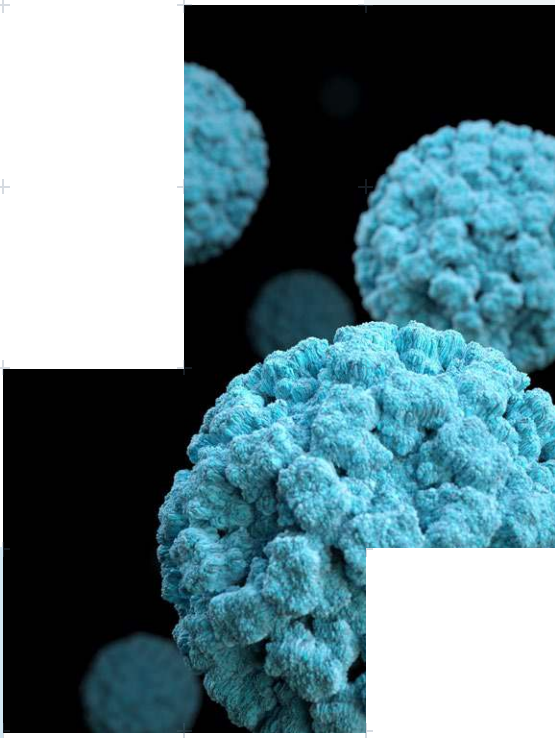
Medtech and Medical Device Outlook for 2024 & Beyond

AlphaSense

What's Inside



CHAPTER 1

Introduction

Medtech lies at the intersection of two of the most fast-changing and innovative industries—healthcare and technology. Forward-thinking technological advancements such as automation, artificial intelligence (AI), and digital therapeutics have allowed the healthcare industry to transform and grow more rapidly than ever before.

With all this technological innovation, the healthcare industry—medtech in particular—is now ripe for investor interest. Past that, medtech has vastly improved patient outcomes, better efficiency in the healthcare industry overall, and greater health equity.

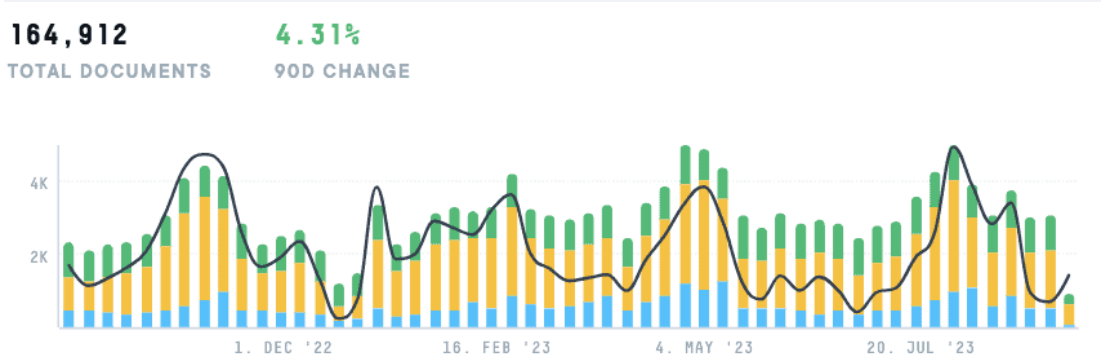
Like many other industries, medtech was adversely affected by the COVID-19 pandemic, as product innovation was disrupted and medical device production ground to a halt. But unlike for some other sectors, the pandemic proved to be a catalyst for accelerated growth in this space.

During and post-pandemic, the medical field faced unprecedented pressures and challenges, as technology brought new possibilities and solutions to issues like staffing shortages, supply chain disruptions, and the quality of patient care. At the same time, consumers were more focused than ever on improving their health and also seeking greater personalization in their healthcare. This, in turn, has created areas of opportunity for entrant medtech and medical device companies to meet these demands.

Forward-thinking technological advancements such as automation, artificial intelligence (AI), and digital therapeutics have allowed the healthcare industry to transform and grow more rapidly than ever before.

In the past few years, the medtech market has grown exponentially and has transformed the healthcare industry as we know it—and it's not stopping anytime soon. Valued at $456.9 billion in 2020, medtech is expected to grow to $800 billion by 2030. Additionally, healthcare companies are keen on expanding their valuation and capabilities through M&A with medtech companies to get the competitive edge.

Document Trend



Mentions of "medtech" in documents within the AlphaSense platform

Similarly, the medical device industry is a booming, fast-growing sub-sector of the medtech industry. Medical devices are the physical subset of the above-mentioned technologies, encapsulating any instrument, apparatus, machine, tool, implant, or similar product that is used to treat, prevent, diagnose, mitigate, or cure disease and other health conditions.

Though medical devices are not new to the medtech market, their most recent boom can be attributed to the 2020 global pandemic. Like most other industries, this space was initially adversely affected by COVID-19 due to supply chain issues and reduced budgets for product innovation that brought production to a halt. But unlike other sectors, the pandemic proved to be a catalyst for accelerated growth in this space—a trend expected to continue into the foreseeable future.

In the past few years, the medtech market has grown exponentially and has transformed the healthcare industry as we know it—and it's not stopping anytime soon.

More than anything, the pandemic highlighted the capabilities of this industry to generate better patient outcomes and improve healthcare processes. With rampant possibilities in most every healthcare sector, the medical device industry is well-positioned for continual growth and is in high demand for investors.

The overall forecast for the medical device market is overwhelmingly positive, with an expected global revenue of $595 billion in 2024 and a CAGR of 6.1% from 2022 to 2030. The healthcare sectors expected to be most affected by growth in the medical device space in the near future include: cardiovascular, orthopedic, neurovascular, urological, and diabetes.

Within the AlphaSense platform, **six medtech trends** and **eight medical device trends** have emerged to define their respective current and future landscapes.

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Medical Technology Trends at a Glance

1 Expansion beyond core business

2 M&A activity is declining across global markets

3 Increased focus on global healthcare access equity

4 Increased focus on sustainability and ESG

5 Generative AI and product manufacturing

6 Telemedicine and digital therapeutics usage are continuing to grow

2024 Medical Device Trends at a Glance

1 Continued rise in digital therapeutics and at-home diagnostics

2 Growing use of biometric devices and wearable technology

3 Expiration of Public Health Emergency

4 EU marketplace opportunities

5 Increased speed to market

6 Greater emphasis on inclusivity/access

7 Greater focus on sustainability and ESG

8 Generative AI in manufacturing and distribution

CHAPTER 2

Top 6 Medtech Trends

Medtech Companies are Expanding Beyond their Core Business

The commercial landscape is evolving, and medtech companies are needing to build inventory resilience and find ways to diversify their offerings to stay profitable and competitive. That's why many are seeking to expand their sphere of influence in patients' health journeys by providing additional value through new services.

One example of this is Medtronic's acquisition of Cardiocom, a telehealth and remote monitoring firm. By expanding from their core offering of medical devices to broader healthcare services and solutions, Medtronic was able to get a bigger stake in a patient's health journey, while providing meaningful clinical and economic value for hospitals.

M&A Activity is at a Decline Across Global Markets

Though the medtech dealmaking space remained quiet in 2022, analysts predicted a resurgence in 2023. However, M&A deal activity is still currently lagging behind historical averages, and the total enterprise value of transactions YTD is running almost 50% shy of historical average.

According to a recent report, there have been 173 medtech deals so far in 2023, totaling $13.6 billion. Neehdam & Co.'s analyst, Mike Matson, estimates that the total amount of deals will go up to 353 by the end of the year, totaling $27.7 billion—a sharp decline from 2022's 422 deals totaling $67.2 billion.

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For an industry that has previously turned dealmaking into a core competency, the current M&A slump brings two important questions to the forefront: why is this happening, and how long until we see a resurgence?

The simple explanation? Market volatility.

In an uncertain economy, sellers want to hold onto their highs, and most companies are looking for ways to trim down lower-margin businesses to tighten operating costs. Additionally, the Federal Trade Commission has recently been cracking down on several high-profile deals due to stricter antitrust regulations, leaving many companies more cautious in the deals they choose to pursue.

While this slump remains top of mind for the medtech space, the consensus among most analysts is that the farther we move from the 2020 pandemic, the more likely that conditions will begin improving. 2023 was slated to be the comeback year, but it appears market conditions are not stable enough to sustain a healthy dealmaking environment. Analysts have high hopes for a resurgence in 2024, barring any unforeseen circumstances.

Focus on Healthcare Access Equity

One of the most eye-opening revelations that has come from the pandemic has been the level of healthcare inequity in the U.S. and certain European countries. When holders of premium private insurance receive radically better care than those with government-subsidized insurance, this has an outsized impact on ethnic and racial minorities, rural communities, the underprivileged, and the elderly. Fortunately, medtech has provided a beacon of hope for greater equity in the future.

Digital health solutions that are designed to reach previously excluded or underrepresented groups can narrow health equity gaps and result in better patient outcomes. In turn, population growth and economic performance are positively affected.

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Additionally, the rise of wearables and consumer devices that enable patients to manage their care from home is contributing to greater healthcare equity, empowering patients to take their health into their own hands and lessening dependence on healthcare institutions.

In a time when inflationary and economic pressures are exacerbating discrepancies in healthcare access, healthcare payers and providers are facing increasing cost pressures, labor shortages, and funding challenges. This is making them more open to medtech innovations—like consumer devices and diagnostics—that enable them to maintain a higher quality of care for their patients.

Focus on ESG

Sustainability is a key focus for most industries and investors right now, and medtech is no exception. The healthcare industry is responsible for generating over 4.6% of greenhouse gas emissions globally, with medical devices being a top contributor due to supply chain emissions, single-use devices, and consumables.

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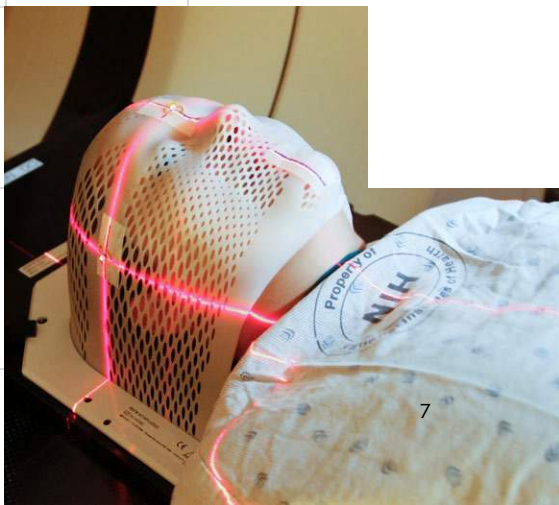
There is increasing pressure from both regulators and investors for industry players to develop clear strategies to move toward carbon neutrality. So far, some of the biggest medtech companies have already set their ambitious ESG targets for the next several decades. Data suggests that the medtech companies that will grow and thrive in the near future are those that disclose their ESG credentials and authentically integrate sustainability goals into their strategy.

Additionally, the advent of consumer devices and greater healthcare access equity addresses the social element of ESG—a trend that is expected to continue and strengthen in the next few years.



Generative AI Opportunities

Generative artificial intelligence (genAI) is the most recent development that has taken nearly every industry by storm. In the medtech space, generative AI has the capacity to vastly improve efficiency, lessening the pressure on healthcare workers and improving patient outcomes.

Some examples of how genAI can streamline healthcare processes include: a visual clinical activity monitoring system that ensures hand hygiene compliance, reading and properly interpreting diagnostic tests, analyzing vast amounts of patient data and picking up on patterns that may have been overlooked, and streamlining routine tasks like documentation.

Additionally, genAI will likely have major implications for product manufacturing in medtech. It can aid with automated development tools that can come up with new ways to design treatments, as well as accelerate time to market for physical products.

According to an expert call in our platform, genAI is a long-term tailwind for medtech. Though we are still in the early stages of its full impact and implementation, proper utilization of generative AI in the medtech space will enable healthcare providers to spend more time on higher-value tasks, reduce cost and time drain in hospitals, and improve patient outcomes. AI is also not expected to harm the medtech space in any way—in fact, resistance to AI adoption is what is most likely to negatively affect companies.

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Continued Rise in Use of Telemedicine and Digital Therapeutics

Telemedicine skyrocketed in popularity during the COVID-19 pandemic, when it provided an alternative to risky in-person medical visits. Its initial widespread adoption underscored its convenience and utility, even in a post-pandemic world.

For patients with budget or geographic constraints who couldn't travel to a medical office, telemedicine provided a way for them to still receive the care and attention they needed. Even for patients without constraints, telemedicine has enabled them to avoid going in person for questions or issues that could be resolved from the comfort of their home—leading to shorter wait times in medical offices, lessened pressure on medical providers, and a better patient experience.

Further, digital therapeutics—software-based medical devices—go hand-in-hand with telehealth and have also been booming during the pandemic. These devices are often AI-based and are used by clinicians to treat, manage, and prevent a wide array of diseases and disorders without having to necessarily physically see the patient. Therefore, these devices improve the efficiency and accessibility of care by enabling patients to manage their own health, without compromising the quality or standards of care received. In a survey of medtech leaders, 63% of respondents agreed that digital therapeutics will have a major impact on the industry over the next 10 years.

Both telemedicine and digital therapeutics are highly lucrative markets. The U.S. market for digital therapeutics is estimated to have a compound annual growth rate of 29.8% between 2020 and 2025, according to Frost & Sullivan. Meanwhile, the U.S. Telehealth market size was valued at US$ 23.8 billion in 2021 and is expected to hit US$ 309.9 billion by 2030, growing at a compound annual growth rate of 45.1% from 2022 to 2030.

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CHAPTER 3

Top 8 Medical Device Trends

Rise in Digital Therapeutics and At-Home Diagnostics

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At-home diagnostics are closely related to digital therapeutics, in that they also empower patients to take their health into their own hands. Though they fall into the medical device category, these devices are not necessarily AI-based and are designed specifically to diagnose potential conditions or diseases. During the pandemic, COVID-19 tests were widely distributed throughout the globe to people's homes, and people grew accustomed to self-testing. This caused the in-vitro (IVD) diagnostic market to undergo a massive growth spurt, though as we have moved farther from the pandemic, this market has slowed down considerably.

Still, this boom has demonstrated an area of opportunity for at-home diagnostics beyond COVID testing, and we will likely see increased proliferation and adoption of these self-tests to assess a variety of health conditions. This, in turn, will further open up consumer markets to medical device sales and potentially improve healthcare access for patients.

Use of Biometric Devices and Wearables is Growing

Wearable and biometric technology has been steadily growing in popularity for decades now, and the market has only accelerated its growth trajectory in the last few years. The global market for wearable technology is expected to reach $161 billion by 2033, a CAGR of 6% compared to 2023.

From mainstream wearable tech, like Fitbits and Apple Watches, to the more niche ECG sensors, PPG sensors, and hydration and sweat sensors, these devices have the unique capacity to empower consumers and patients to manage their own health.

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While the rise in popular interest and demand for these products means medical device companies can now find success in selling directly to the consumer market, it also means they will need to compete with large technology companies that want to enter the healthcare space.

The healthcare areas that are currently leading wearable adoption are: audiology, health science, kinesiology, nursing, occupational therapy, pharmacy, and physical therapy. While new devices are emerging at a rapid clip, the market is far from saturated. Opportunities abound for innovative medical device companies that can create a wearable or biometric device that provides value to consumers, while easing pressure on hospitals and healthcare facilities.

The wearable device industry is even seeing enhanced innovation with the surge in generative artificial intelligence (genAI) and other AI-powered technologies. We discuss this trend more in-depth in our genAI section below. Beyond AI,

the recent uptick in alternative data investment, like real-world data, is providing healthcare companies with more information on human biometrics, accelerating growth further in the wearable space.

Repercussions of the Expiration of Public Health Emergency

When the global pandemic was declared a public health emergency, many regulations for medtech companies were loosened in an effort to bring products to market in an expedited time frame. Additionally, government dollars were being funneled toward specific companies to support testing, vaccination, and care delivery throughout the pandemic.

On May 11, 2023 the COVID-19 public health emergency (PHE) expired in the U.S., putting pressure on companies to ensure they were in compliance with all reinstated regulatory guidelines, and for healthcare systems to have a game plan for a smooth transition for patients and staff once waivers lapse.

This is expected to primarily impact medical device companies that were given expedited regulatory authorizations (EUAs) during the pandemic, as they were deemed most essential to pandemic relief efforts. Medical device companies are now reacting to changes by monitoring regulatory dynamics and closely tracking new device approvals and recalls.

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European Marketplace Challenges

Historically, it has been challenging for medical device companies to get their products into European markets, mostly due to strict medical device regulations (MDRs) in the EU and the UK. Both the EU and UK were supposed to come out with updated MDRs in 2024. However, the EU is now looking to delay the compliance deadline for its renewed MDR by several years, as there are insufficient resources to meet the deadline required by law, and the EU would face potentially critical medical supply shortages if they stick to the current deadline.

With all of these regulatory changes to keep track of, medical device companies are leaning away from EU and UK marketplaces and turning toward the U.S. marketplace. The U.S. FDA has traditionally been seen as more supportive of innovation, and has implemented processes to help smaller companies and startups get their products efficient market clearance. Meanwhile, small companies and startups wanting to enter the European markets have had to contend with high regulatory costs and time-to-market timelines that do not sync with their own.

Because small companies and startups make up such a large percentage of medical device companies—and are disproportionately responsible for digital health innovation—European regulatory agencies will need to find ways to accommodate these companies' specific needs or else risk stagnation in their medical device markets.

Increased Speed to Market

With the aforementioned regulatory hurdles, increasing speed to market—without sacrificing safety or quality—is top of mind for most medical device companies. Commercialization of a medical device is usually a long and drawn-out process that involves research and development, preclinical testing, clinical trials (if needed), training healthcare systems and professionals on device usage, and regulatory approval. And yet in today's climate, speed to market is absolutely essential to remain competitive and avoid being overtaken by peers.

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> *In the competitive medical device marketplace, companies cannot afford to lose time. In other words, if you have a leading-edge product that successfully solves a problem, you can bet that your competitor is working on it too—and you might not get a second chance to enter or own that market.*
>
> **—Transforming the Medical Device Industry**
> Benchmark Electronics Inc.

As such, many companies are finding new ways to increase their speed to market in sustainable and smart ways. According to a survey conducted by PA Consulting Group of 40 senior executives and representatives of medical device developers in the US and Europe, the main methods of accelerating time to market are reuse of technology, focusing on core competencies and outsourcing other activities, managing strategic partnerships, efficient resource planning, and standardizing systems.

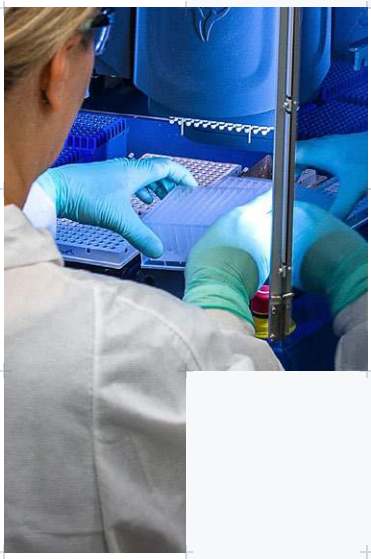
All of these methods contribute to streamlined regulatory and validation processes, greater operational efficiency, prioritization of innovation, better relationships with collaborators and sourcing partners—and ultimately, increased speed to market.

Historically, the medical device industry was not heavily focused on diversity and representation in their data.

Greater Emphasis on Inclusivity and Access

Historically, the medical device industry was not heavily focused on diversity and representation in their data. In recent years, however, there has been a larger discourse about the importance of an evidence-based approach and taking the diversity of potential users into account.

While in the past, medical devices were designed with white, middle-aged men living in developed countries in mind, companies are now further considering that the way people react to medical devices could depend on a variety of factors. Formerly, health conditions in developing nations often progressed much further before patients received treatment, whether due to lack of education and awareness, poor healthcare access, or lack of proper technology.



This means that while there is a huge opportunity for medical device companies to enter these developing nations' markets, they cannot simply bring over the same devices and technologies that were created with developed countries in mind. Rather, they must contend with an abundance of new considerations and ensure that their solutions are tailored to their end users.

As such, firms need to acknowledge and address language barriers and other cultural differences in order to ensure that the devices they are creating for a particular market or geographic region are well-suited to serve the needs of the patients and healthcare workers of that area.

Additionally, firms must be aware that pricing, distribution, and regulatory concerns are vastly different in developing countries, compared to countries with a more established healthcare market.

Greater Focus on Sustainability and ESG

Sustainability is a key focus for most industries and investors right now, and medtech is no exception. The healthcare industry is responsible for generating over 4.6% of greenhouse gas emissions globally, with medical devices being a top contributor due to supply chain emissions, single-use devices, and consumables.

As such, there is increasing pressure from both regulators and investors for industry players to reduce the environmental impact of their medical devices and prioritize sustainable practices throughout their product development processes. One popular solution is the reprocessing of medical devices, which has been shown to greatly minimize medical waste and drive enterprise growth for medtech. This practice can reduce hospital costs by up to 50% and cut ozone depletion by almost 90%.

Increasingly, medtech and medical device companies are embracing ESG and implementing comprehensive initiatives to move toward carbon neutrality. In a survey conducted by EY of life sciences CEOs, nearly 80% are planning on adjusting their global operations or supply chains to address sustainability concerns, and 55% reported that M&A will be a key strategic play to gain ESG expertise and boost sustainability.

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Generative AI Opportunities

GenAI is the most recent development that has taken nearly every industry by storm. In the medtech space, generative AI has the capacity to vastly improve efficiency, lessening the pressure on healthcare workers and improving patient outcomes.

For medical devices, generative AI can be used to increase efficiency in manufacturing and distribution processes. One example is digital factory twins, which grant manufacturers the ability to conduct factory, line, and plant simulations and companies the ability to digitally model all elements of their manufacturing operations in a 3D environment. Another example are supply chain simulations, which can be used to anticipate and prepare for any breakdowns, necessary replacements, and disruptions.

Generative AI can also give medical devices the ability to give diagnoses or recommend treatments to patients. The positive impacts of such a capability cannot be overstated: reducing cost and time drain on hospitals, allowing healthcare providers to spend more time on higher-value tasks, and improving patient outcomes. However, as with any artificial intelligence tool that could affect the livelihood and safety of human beings, rigorous regulatory processes are essential to ensure safe deployment of these new technologies.

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CHAPTER 4

Global Medtech & Medical Device Outlook for 2024 and Beyond

MedTech

The outlook for the medtech space remains overwhelmingly positive. Company valuations now exceed pre-pandemic levels, and analysts forecast continuous growth and margin improvement in the coming years. Additionally, macro trends—such as an aging population, increasing access to healthcare, and technological advances—are setting the stage for even more innovation and investment in this space.

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Further, hospitals are returning to normalcy (as evidenced by revenue and gross margin estimates slowly rising), signaling the end of healthcare staffing shortages and policy tailwinds. Around the world, Korean dental/aesthetic device stocks are expected to keep outperforming rivals, while China is showing the highest growth potential for digital dentistry. Additionally, diagnostics firms are expected to turn around, with companies filling the gaps from dwindling COVID-19 test kit revenue.

In terms of dealmaking, the medtech investment downturn is expected to manifest differently across the globe. U.S. investors are optimistic that the markets are simply recovering from pandemic slowdowns and will be on the rise again soon. In the U.K., healthcare staff shortages remain an issue, leading the NHS to divert investments that would have gone into technology into other focuses.

In the broader EMEA context, the current investment downturn is expected to lead to an innovation slowdown, which could pose a challenge for a market where most sales are driven by products under three years old. APAC investment activity is still slow and shifting away from pandemic-related topics to digital technologies that improve access, quality of life, and affordability of healthcare.

The overall positive outlook for this industry means the pressure is on for medtech companies to continue innovating and not fall behind. With investor interest in the space peaking and new industry disruptors continually entering the space, the time is now for incumbents to build a lasting strategy around growth and resilience.

Medical Device

The medtech industry—and the medical device space in particular—is currently undergoing a period of rapid transformation and growth. Not only is this one of the most innovative industries, but it has the unique potential to completely revolutionize global healthcare and transform human beings' relationships with their own health. For emerging companies or investors interested in this space, there has never been a better time to tap into the wealth of opportunities to be found in medical technology.

In-vitro diagnostics are expected to remain the top segment in 2024, and neurology is expected to be the fastest-growing device specialty. Outside IVD, the expected top 10 device areas by sales in 2024 are: cardiology, diagnostic imaging, orthopedics, ophthalmics, general and plastic surgery, endoscopy, drug delivery, dental, and diabetes care. Diagnostic imaging and orthopedics are expected to be the slowest-growing segments next year.

Despite the positive outlook for the growth trajectory of the medical device space, one significant consideration is the regulatory environment. Medical device companies must work closely with regulators and industry experts to ensure

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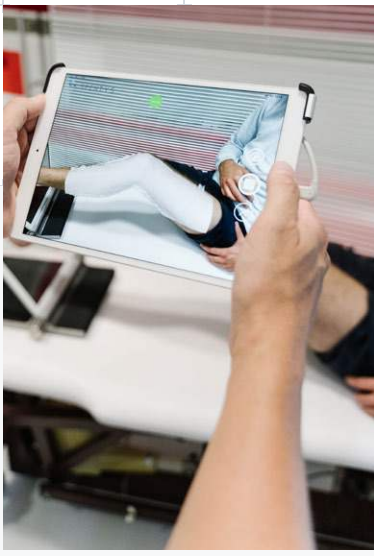

their products meet all necessary standards and that they are deployed in safe and effective ways.

Additionally, success in the medtech and medical device space is closely tied with commitment to sustainability. Data suggests that the medtech companies that will grow and thrive in the near future are those that disclose their ESG credentials and authentically integrate sustainability goals into their strategy. In order to keep growing and thriving, medtech and medical device companies will need to ensure that their innovations have a positive impact on both their patients and the planet.

Finally, medtech and medical device companies that want to avoid being left behind by forward-thinking competitors must turn toward digital transformation, artificial intelligence, and automation. These technologies are here to stay, and their adoption could mean the difference between becoming an industry leader and turning obsolete.

Companies that are able to not just navigate these hurdles, but actually use them to their advantage, will have the unique opportunity to transform the healthcare industry as we know it, improve outcomes for patients around the globe, and become leaders in one of the most innovative and high-value industries of our time.

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AlphaSense

About AlphaSense

AlphaSense is a market intelligence and search platform used by the world's leading companies and financial institutions. Since 2011, our AI-based technology has helped professionals make smarter business decisions by delivering insights from an extensive universe of public and private content—including company filings, event transcripts, expert calls, news, trade journals, and equity research. Our platform is trusted by over 3,500 enterprise customers, including a majority of the S&P 500.

Headquartered in New York City, AlphaSense employs over 1,000 people across offices in the U.S., U.K., Germany, Finland, and India.

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