMENT

REAL ESTATE

The return to the office is being experienced differently around the world, influenced by the spread of the Omicron variant of the coronavirus, vaccination rates and country-specific pandemic guidelines.

With the pandemic triggering profound shifts in how and where people work, companies have tested different working models, revamped work-from-home policies and, in some cases, implemented fully remote working practices.

This shift toward flexible ways of working will continue to impact the amount and type of space solutions offered by real estate teams as well as the office market. Many employees, having tasted the benefits of working from home, are only willing to accept a partial return to the old office paradigm. Remote working has now become a basic requirement for many employees rather than wishful thinking.

For this reason the concept of “pivoting” now not only applies to the shifting of direction by a business but to office portfolios in general as business leaders in collaboration with HR, procurement and real estate teams embark on a process of trial and error as they attempt to figure out the wider needs of their employees and how to enable expansion, relocation or contraction of space at any one moment in time.

Current Situation and Outlook

With the concept of the conventional office changing, we have seen an increase in real estate portfolio-based planning activities, with overall portfolio sizes expected to decrease by as much as 25%-40% in the next 3-5 years amid remote work and flexible space solutions (which increased by 37% in the U.K. in the first half of 2021).[190] Many companies going into 2022 are looking to improve the utilization of space, as utilization rates across the board have plummeted, driving up the amount of surplus space, trapped cost, and total carbon associated with real estate.

As a result, real estate departments across the world are critically assessing what the needs of the business and its employees will be in order to:

I. Reduce fixed costs

II. Release invested capital

III. Increase the level of flexibility within the portfolio to manage peaks and troughs

IV. Design facilities and space offerings that support innovative ways of working and enhanced productivity

V. Entice people back to the office by improving the onsite experience

Adapting to the New Norms

Real estate and procurement teams realize they will need different types of skills to help effectuate the move toward more service oriented and flexible real estate solutions. A higher level of financial acumen and change management skills will be required, coupled with the ability to develop strategies and partnerships to support decarbonization of the portfolio. Outsourcing of transactional corporate real estate activities, facilities management services, technology platforms, data and analytics dashboarding, execution of project management and HSE are expected to increase as the role of real estate and procurement becomes more strategic.

Improving integration between real estate and facilities management teams will be fundamental to decreasing cost, directing facilities management to where it is needed at that specific time, enabling speed of execution, increased satisfaction and adoption rates of solutions provided. By working together, the two teams can become enablers of optimal employee and business performance as a whole.

The Impact of Sustainability Goals

Right now, sustainability goals are influencing real estate from every perspective. It is impacting occupiers of buildings, their willingness to return to the office, the space they want to use, who they want to do business with, which buildings get shortlisted and how green lease principles are embedded in traditional leases.

Sustainability is starting to drive more property investment and leasing decisions rather than pure rent and level of tenant improvements offered by landlords, as most countries adopt ambitious carbon neutrality goals with the expectation that private enterprises will support in achieving them. Businesses with real estate, regardless of the size, should extensively review their portfolios in a bid to understand which buildings are surplus to demand, may not comply with, or hinder them from achieving, carbon reduction targets.

As governmental regulations around environmental standards increase, new building developments will aim to achieve the highest levels of environmental certification, effectively driving up lease costs. In an effort to contain cost creep, it will be essential to ensure high utilization rates, rights to surrender space and portability (rights to transfer remaining lease covenant from one building to another mid contract with common landlords).

New projects will require certifications such as BREEAM (in the U.K.), LEED (in the U.S.) and DGNB (in Denmark) to ensure that:

I. Negative impact of a building on the environment is captured.

II. Sustainable designs and construction practices are used throughout the life of the building.

III. The building contributes toward and supports the health, happiness and well-being of people working in it.

Businesses that own and self-occupy buildings will need to start developing substantial retrofitting budgets to comply with the legislation or consider disposal options and acquisition of more energy-efficient space. In order to maximize potential proceeds from disposals, portfolio-wide strategies should be developed in collaboration with the right experts in the field.

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Most recently, a landmark ruling against a major oil & gas company[191] and the Dutch government[192] is contributing toward sustainability becoming a priority for real estate and procurement teams, requiring them to work together to develop plans to:

- Eliminate inefficiencies from the portfolio and its supply base
- Adopt a unified approach to the digitization of real estate and management of the portfolio through use of systems and technology also within buildings
- Ensure the health and safety of its employees is monitored and secured[193]

United States

Just before the Omicron wave, commercial office vacancy rates in the U.S. had stabilized at 14.9% in the third quarter of 2021, just .1% higher than Q1 2021.[194]

A key contributor to the initial rise in vacancy rates had been an increase in the amount of subleased space being offered by companies to generate income from underutilized space they were unable to surrender or release. Notably, the amount of sublease space entering the market declined from 208.8 million square feet to 202.3 million square feet (between Q1 2021 and Q2 2021), giving the impression that the situation is stabilizing.[195]

With the Biden administration still planning to invest $550 billion in infrastructure to rebuild America's competitiveness, the expectation is that it will positively impact every sector — from transportation, water, energy, communications, the environment and the office and industrial real estate sector.[196] However, recovery will be slow and take a number of years during which occupiers/buyers, particularly of office space, will be able to capitalize upon a situation in which supply outweighs demand driving higher levels of incentives from landlords.

In contrast, we see vacancy rates of as low as 4.9% within the logistics sector despite a healthy pipeline of new construction becoming available.[197] The key contributing factor to this is the e-commerce boom caused by COVID-19. E-commerce sales grew by more than 39% in 2021 and are expected to increase further in 2022.[198]

What to Expect This Year

Successful corporate real estate and procurement strategies will need to align the real estate portfolio and supporting services, such as facilities management, to the new needs of the business maximizing value for end users and contributing to overall performance of the company.

Successful strategies that can be deployed in 2022 and beyond include:

- Increasing the ratio of leased vs. owned space for non-core operations
- Reducing the overall term of leases to align with new market norms
- Inclusion of partial rights to surrender space and development of hybrid and green leases
- Development of disposal, lease re-gear and disposition programs releasing underutilized space and capitalizing upon buyer/tenant friendly markets

- Balancing in-house and outsourced services. Real estate and procurement should start focusing on 20% of the portfolio that drives 80% of the total cost
- Benchmarking of the performance of the portfolio against peers and markets to understand the level of opportunity for improvement, particularly at the lease level, given how office markets are set to remain under pressure.

FACILITIES MANAGEMENT

The severity of COVID-19 has triggered new public and private regulations that, along with the ongoing restrictions on commercial activity to prevent contagion among the population, have deepened the economic recession around the globe. Like many industries, facilities management (FM) is facing unprecedented challenges. Facilities management executives are increasingly concerned with maintaining their people's safety as they gradually return to the office while controlling costs in the face of budget constraints.

While top economies aimed to increasingly outsource services and developing countries were on the path of sustainable growth in demand, the outlook has changed from the start of the pandemic. The disruption in overall business activity reduced workspace demand and favored a mobile workforce located away from the biggest cities and industrial clusters.

The facilities management category will face additional difficulties, as companies will continue to implement cost-cutting strategies and this is one of the areas that are first impacted by reduced budgets. It is important to focus on how budget cuts can lead to deteriorating conditions of buildings and equipment, which means higher repair and management costs in the future.

Procurement professionals in this category are aware that not all key global players can provide a solution feasible for all client needs. However, organizations can develop a mixed supplier portfolio that can maintain business continuity for non-core or low-impact services with local and smaller suppliers that can also support them in meeting financial targets.

Another critical aspect of facilities management is the ability to address the great divide when it comes to diverse suppliers in this industry. Investments in diverse suppliers will not only enhance a company's social responsibility image but also impact its bottom line. Companies that invest in supplier diversity help grow the impact of potential suppliers while promoting healthy competition. This often leads to better quality, lower costs and new ideas and experiences. These factors contribute to making businesses more profitable. Many of these diverse suppliers exist within facilities management and can significantly boost an organization's contribution toward supplier diversity.

Key Trends

Labor shortage

Since the start of the Fourth Industrial Revolution in the 2010s, when automation and digitalization of many economic activities accelerated the availability of great amounts of data, the global labor market has experienced significant changes. Technology has made possible the replacement of workers by machines, and the rate of people developing a career in skilled trades will continue to decline in the following years.

This major shift in the demand for a highly skilled and digitally driven workforce has impacted the availability of skilled trade workers needed for facilities management and maintenance core services. Businesses now require maintenance workers to act as data scientists managing real-time data from interconnected devices. The main concerns are the aging population in this sector not keeping pace with (or being trained in) technological developments and the industry's struggle to revamp the purpose of facilities management to attract young talent.[199]

The labor market challenges and the continuing effects of the COVID-19 pandemic have added complexity to this category. Companies have increased demand for experienced teams of facility management suppliers to meet high-quality cleaning and sanitization services, as well as asset maintenance to provide a safe and flexible environment for the population that has initiated a gradual return to economic activities. Nevertheless, the higher demand for skilled trade workers will cause wages and overall costs to increase, putting procurement professionals under additional scrutiny when building comprehensive budgets for these services.

As in many industries, FM workers are determining their continued path for career progressions. The pandemic has contributed heavily to this matter and in addition to the previously listed factors, also wreaked havoc on employment and labor rates. To add to these labor challenges, the rapid adoption of innovative technologies is adding to this narrative. The increase in smart buildings through the adoption of Internet of Things (IoT) enabled devices will forever change the way we manage properties.

To ensure the safety of all employees, employers have taken very seriously the task of ensuring their facilities are thoroughly sanitized. FM providers are at the core of these sanitization efforts. These providers have taken advantage of the need for change during this time frame to leverage technology to provide a higher standard of service to their clients.

Supplier Risk

Facilities management companies have taken a lead role in dealing with new standards and regulations arising in response to COVID-19. At the same time, they are being urged to redesign their business models to explore new opportunities for remote work and redesigned workplaces.

During the health emergency, essential activities are an intrinsic part of the core functions of facilities management. From sanitization and infrastructure maintenance to enabling the workplace to comply with social distancing rules, FM suppliers and professionals need to be aware that value perception and flexibility of their services will be key in the upcoming years. Suppliers must increase their technical knowledge and after-sale service as companies focus on recovering or reopening business, but they must also become more flexible in terms of complying with new standards and adapting to hybrid work schedules. That means managing for space availability and adjusting critical services (HVAC, lighting and even frequency of cleaning) according to the new workplace dynamics.

The pandemic has impacted facilities for 2 years now. There have been some attempts to reopen and there have been acknowledged delays. One consistent theme is that all facility operators want to ensure constituents' safety in terms of cleanliness and sanitization standards. This increased concern has led many operators to incorporate advanced

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technology and products to manage increased standards while trying to balance costs. The introduction of technology has assisted building operators by monitoring areas of utilization to better pair SLAs with expenditures.

It is a must for organizations to rethink their facility operating models. Around 81% of FMs said they will be changing the layout of their facility to optimize social distancing.[200]

Remote Workforce

It is important to analyze how remote and hybrid work will impact how we use and manage facilities in the coming years. One of the most important changes that resulted from the pandemic is the rapid adoption of flexible ways of working that transformed the office-centric culture in most countries and industries.

Companies are witnessing the introduction of flex office spaces and are beginning to adapt properties and operations to this significant work-model change. Facility managers have the task of analyzing how to adapt or reduce existing premises to support this transition and assessing how the new operation costs, reduced leased space, lower energy consumption and revised maintenance and cleaning schedules, among other factors, could have a positive financial impact. The facilities manager's role is likely to become more strategic as more companies focus on identifying and realizing cost savings from this trend.

Going back to the office has been a challenging proposition for many businesses. The pandemic has significantly increased the timeline for employees working remotely. How much that has been accelerated is yet to be determined, but one thing for sure is that remote working is here to stay. Redesigning a workplace for wellness and wellbeing is a priority for most organizations, despite the costs. As remote work accelerates in North America and Europe, corporations will need to transform if they are to return to essential in-person interactions. The need for safe workplaces will generate demand for workplace designs that minimize touchpoints and offer appropriate socially distant spacing.

Since the start of the pandemic, there has been a spike in office space availability as companies consider downsizing their office spaces to support the transition to remote working. This has also led to an increase in flexible workspaces. Businesses large and small are adopting these alternative work solutions to embrace the changes that have been imposed due to COVID-19. Flex spaces and remote working are proving to be better business alternatives to traditional offices. These working styles create an attractive business case for many organizations due to the offset of equipment, maintenance and energy costs.

Other factors such as Space-as-a-Service, the gig economy and sustainable business practices will also be closely aligned with facilities management. Much of a business' success relates to the quality of the workplace. This realization has prompted companies to focus extensively on how they are using and managing facilities.[201]

Sustainability Efforts

Facilities management is a key ally in companies' efforts to reduce their carbon footprints. The function has strong ties with the implementation of sustainable practices that will be boosted by the shift to a flexible office space model.

Facilities management will support offices in reducing CO_2 emissions by optimizing heating and air conditioning, changing to efficient office lighting, promoting waste recycling, reducing food waste and eliminating single-use plastics.

It is important to note that as a result of the COP26 climate change conference held in November 2021, net-zero commitments will start cascading from governments and public companies to businesses who have yet to understand and draft detailed plans for how they can achieve this target.

Facilities services contributes to a recurring high bottom line. Companies can allocate the bulk of their Tier 1 and 2 sustainability spend targets through this category by investing in sustainable suppliers while reducing their carbon footprint and improving their brand image.

A majority of on-site facilities services providers have wastewater, non-biodegradable waste and GHG emissions as their recurring end products. This is an untapped area that can drive incremental and scalable sustainability targets through effective SOPs and supplier KPIs.

Sustainable equipment is a critical factor in reducing a company's carbon footprint. Introducing biodegradable materials into buildings supports a more eco-friendly relationship between buildings and the environment. In addition, utility performance and energy provisions are key contributions to making buildings more environmentally friendly. FM also contributes to sustainability by driving recycling and diversion programs.

North America

North America continues to hold the largest facilities management global market share. Companies are expected to continue outsourcing their maintenance and facilities management services to meet increased cleaning and sanitation standards in the post COVID-19 era.

The strong economic recovery expected in the region will be led by the US as a result of the November 2021 approval of the $1.2 trillion infrastructure bill. The bill will bring major upgrades to rails, roads and new transportation infrastructure. This ambitious spending plan adds to the $1.9 trillion coronavirus-aid bill approved in March 2021 that will accelerate new projects and generate thousands of new jobs. Facilities management demand for integrated services, such as Integrated Facilities Management (IFM) programs, is expected to drive sustained growth for years to come, with the hard service segment holding the higher share, fueled by the needs of the construction industry.

What to Expect This Year

Adapting to the multitude of changes is far from easy, especially given the established practices within facilities management. The industry must adapt and continue to evolve.

While those outside the industry may think of facilities management as a simple process, facility managers understand that they must spend a large portion of their day just navigating the system. It is not surprising that they now have access to many different software solutions that aid managers in the decision-making process.

eFacility Management increases in times of crisis, as companies seek to reduce costs and maximize profitability from their real estate assets. This need for savings drives companies to optimize the use of properties and equipment.

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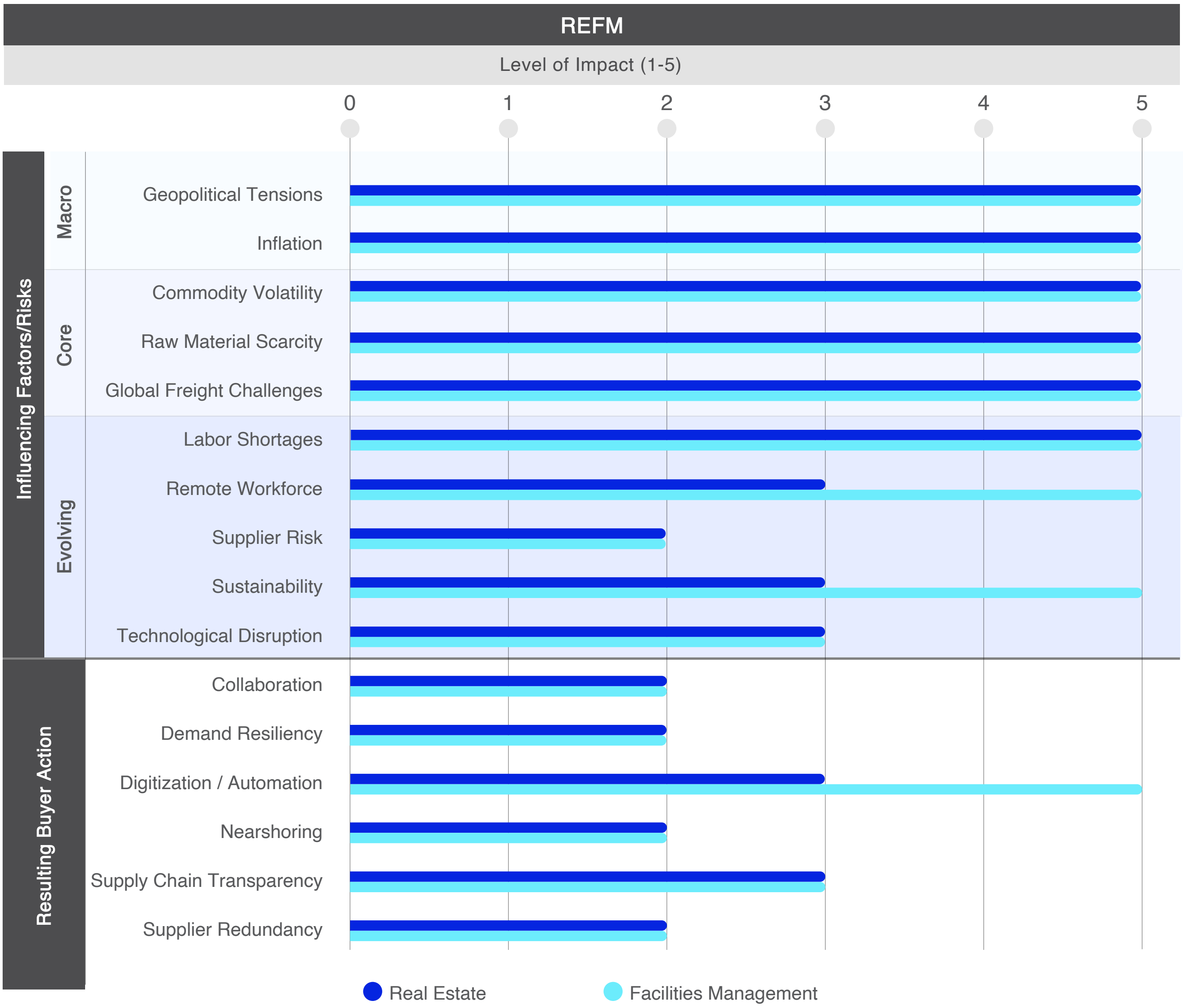
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Technological Disruption
Resulting Buyer Action
Collaboration
Demand Resiliency
Digitization / Automation
Nearshoring
Supply Chain Transparency
Supplier Redundancy
Real Estate
Facilities Management

CONTRIBUTORS

Chemicals: Virat Venkataraman, Paulo Moretti, Barkha Jain, Martin Hanak, Sherry Yuan, Subhadra Chandrasekar, Vivek Patel

Metals, Precious Metals and Agricultural Commodities: Julia Fischer, Jeremy Shin, Sourabh Dekate, Purvang Ashar, Pramod Sethumadhavan

Packaging: Kartik Yeleswaram, Virat Venkataraman, Natalie Henfrey, Anshul Jain, Srinivas NB

Capex: Vipin Gupta, Nishikant Rajeshirke, Swetha Thomson, Ricardo Z, Minal Udavant, Himank Sharma, Ashish Trehan, Chirag Murdeshwar, Rohan Motwani, Sahil Vashistha, Mangesh Kalaiselvan

Energy and Utilities: Rachel King, Antonio Del Sesto, Carter Smith-Wellman

Travel and Fleet Management: Gurmukh Singh, Karthik Bala, Lalit Sharma, Saif Ansari, Samir Sodani, Viki Gandhi, Jan Chalupny, Paul Wakelin, Ivo Neshev, Akshaya Bhuvaneswaran, Nildson Pina, Amauri Rojas, Rob Jones, David Harris, Francy Zhao

Professional Services: Neerja Bavishi, Aishani Seth, Kinjal Shah, Alpit Kale, Abraham Mathew

HR & Benefits: Upasana Sammadar, Caroline Czulno, Armin Pastakia, Alaap Anklesaria, Tanvi Rahlan, Mohit Rehlan, Akshay Khandelwal

Legal Services: Wayne Clark, Nirav Devnani, Samidha Singh

IT and Telecom: Ryan Shadle, Greg Callahan, William Johnson

Marketing: Luka Erceg, John Hardy, Annette Tauschl, Joseph Tereshinski, Lianne Yang, Siddhartha Bhowmick, John Carter, Eimear Lewis, Pratik Kshirsagar, Richa Garg, Igor Milinkovic, Catherine Hilton

Maintenance, Repair and Operations: Manish Pardasani, Abhinav Gupta, Vipin Gupta, Shachee Goswami, Jan Vrany, Christophe Des Vallieres, Pallavi Patel, Alex Lin, Kai Wang, Mayur Patil, Rodrigo Damian, Thiago Amorim, Ana Laura Amero Garibay

Research and Development: Bhawna Satija, Mohansaikiran P, Sreekar L, Sally Mountain, Nishant Garg, Jigar Mehta, Diomedes Saldana-Greco

Real Estate and Facilities Management: Sandra O'Laughlin, Joao Duarte, Kathy Tiburcio , Daryl Watkins, Adriana Vidrio Galvan, Rodrigo Damian

Editorial: Aditya Agarwal, Ganesh V, Sayantan Das, Aniket Joshi, Felton Hatcher, Pramod Sethumadhavan

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David Doran

Vice President, Consulting

David has over 20 years of experience in leading several large-scale consulting and sourcing engagements for transport and logistics at Fortune 500 companies.

A recognized leader in supply chain management and logistics, David plays a critical role in the design, sourcing and implementation of supply chain improvements to GEP's global clients.

LET'S TALK

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A leader in multiple Gartner Magic Quadrants, GEP's cloud-native software and digital business platforms consistently win awards and recognition from industry analysts, research firms and media outlets, including Gartner, Forrester, IDC and Spend Matters. GEP is also regularly ranked a top supply chain consulting and strategy firm, and a leading managed services provider by ALM, Everest Group, NelsonHall, IDC, ISG and HFS, among others.

Headquartered in Clark, New Jersey, GEP has offices and operations centers across Europe, Asia, Africa and the Americas. To learn more, visit www.gep.com.

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GEP | NEXXE™

GEP NEXXE is a unified and comprehensive supply chain platform that provides end-to-end planning, visibility, execution and collaboration capabilities for today's complex, global supply chains.

Built on a foundation of big data, artificial intelligence and machine learning, GEP NEXXE is next-generation software that helps enterprises make supply chain a competitive advantage.

100 Walnut Avenue, Clark, NJ 07066 | P 732.382.6565 | info@gep.com | www.gep.com

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