



# Reinventing MedTech with intelligent technologies

Human-centric healthcare for  
tech-savvy patients and organizations



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## Introduction

Check your heart condition on a smart watch or go in for a stress test? For most patients, the former is the preferred way to go.

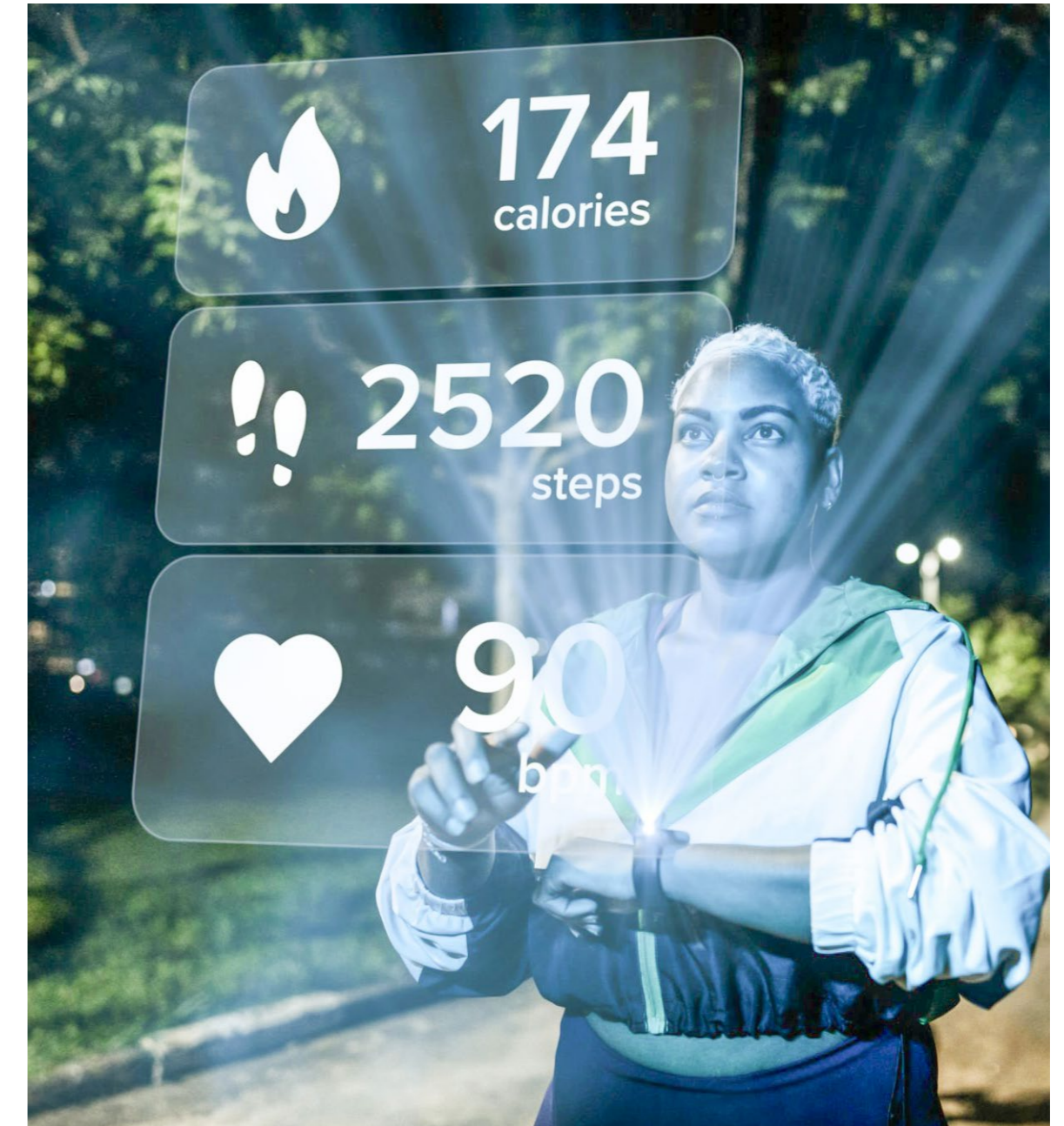
In what could be a boon for the MedTech industry, today's patients prefer the convenience and immediacy of technology that helps them access real-time medical information. Serving these patient needs at a time when healthcare is barely able to operate at pre-Covid levels requires creativity, value orientation and savvy application of intelligent technologies. Our research of 800 U.S. patients, between the ages of 13 to 72, found that 94% leverage devices and apps to manage their health conditions<sup>1</sup>, signaling a growing market demand that MedTech companies cannot afford to ignore. Empowered patients are already making key decisions, driving demand for high-quality care across diverse settings—from urgent care clinics and ambulatory surgery centers to the comfort of their homes. Generative artificial intelligence (gen AI) will likely enhance this trend, affecting how patients seek guidance and accept treatments.

What's clear is that more than ever, MedTech companies must stay on top of patients' fast-changing attitudes and actions—a business

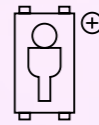
imperative that is not lost on anyone who has led MedTech in the past few years.

Just as intelligent technologies such as predictive and gen AI are bolstering patient awareness and behaviors, they are also opening new possibilities for MedTech companies to serve cash-strapped healthcare providers—which are also dealing with acute talent shortages—to enable more efficient and effective care across a growing array of settings, and ultimately cost savings.

These intelligent technologies are revolutionizing the MedTech industry's entire value chain and require multiple strategic pivots. On one front, they foster the creation of innovative products through direct engagement with consumers while meeting providers' changing needs. Conversely, these technologies have a profound impact at the enterprise level, influencing overall operations and traditional workflows. Combined, these shifts have triggered business model innovation and changed how products are being commercialized. Finally, they've created opportunities to move upstream in the patient care pathway and amplified the need for a broader and more connected ecosystem across the care continuum.



## Strategic pivot in response to changing market dynamics



The shift to preventative care unlocks new value pools

**Create new opportunities to move upstream in the patient care pathway**



Intelligent technologies create opportunities to revolutionize daily operations

**Disrupt the MedTech value chain model by automating, augmenting, and reinventing traditional workflows and drive top and bottom-line improvements**



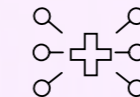
Intelligent technologies power new smart connected solutions

**Enhance the core product portfolio and create new revenue streams**



Business model innovation fuels growth despite cost pressures and shifts in care

**Promote a shift towards modern, less infrastructure dependent business models**



Connected ecosystem across care continuum requires a broader set of capabilities

**Deepen internal & external ecosystem partnerships to benefit broader care continuum solutions**

This transformative landscape is compelling MedTech companies to adopt a market driven reinvention strategy characterized by investment in technological capabilities as a critical imperative. Achieving this requires a robust digital core. The digital core integrates the power of cloud, data, and AI to create an interoperable set of secure, flexible platforms that enable companies to rapidly create new capabilities and growth opportunities for the enterprise. A strong digital core is crucial not only from a product development standpoint but also for enhancing enterprise-wide operational efficiency.

In the future, the digital core will provide shared capabilities across both enterprise technology and product technology, unlocking new levels of agility.

Reinvention will not be uniform across the MedTech landscape; it's manifesting uniquely within each sub-segment, each facing its own set of challenges from commoditization to pricing pressures in their core markets. Yet, within these challenges lies a spectrum of opportunity. The diabetes segment is becoming the new frontier for consumer oriented MedTech businesses, as wearable technology is propelling transformation and creating new opportunities. The Cardiovascular segment is very similar to diabetes but with a broader range:

it is becoming the frontier for understanding, proactively tracking, and simulating what's happening inside the body and developing solutions for preventing disease and/or ensuring timely intervention.

At the same time, digital surgery is becoming the place where all tech (data, digital imaging and connected devices and services) is aggregated in interventional care and increasingly gets pushed across the decentralized care community. Diagnostic imaging companies are reevaluating and redesigning their commercial strategies to maintain a competitive edge and more seamlessly integrate with emerging care delivery models.

To better understand how leading MedTech companies can navigate this new future, Accenture has explored four segments—**diabetes, cardiovascular, general surgery, and diagnostic imaging**—through expert research. This report delves into how leading MedTech companies can seize the opportunities of this digital era, offering in-depth analyses of key segments and actionable strategies for sustainable competitive advantage.





01 Mass market  
— makeover for diabetes

Imagine being able to check your blood sugar levels as easily as checking the time on a smartwatch—it's a reality that's becoming more common every day. At the forefront of the MedTech revolution, diabetes care stands as a prime example of how patient empowerment and technological innovation are reshaping healthcare across all markets.

With improved reimbursement and direct to consumer models (DTC), and as a result, increased patient awareness and ownership, there is a decreasing focus on the traditional segments. This is pushing pharmaceutical companies and MedTech innovators to venture beyond traditional boundaries, exploring new realms of possibility.

This shift is empowering individuals with diabetes to embrace groundbreaking solutions, such as Abbott's Lingo, which exemplifies the fusion of wearable technology and digital health platforms to enhance personal health management and wellbeing.<sup>2</sup> With this change we are expanding from simply monitoring glucose levels to influencing health outcomes. For instance, more than 30% of the CXOs we surveyed said smart watches alone could disrupt the MedTech business, reducing revenue by 3–5% in the next five years, if no action is taken by their organization.<sup>3</sup>

In addition to competition from consumer devices, the industry is witnessing a dynamic interplay

between new pharmaceutical treatments and MedTech innovations. GLP-1 receptor agonists,<sup>4</sup> initially developed for Type 2 diabetes management, have gained traction for their broader weight management benefits, challenging perceived competition with diabetes devices. Rather than a detriment, evidence points to a symbiotic relationship, with continuous glucose monitor (CGM) prescriptions surging alongside GLP-1 receptor agonist therapy initiation, illustrating the complementary potential of drugs and devices.

Oliver Richards, Managing Director, Global Medical Technology Strategy Lead for Life Sciences at Accenture stated, "These trends are not mere shifts, but significant leaps toward a more inclusive, proactive healthcare model, thus humanizing healthcare." He added, "New pharmaceutical therapies bring more people living with diabetes into the active care pathway, continuing to shift the focus to diabetes as a standalone disease rather than a symptom or comorbidity. As we look to the future, these innovations promise not just better diabetes management but a whole new way to think about healthcare—more personalized, immediate, and in tune with our daily lives."

Considering all this through the lens of our expert research, we've uncovered the following key insights.



Key insight 1

# Adopt flexible business strategies - the rise of direct-to-consumer (DTC) models

A direct-to-consumer (DTC) approach is emerging as the dominant alternative, signaling a shift towards models where therapies are directly accessible, and the patient or consumer pays out-of-pocket (see Figure 1).

Which of the following alternative business models, if any, does your diabetes unit plan to pursue as a means of transitioning away from the traditional reimbursement model?

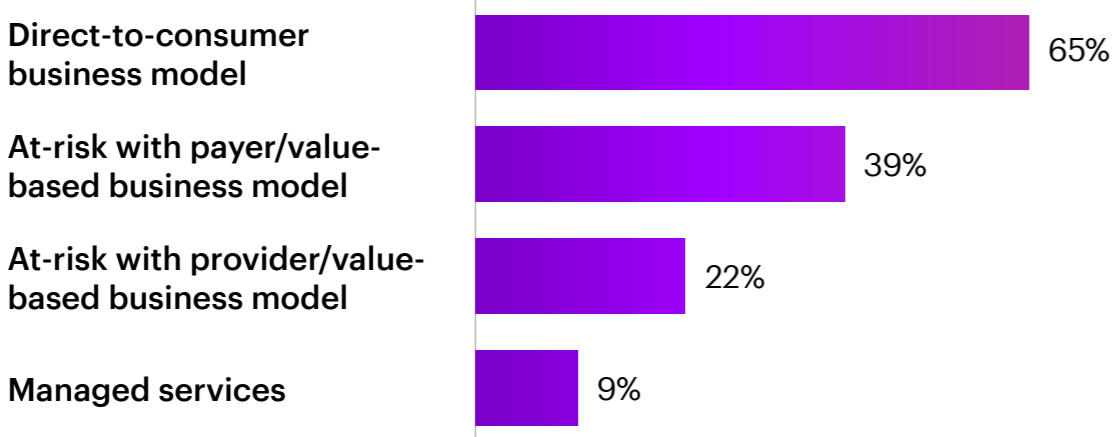


Figure 1: Diabetes goes direct. Percentage of diabetes companies that plan to pursue alternatives to the traditional reimbursement business model.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

Consider being able to pick up a device that helps you monitor your blood sugar levels right off the shelf at your local pharmacy—no prescription needed. Dexcom’s Stelo Glucose Biosensor System—the first ever over-the-counter CGM system makes it possible. As the first glucose biosensor that does not require a prescription designed specifically for patients not on insulin, it broadens access to people who do not have insurance coverage for CGMs. The device, which was approved by the FDA on March 5, 2024, is an integrated CGM intended for use in adults without diabetes who wish to better understand how diet and exercise affect blood glucose levels. Stelo exemplifies the potential of DTC models to democratize access to advanced healthcare technologies, even for those without diabetes.<sup>5</sup>

**Value-based models gaining momentum:** While traditional and DTC models will continue to play a crucial role in revenue streams, the anticipation around value-based models is also palpable. Presently, two-thirds (65%) of the respondents’ report generating some revenue (6% of total revenues in average) through value-based models, yet a remarkable 96% project a pivot toward leveraging these models in the next three years. This anticipated shift underscores a broader industry movement to business models

that prioritize patient ownership and cost-effectiveness, setting a new standard for how diabetes care is delivered and financed.

For example, Medtronic has entered into multiple value-based agreements with healthcare payers primarily in the diabetes space. The UnitedHealthcare partnership allowed members with diabetes access to advanced insulin pump technologies and comprehensive support services offered by Medtronic.<sup>6</sup> We expect Medtronic and other players to build on initial pilots like this one to drive resounding success with value-based models in the future.



## Key insight 2

### Shift from a product-centric to an end-to-end platform mindset

The shift towards a holistic care model in diabetes management necessitates a move from solely product-centric strategies to the development of comprehensive end-to-end platforms. This transformation involves integrating a broad array of technologies, that span traditional devices such as glucose meters to innovative solutions like CGM systems and smart insulin pumps for diabetes.

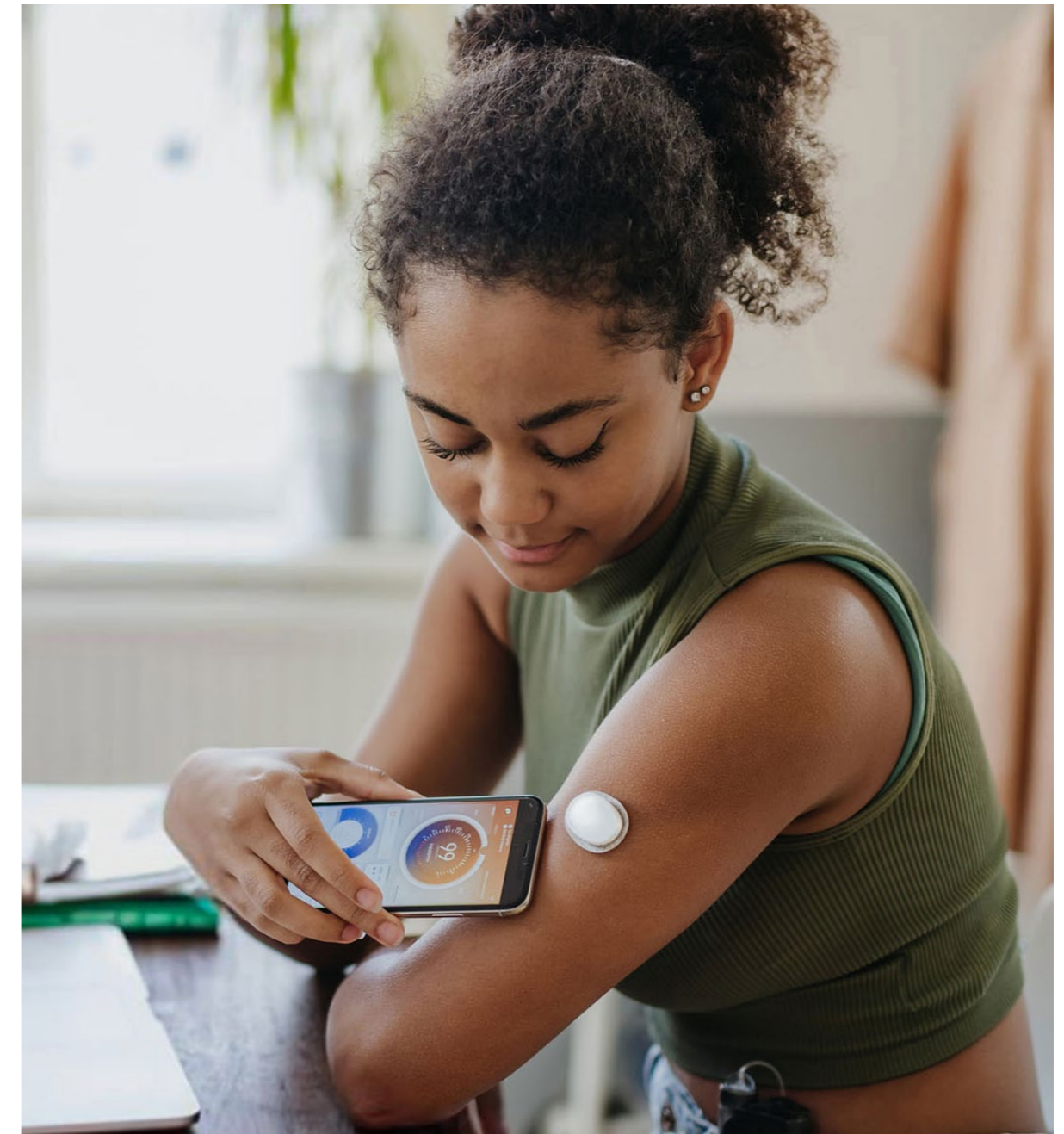
Leading the way are companies like Dexcom Inc. and Abbott Laboratories, both of which are already transforming medical devices into consumer-friendly products. Abbott's launch of Lingo in 2023—a device and app that uses CGMs to help to understand and improve the metabolism of a user—exemplifies this shift.<sup>7</sup> While some industry players like Medtronic continue to successfully prioritize medical-grade solutions, such as next-generation insulin pumps, the evolving market landscape suggests success in the diabetes care sector will increasingly depend on the ability to merge clinical efficacy with consumer-centric design and usability.<sup>8</sup>

Success in this new landscape requires distinct approaches. For medical-grade products, the focus should remain on core innovation and

clinical value. For consumer-oriented solutions,<sup>9</sup> while preserving clinical value, embracing a design that prioritizes ease of use, engaging patient experiences, and exploring new markets, including e-commerce, becomes critical.

Part of making this profound mindset change is looking outward, as the transformation of diabetes care is not a journey any single entity can undertake alone. MedTech companies are pivotal in driving innovation for diabetes care, with our survey highlighting their role as key change agents alongside big tech companies and healthcare payers.

Yet, the synergy between big tech and healthcare payers is increasingly becoming central to transformative healthcare solutions. Nearly half of the survey participants view payers as the leading force in industry transformation, underscoring the impact of supportive policies like the Center of Medicare and Medicaid Services recent expansion of CGM coverage to over 3.3 million Medicare beneficiaries who use insulin—a move hailed for significantly lowering care barriers.<sup>10</sup>

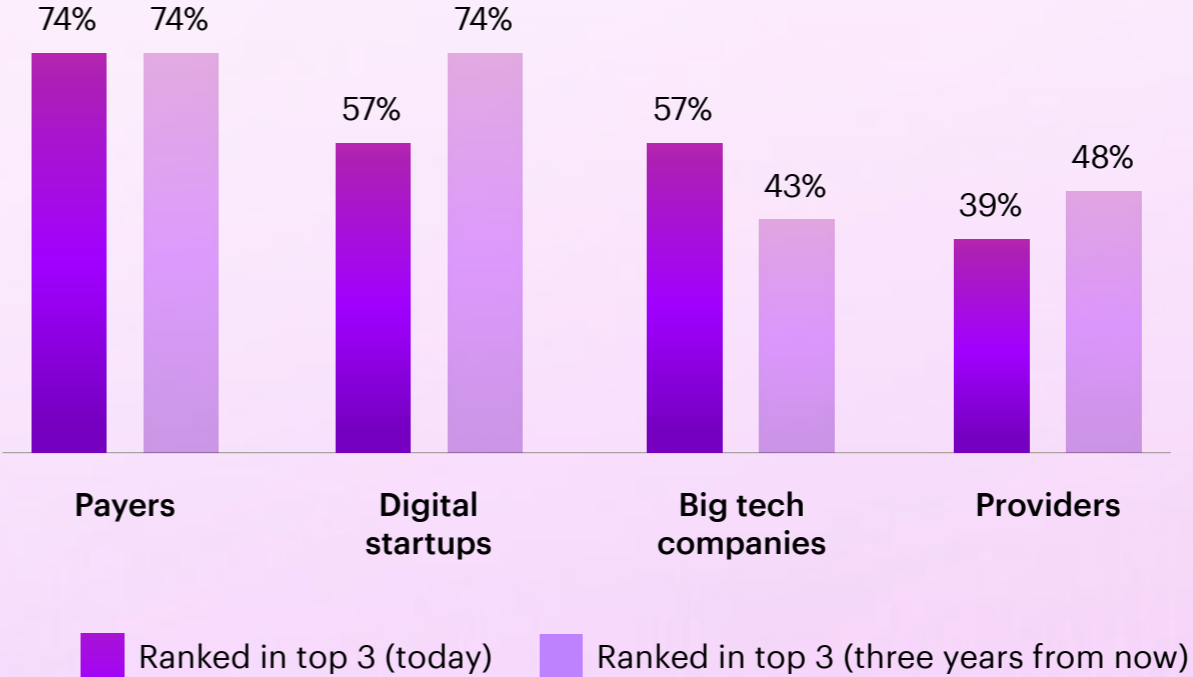


# The emergence of digital start-ups in healthcare

A standout example of big tech’s influential role in reshaping diabetes care is Amazon’s innovative Health Condition Program, launched in January 2024. This program marks a milestone in making digital health benefits more accessible to individuals, directly through their employers or health plans. These collaborations highlight the evolving landscape where MedTech companies, big tech and payers converge to redefine patient care pathways.<sup>11</sup>

Our research reveals a significant trend: while collaborations with payers are presently predominant, there’s a growing inclination among companies to establish deeper connections with digital startups. Approximately 74% CXOs affirmed the importance of forming partnerships and strategic alliances with digital startups in the next three years to foster the development of new capabilities (see Figure 2).

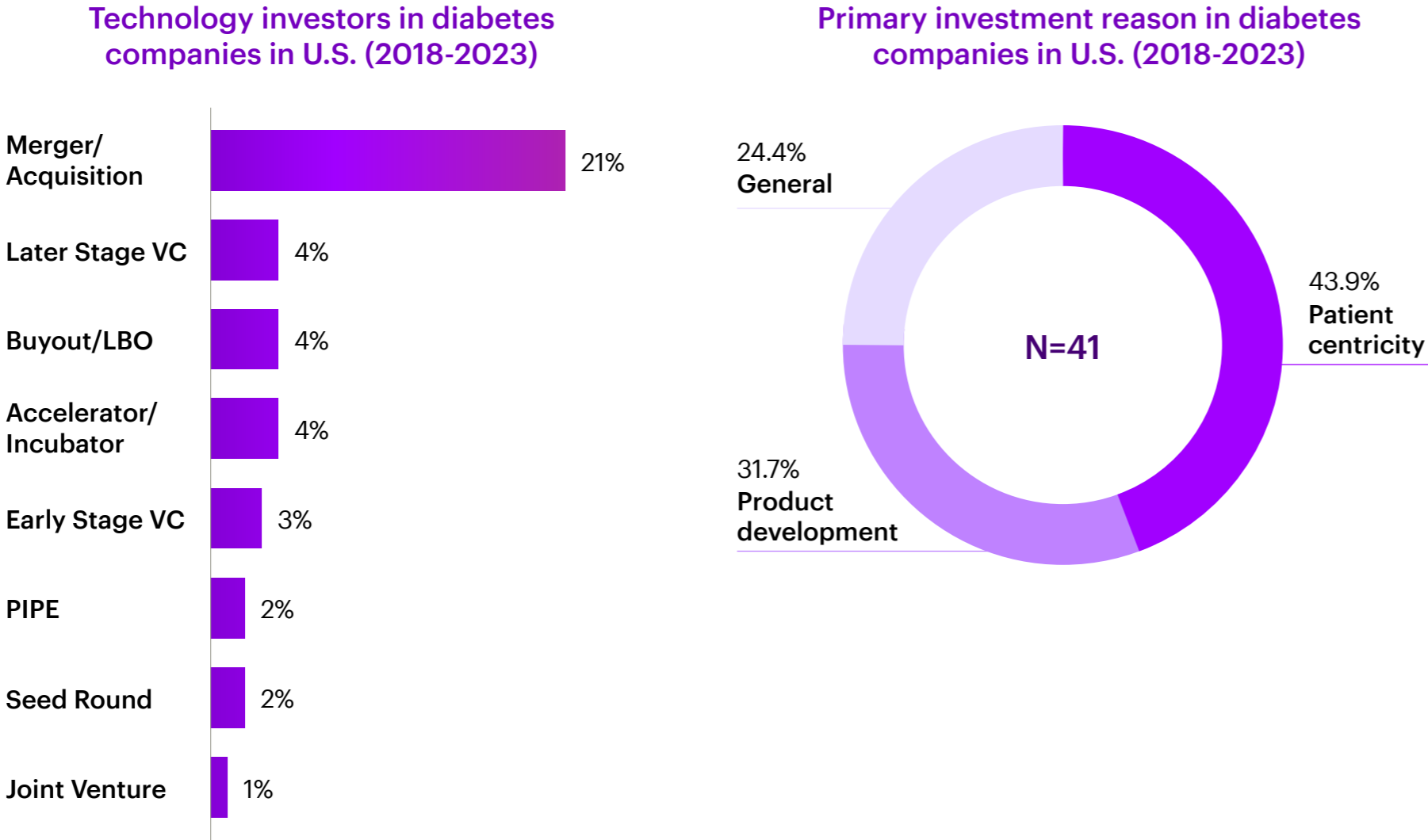
**With which of the following players would your organization like to have the strongest level of long-term partnership in the diabetes care space in three years?**



**Figure 2: Startups to catch up with payers.** Although digital startups are on par with big tech companies today in terms of partnerships, they are expected to be as important as—if not more important than—payers in three years’ time.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

Interestingly, most investments by technology companies in diabetes care over the past five years have focused on patient-centricity rather than product development, which aligns with our recommendation of creating an end-to-end mindset (see Figure 3).



**Figure 3: Tech investors in the diabetes space.** Growing focus of technology investors in companies offering patient-centric solutions.<sup>12</sup>

While diabetes management remains a focal point, the principles of integrated care and patient-centricity have broader applicability across the healthcare spectrum. For instance, although consumer care solutions are being developed for diabetes, other segments like wellness solutions, cardiovascular disease and other pharmaceutical therapies could also benefit from them (see Figure 4). MedTech companies should consider leveraging in-house development as well as inorganic measures such as partnerships and mergers and acquisitions (M&A) to cultivate capabilities and sustain long-term growth.

**Which of the following other areas do you believe could benefit from the broader care continuum solutions your organization is developing in the diabetes care space?**



**Figure 4: Integrated care pathway.** All respondents feel that the broader diabetes solutions they are developing could have a beneficial impact on other areas and almost all identify benefits for wellness solutions.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

### Key insight 3

## Shift from an engineering-first to an experience-first mindset

Transforming diabetes care starts with listening to those it affects the most—the patients—at the heart of product development. Building solutions for the entire patient care pathway is essential, encouraging not only the prevention of diabetes but also promoting effective provider/patient communication that enhances patient adherence. Seeking more innovative solutions and leveraging new technologies to integrate diabetes self-management for both people living with diabetes and healthcare professionals will prove highly beneficial.

Consider Insulet’s Omnipod DASH Insulin Management system. This system replaces the need for daily injections with a wearable, tubeless insulin pod that’s controlled by a smartphone-like personal diabetes manager. This eliminates the need for multiple daily injections and can be worn anywhere and carries up to three days of insulin.<sup>13</sup>

Expanding service offerings to include accessible options like telehealth and advanced data management platforms is also crucial. These services enable secure, real-time health data sharing with healthcare providers, facilitating tailored care and early intervention. Leveraging AI to predict health complications and customize prevention strategies further exemplifies how technology can enhance patient outcomes (see Figure 5).

Which of the following represent your organization’s highest priorities for investment within diabetes care services space?

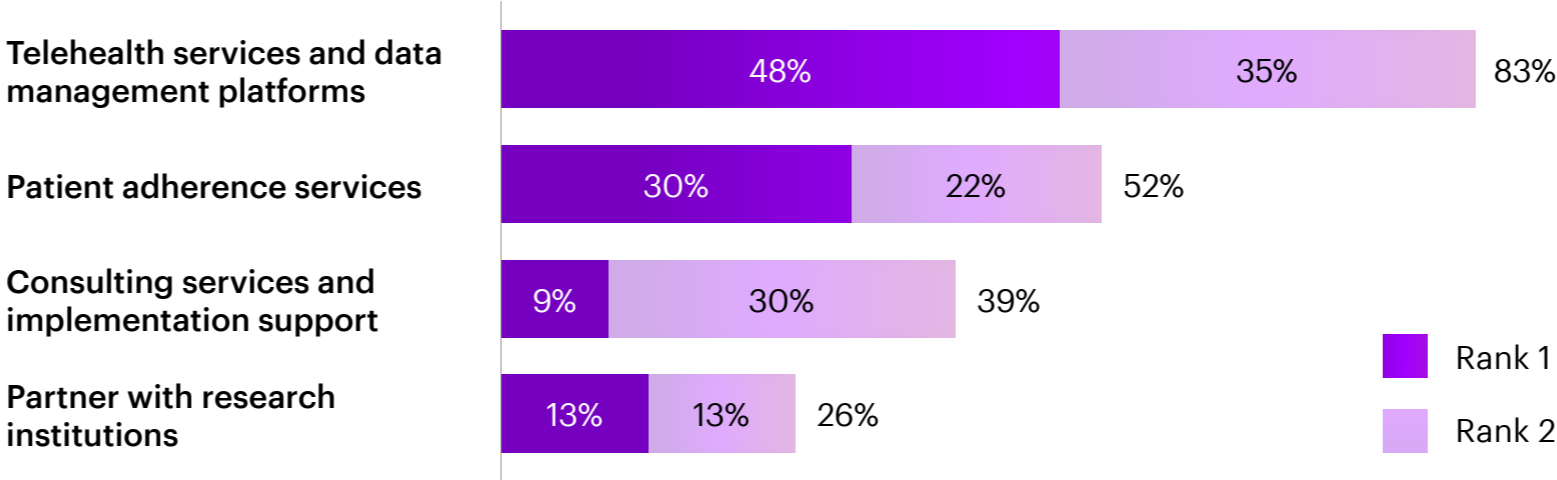


Figure 5: Adding new patient centric services. Diabetes business units are prioritizing investments in new services offerings to promote better patient engagement.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

# Role of intelligent technologies

To build toward a connected ecosystem, companies will have to reevaluate their strategic priorities in the digital space. Investing in a robust digital core will enable strategic development of intelligent technologies such as gen AI, telehealth and digital health platforms, and data analytics/health informatics.

Intelligent technologies such as predictive and generative AI present dynamic, scalable opportunities to identify trends, anomalies, and potential health risks by analyzing the data collected via new wearable technology, enabling early intervention and personalized treatment plans, tailored to an individual’s unique health profile (see Figure 6). Companies should integrate these technologies into their products and software, enhancing upstream care by delivering personalized guidance, monitoring health metrics, and providing real-time feedback for effective diabetes management.

MedTech companies must establish a robust digital core and data infrastructure to fully leverage the potential of intelligent technologies. This involves treating data as a strategic asset and investing in AI capabilities that enable hyper-personalization and automation at scale. Harnessing structured and unstructured data, as well as synthetic data, will drive insights, inform decision-making and create new market opportunities. This forward-thinking approach not only positions companies at the forefront of diabetes care innovation but also paves the way for a future where technology and healthcare converge to deliver unparalleled patient outcomes.

## Key applications/benefits of gen AI for diabetes devices business

Which of the following does your organization see as the key applications/benefits of gen AI for your diabetes devices businesses?

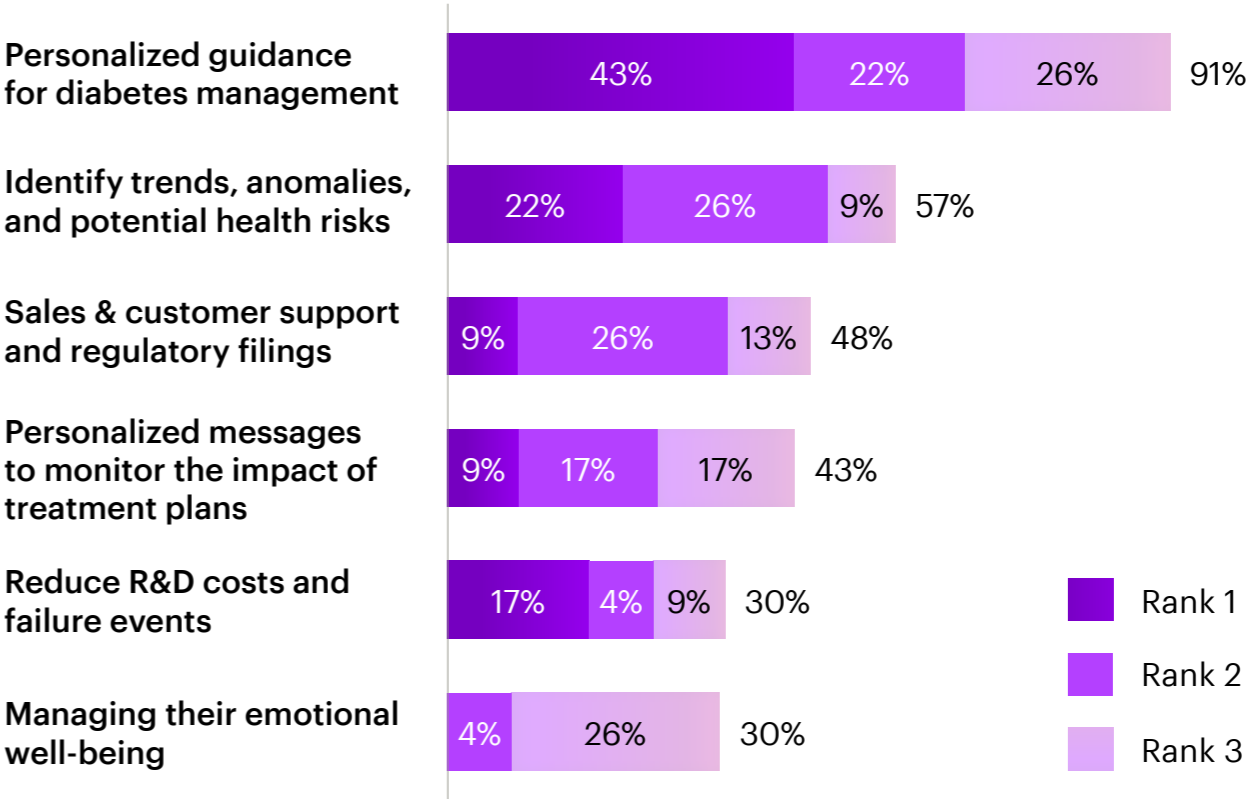


Figure 6: Unlock the potential through gen AI application. Patient centric benefits called out as most desired benefit by leveraging gen AI for diabetes business.

Accenture Research analysis leveraging Pitchbook data. 2024.



## Way forward

The future of diabetes care is set to pivot significantly toward consumer engagement and data-driven solutions, transforming health management into a more interactive and goal-oriented experience. As we move forward, CGM technology may expand to include other dimensions such as continuous ketone and alcohol monitoring, hypertension monitoring, cardiovascular parameters, etc. with the aim of broader management of diabetes through one device.

In the realm of insulin therapy, with pharmaceutical companies' ongoing efforts to introduce innovations such as once-weekly insulin formulations and glucose-responsive insulins, the development of new, more compact devices will be necessary. The industry will also see an increase in non-traditional partnerships, like Apple's proof-of concept into light-based glucose monitoring,<sup>14</sup> which could open new avenues for prediabetes detection and management.

With the backing of supportive reimbursement policies, the future landscape of diabetes care will be marked by a strong focus on integrating advanced technologies, fostering significant consumer engagement, and promoting collaborative efforts across the industry. This approach not only promises to elevate patient care but also to drive the sector towards becoming holistic solution providers.

## 02 Care for cardiovascular





Historically, cardiovascular disease (CVD) devices have anchored the final phase of the patient's healthcare journey. Yet today's landscape—marked by the consumerization of healthcare, a shift towards decentralized care, and rapid technological innovation—is challenging their stronghold. Companies face a pressing need to evolve beyond positioning themselves as providers of advanced stage interventions, as they witness a diversion of revenue toward more proactive upstream devices and therapies. Contrary to initial apprehensions, the advent of pharmaceutical innovations like GLP-1 receptor agonist drugs do not spell doom for CVD companies. Instead, our survey reveals an overwhelmingly positive sentiment among industry leaders, with 83% acknowledging the positive revenue and growth potential these therapies bring to the table. This unexpected boon underscores a pivotal moment for CVD firms to redefine their role and value in the modern healthcare ecosystem.



Key insight 1

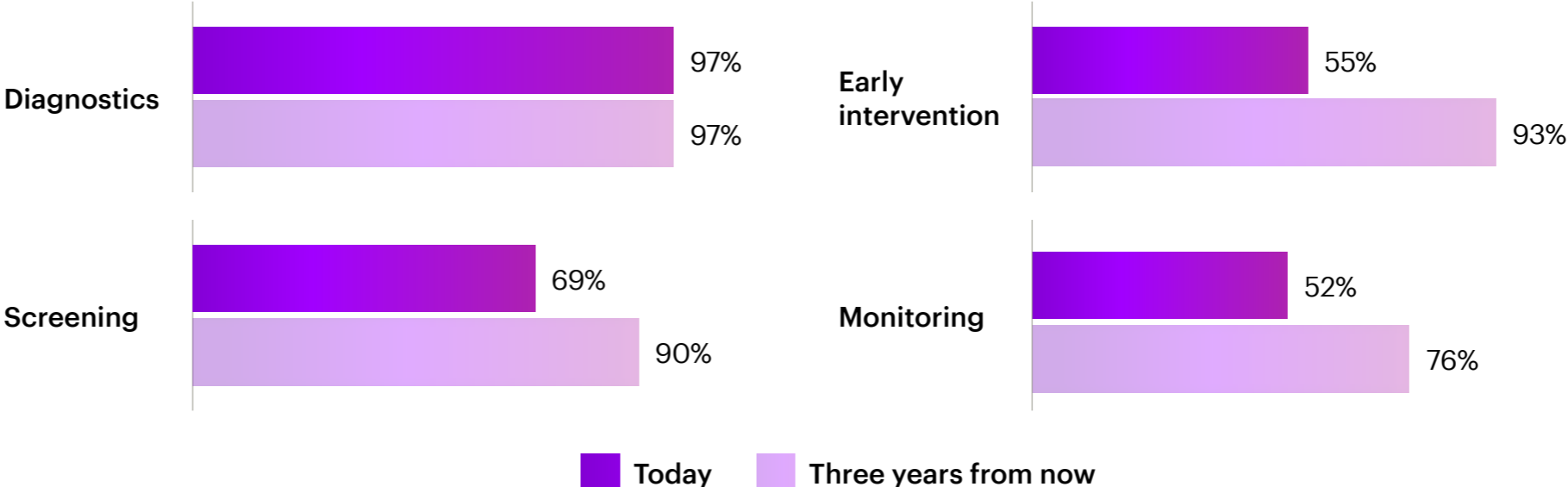
### Enhance upstream care investments

Companies must adopt a comprehensive approach that emphasizes early detection, prevention, diagnostics, and continuous monitoring. Highlighting this shift, the FDA-approved an insertable cardiac monitor, Medtronic’s LINQ II. This device, capable of detecting irregular heartbeats in pediatric patients, marks a pivotal move towards pre-emptive care by facilitating early diagnoses and upstream treatment instead of later-stage therapies. This device provides early diagnoses in patients, allowing for upstream treatment rather than later-stage therapies.<sup>15,16</sup> Even further upstream, wearable devices are providing valuable insights into patient care, such as the ability of Apple Watch to detect heart arrhythmias such as atrial fibrillation.<sup>17</sup>

According to our survey, almost all respondents feel that diagnostics already have high or very high revenue generation potential—a trend that is expected to continue in the future. Additionally, other areas of upstream care—screening, monitoring, and early intervention—are also viewed as areas with high potential revenue generation in the next three years (see Figure 7).

How would you rate the current revenue generation potential/revenue generation potential three years’ from now of the following?

#### High/Very High Potential (4 or 5 out of 5)



**Figure 7: Upstream care continuum to be the new focus.** The revenue generation potential of upstream investment is expected to increase exponentially in the next three years.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

To get there, the majority of companies we surveyed are employing strategies to develop upstream care in the CVD space. All are engaging in in-house development and almost all are using multi-player partnerships including healthcare providers, payers, and technology firms. M&A approaches are less common but are reported by around 6 in 10 as part of their strategies.

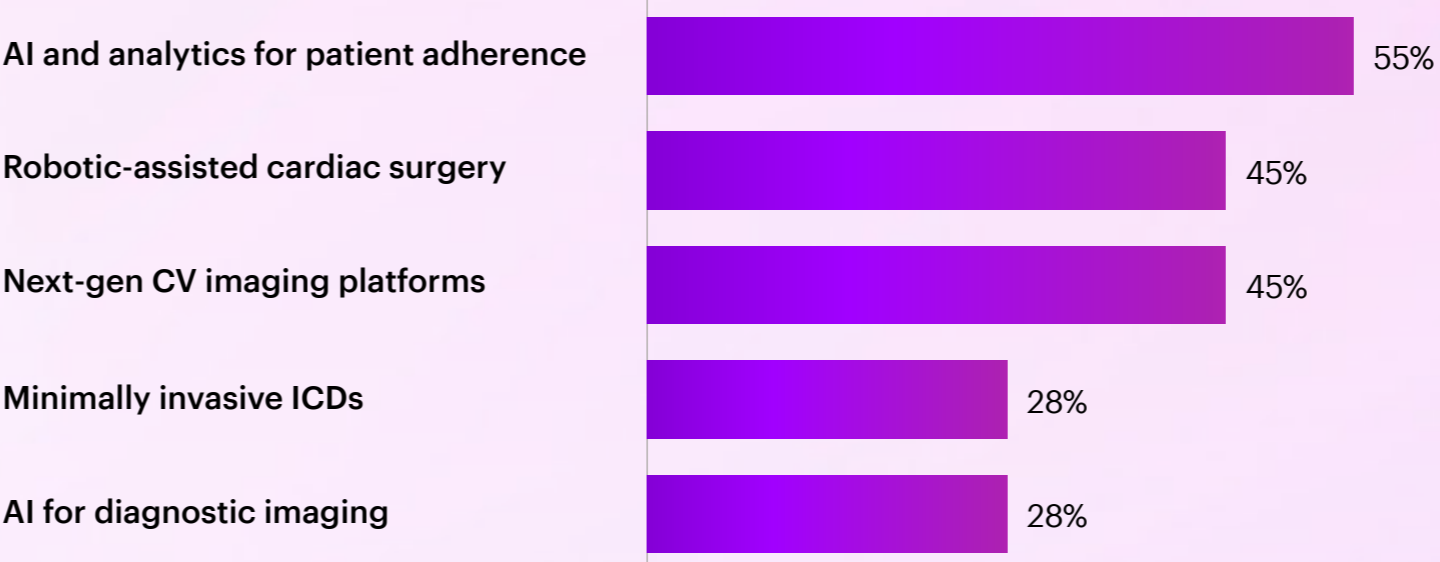
Key insight 2

## Complement downstream portfolios with digital offerings

CVD companies have a prime opportunity to elevate patient care by integrating digital solutions, such as wearable devices and mobile applications, directly into their service offerings. This strategic move is designed to significantly improve the patient experience, making health management more accessible and engaging.

As per our survey, 9 in 10 MedTech CXOs believe that there are emerging technologies in the CVD space with the potential to disrupt their business model. Artificial Intelligence (AI) for enhancing patient adherence, innovations in robotic-assisted cardiac surgery, and advancements in cardiovascular imaging are among the top areas poised for impact (see Figure 8). An example of industry adoption is aimed at centralizing key data assets and leveraging common platforms across the company's portfolio.

Which of the following technologies in the CVD space do you believe have the potential to disrupt your existing business model?



**Figure 8: Intelligent technologies in CVD.** New technologies, especially around AI, are disrupting the existing model of CVD business.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

One way to integrate digital solutions to their offerings is to leverage the power of non-traditional partnerships. For example, the recent partnership between Medtronic and the health and autonomy unit of French postal company, La Poste, strives to improve patient journeys by harnessing data and leveraging AI. This partnership will focus on developing a platform to offer a range of digital services, including telemonitoring and telecare across several medical conditions. It also provides personalized support services to healthcare facilities for analyzing and effectively using their medical data.<sup>18</sup>

### Key insight 3

## Embracing minimally invasive care and connected solutions

### The shift to less invasive treatments

MedTech companies need to reevaluate their product portfolio, prioritizing minimally invasive (MI) products and procedures, while concurrently developing a connected solution ecosystem that benefits multiple segments simultaneously. This process should be grounded in both patient and provider preferences toward smaller and less invasive devices while achieving equivalent or similar clinical outcomes. The progression of minimally invasive treatment is improving patient experience and continues to evolve, going from open-heart surgery to MI surgery, from MI surgery to a catheter-based intervention and from there to external wearables. This approach means smaller incisions, less discomfort, and quicker recovery times for patients. It's a game-changer, making serious heart treatments less daunting and significantly improving the quality of patient care.

In this space, manufacturers can add value at each stage of the patient journey by assisting providers in avoiding open surgery, which in turn helps provide patients with a lower risk of infection, faster recovery times, and reduced discomfort, all of which helps lower the overall cost per patient.

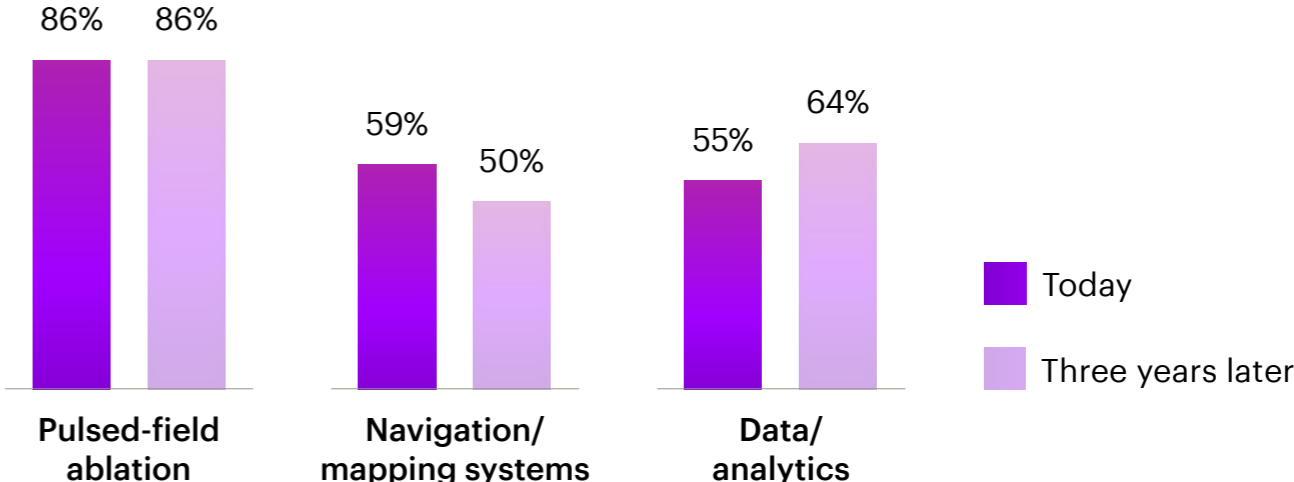
Minimally invasive treatments such as transcatheter aortic valve replacement (TAVR) and pulsed field ablation (PFA) can potentially reduce hospital stays, lower costs per patient while benefiting patients with severe aortic stenosis. Most of the organizations we surveyed view these innovations as areas that could generate higher revenue in future.

For example, in 2021, Abbott entered the US TAVR market with its Portico valve, joining competitors Medtronic and Edwards Lifesciences. In January 2023, the approval of the Navitor, a minimally invasive latest generation transcatheter aortic valve implantation (TAVI) system, further enhanced Abbott's structural heart portfolio and competitiveness in the \$3.4 billion US TAVI market, solidifying its position.<sup>19</sup> Increased demand and favorable factors like growing payer acceptance, particularly with CMS covering around 90% of qualifying TAVR hospitalizations, represent additional opportunities for market growth.<sup>20</sup>

PFA is another minimally invasive area gaining continued attention. It is expected that PFA will quickly become the predominant method for ablation procedures as the technology is being rapidly adopted (see Figure 9).

### Cardiac ablation areas seen as the highest revenue generation potential by CXOs

In which cardiac ablation areas does your organization see the highest revenue generation potential currently, and in three years?



**Figure 9: PFA, a high revenue potential area.** Pulsed-field ablation is gaining momentum with leaders aggressively investing in this space as it is faster, minimally invasive and is considered much safer than open surgeries.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

# Big players onboard

PulseSelect from Medtronic was approved by FDA as the first PFA system in the US in December 2023, followed by approval of the FARAPULS Pulsed Field Ablation (PFA) System by Boston Scientific in January 2024.<sup>21</sup> Johnson & Johnson's Biosense Webster division received approval for its PFA catheter with a regulatory green light in Japan.<sup>22,23</sup> Meanwhile, Abbott has begun its first human trials in the sector, and startups have attracted investments in developing their own approaches.<sup>23</sup>

As companies develop these individual solutions for CVD, they should also aim to benefit the broader care continuum through a connected ecosystem. In particular, the CXOs we surveyed highlighted diagnostic imaging, general surgery, and pharma therapies as promising adjacent beneficiaries (see Figure 10)

**Which other areas do you believe could benefit from the broader care continuum solutions your organization is developing in the CVD care space?**



**Figure 10: Focus on broader care continuum.** CVD companies to expand horizons and focus on entire care pathway by designing solutions benefiting multiple segments at once.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

## Role of intelligent technologies

Companies realize that digital transformation is disrupting the existing business model, compelling them to reinvent and place the digital core at the center of the new model. The development of a connected ecosystem of devices remains a priority for them.

Intelligent technologies such as AI and machine learning (ML) are at the forefront of this change, especially in cardiovascular healthcare. These smart technologies delve into vast amounts of data—from patient scans to health records—making it easier to predict heart-related risks with remarkable accuracy. Wearable technology and health apps play a crucial role too, offering continuous monitoring of vital signs. This constant flow of real-time data allows for quick identification of potential health issues, enabling physicians to act swiftly and prevent complications before they escalate.

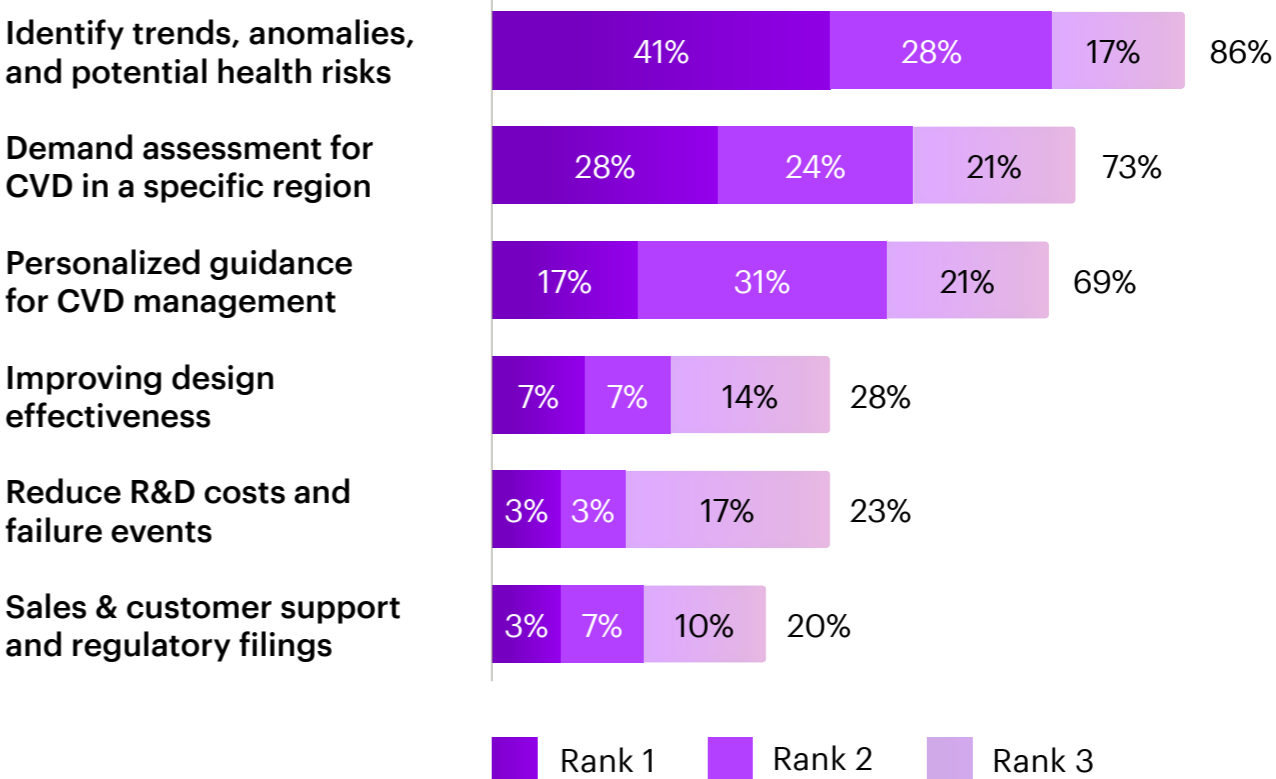


**MedTech CXOs from our survey identified these key applications of gen AI in CVD business: (see Figure 11).**

1. Identifying trends, anomalies, and potential health risks by leveraging the data collected via new wearable technology, enabling early intervention and personalized treatment plans, tailored to an individual’s unique health profile.
2. Assessing demand for cardiac devices in a specific region by leveraging internal data such as sales orders and customer information, as well as external data such as epidemiology studies and hospital reports.
3. Gen AI-powered platforms that provide personalized guidance, tracking health metrics, and real-time feedback for CVD management, supporting a desire for clinical applications for gen AI.

To capitalize on these opportunities, CVD firms should establish a comprehensive digital approach and seek various partnerships, integrating technologies like predictive and gen AI for clinical and operational purposes. To harness these intelligent technologies, it is important to reorient the operating model from siloed functions to end-to-end business capabilities and decision-making through a unified data architecture and cross-functional teams. At the same time, companies must understand the new capabilities required for a data and generative AI backbone and what it will take to build it. They should engage cross functionally to address workforce impact, compliance with laws, privacy, and security programs across the enterprise.

**Which of the following does your organization see as the key applications/benefits of gen AI for CVD businesses?**



**Figure 11: Gen AI can be the true differentiator.** CVD companies plan to leverage gen AI across areas benefiting patient outcome such as personalized treatment plan as well as for internal operational benefit such as demand assessment.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

## Way forward

The paradigm for cardiovascular care is quickly changing. Thanks to new technology, people taking charge of their health, and a focus on stopping problems before they start, heart care is getting a major upgrade.

MedTech companies are at the heart of this change. They're mixing the latest tech and traditional treatments to make heart care better and easier for everyone. The move to catch heart issues early and use less invasive treatments is making a big difference. It means less pain, quicker recovery, and better health for patients.

Looking ahead, the plan is simple: to keep focusing on what patients need, work together across different areas of health care, and develop care that covers everything from prevention to treatment. This approach will open a future where heart care is more about staying healthy and less about dealing with problems after they happen.

Our comprehensive analysis affirms the resilience and adaptability of the MedTech industry as it successfully navigates the integration of cutting-edge therapies and digital health platforms into traditional CVD treatment regimes. The strategic enhancement of upstream care

investments throughout the ecosystem, complemented by the growing incorporation of digital offerings and the re-evaluation of existing portfolios towards minimally invasive solutions, heralds a new era of opportunity and growth. However, it's important to acknowledge that advancements in pharmaceutical therapies, wearables, and other devices present risks for businesses reliant on implants as the final step in the care pathway. Therefore, it is crucial for MedTech businesses to proactively disrupt their own models and adopt a continuum of care approach. This could involve partnerships with pharmaceutical companies, a focus on diagnostics and prevention, or the development of proactive implants like implantable cardiac monitors or pacemakers that not only treat but also diagnose and prevent medical issues.

The path forward is clear: investing in patient-centric research, fostering interdisciplinary collaborations, and developing strategies and solutions for the entire care pathway will open a future that is not just promising, but vibrant with potential.





## 03 Tech surge in surgery



In the 20 years since the first surgical robots were approved, general surgery has changed significantly across three key dimensions:

- 1. Technologically**, robots are now smaller and smarter with Augmented Reality and Virtual Reality (AR/VR) and Artificial Intelligence (AI) capabilities integrated.
- 2. Economically**, there are many more players in the market. Along with traditional MedTech players like Medtronic and Johnson & Johnson (J&J) entering the surgical robotics space, there are many digital start-ups disrupting the industry.<sup>24</sup>
- 3. Systemically**, there is growing demand for decentralized care and minimally invasive care. Robotics have played a crucial role in shifting procedures from open surgeries to laparoscopic procedures.

Not all MedTech players have successfully capitalized on these changes, however. Our survey indicates limited internal technological capabilities and a lack of readiness for digital solutions as the top two barriers. Rapidly rising cost pressure from providers is another hurdle, constraining the ability of MedTech companies to innovate. Additionally, hospital operating margins are tight: even though the index median profit was over 2% in 2023, 40% of U.S. hospitals

lost money from operations.<sup>25</sup> As a result, hospitals are exploring new ways to reduce costs and are prioritizing solutions that bring better productivity, cost savings and revenue growth. General surgery devices, being a capital-intensive business, may be directly impacted.

MedTech companies that play in the general surgery space also need to adapt to the continued rise of ambulatory surgery centers (ASCs), which are expected to grow in the United States by 22% between 2023 and 2033.<sup>26</sup> The appeal is clear: shifting outpatient procedures for non-complex commercially insured individuals to ASCs would reduce spending by 59% and save consumers \$684 on average per outpatient procedure.<sup>27</sup> While ASC revenues will continue to lean heavily on gastroenterology and ophthalmology, experts expect an increased demand for services like orthopedics,<sup>28</sup> presenting new opportunities. Engaging with ASCs requires a different approach when compared to hospitals, requiring a separate channel strategy with flexible financing options, service agreements and so on.

All these factors are adding stress to the portfolio of traditional surgical device manufacturers, prompting them to transform at the enterprise level. Our research identified three key insights for companies to navigate this new landscape.



## Key insight 1

### Upgrade the “hardware” and “software” of your general surgery portfolio

To maintain a competitive edge, it's imperative for general surgery MedTech companies to upgrade both their “hardware” in the form of surgical robots and their “software” of digital services. Together, these upgrades not only enhance the technical capabilities of the surgical suite but also ensure that the entire surgical process—from planning through recovery—is as effective and patient-centered as possible.

Currently, all companies are geared toward developing solutions for minimally invasive (MI) procedures. Those that use intelligent technologies will distinguish themselves by accelerating the transition from open surgery to MI procedures rather than simply trying to capitalize on existing MI procedures. Take, for example, how Virtual Incision's MIRA™ Surgical System is aiming to make MI (minimally invasive) surgery mainstream. Weighing less than one kilogram, MIRA is the world's first miniaturized robotic-assisted surgery (miniRAS) device to become commercially available in the U.S, establishing a new category of medical devices. Whether as a complement to existing mainframes or as a stand-alone platform, miniaturization has the potential to accelerate the adoption of robotic-assisted surgery.<sup>29</sup>

Focusing on addressing the needs of physicians and surgeons will also help companies stand out. Studies show that an improved automated surgical system can limit the physical toll of surgical procedures and reduce operating room (OR) time by an average of eight minutes, leading to estimated annual savings of \$58,000.<sup>30</sup> Other bigger benefits are reduced workload for OR staff, physician ergonomic benefits, ability to “level-up” the lower performing surgeons, and hospital brand value.



On the “software” front, the biggest opportunity is to incorporate data, analytics, and services throughout all stages of the surgical process, from pre-op to post-op. Here are some examples of how it’s happening:

- 1. Preoperative:** J&J’s Proplan CMF Virtual Surgical Planning Services enable surgeons to visualize patient anatomy, simulate planned surgeries, and optimize the skeletal osteotomies and reconstruction plan.<sup>31</sup>
- 2. Perioperative:** Intuitive’s Da Vinci 5 focuses on ergonomics to enhance surgeon comfort. The robotic platform prioritizes preventing musculoskeletal issues, fatigue, and repetitive motion problems, aiming to boost surgeons’ productivity. It also enhances usability and efficiency with accessible controls for the entire care team.<sup>32</sup>
- 3. Post-operative care:** Digital technologies are transforming post-operative care by enhancing surgical skills and professional education. An example would be myMobility with Apple Watch, a digital care management platform that uses

iPhone® and Apple Watch to help providers deliver support and guidance to their patients through a connected experience. myMobility delivers continuous data and patient-reported feedback to facilitate care, driving improved outcomes and higher patient satisfaction during the post-operative recovery process.<sup>33</sup>

Another important application can be automation of data/registry reporting. The existing approaches to registry construction are labor-intensive, costly, and prone to manual error.<sup>34</sup>

Spanning imaging, visualization, analytics and interoperability technologies, digital surgery is amplifying the capabilities of surgical robots.

## Paradigm to follow from orthopedics

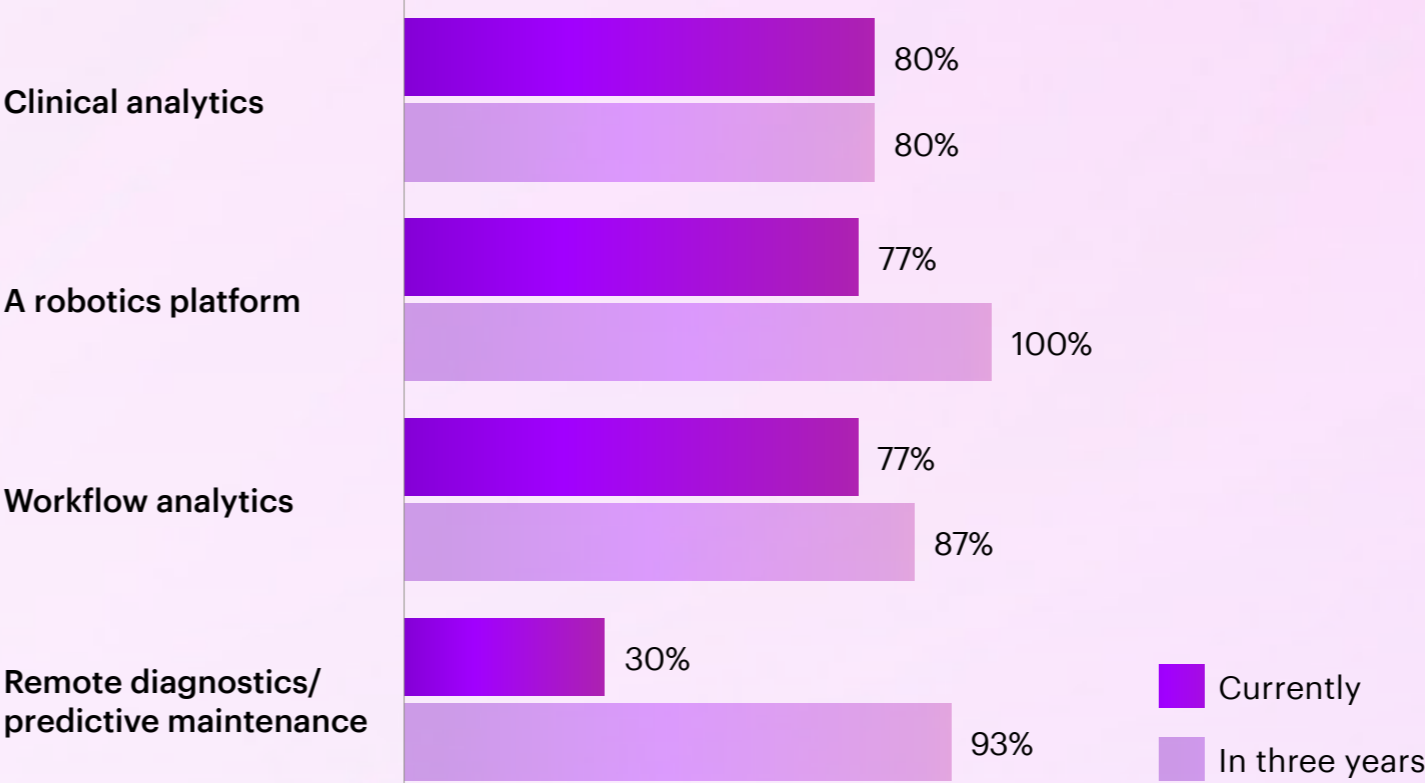
Johnson & Johnson MedTech UK & Ireland has introduced the Velys Digital Surgery platform, an orthopedic end-to-end digital surgery ecosystem. This ecosystem incorporates digital technology, robotics, and data insights, spanning from pre-operative stages to post-operative care. It also features ‘Velys Insights,’ an integrated clinical support solution providing real-time, patient-specific data to assist in decision-making before and after surgery. The platform’s key capabilities include ‘Care Coordination,’ enhancing case management and workflow efficiencies, and ‘Patient Path Management,’ allowing care teams to educate, support, communicate with, and monitor patients remotely through the Velys Patient Path mobile app during knee, hip, or shoulder replacement journeys.<sup>35</sup>

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With the increasing emphasis on digital surgery, the survey respondents consider the following as key features in surgical offerings: robotics platform (90%), workflow analytics (80%), clinical analytics (80%) and remote diagnostics/predictive maintenance (77%). They point out that almost 80% of the customers are already looking for clinical analytics, workflow analytics, and robotics platforms to be included in long-term contracts for general surgery. While a desire for remote diagnostics and predictive maintenance is currently relatively uncommon (30%), this is expected to become widespread in three years (see Figure 12).

All organizations surveyed are employing strategies to develop digital solutions in the general surgery space, either by in-house development, through multi-player partnerships or by M&A strategies. For example, in 2024, NVIDIA is working with Johnson & Johnson MedTech to test new AI capabilities for the company’s connected digital ecosystem for surgery. It aims to enable open innovation and accelerate the delivery of real-time insights at scale to support medical professionals before, during and after procedures.<sup>36</sup>

**Which digital solutions are your customers looking for in long-term contract agreements currently and how will that change in three years?**



**Figure 12: Evolving customer demands.** Manufacturers anticipate rising interest in robotics platforms and remote diagnostics, driving growth in digital surgery business.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

## Key insight 2

### Explore new business models for general surgical devices

General surgical device companies are exploring alternative business models. Despite the financial pressures they face, hospitals remain committed to investing in surgical capital, especially in robotics. As per our survey, 7 in 10 respondents have seen an increase in hospitals' willingness to invest in large surgical capital platforms. New innovative models have the potential to expedite this trend, which will provide customers with more options.

Our survey indicates that while the direct purchase model remains dominant (>90%) for new platform-based devices, alternative models such as leasing, platform-as-a-service (PaaS) and rentals are poised for significant growth over the next three years. These emerging models aim to reduce reliance on capital and infrastructure, enhancing flexibility and enabling customers to make purchases with lower costs (see Figure 13).

Successfully launching these models requires a financing arm or the capacity to raise capital. Moreover, it's imperative to shift messaging and value propositions to emphasize the overall ecosystem value rather than solely focusing on individual product innovation. This involves highlighting digital components, services, consumables, and other factors contributing significantly to the overall value proposition.

New sales models, like equipment leasing contracts (Robotics-as-a-Service or RaaS), are expected to democratize access to surgical robots and drive adoption. For instance, Intuitive Surgical reported that 48% of its total placements for the DaVinci system were operating leases in 2023, up from 38% in 2021.<sup>37</sup> The benefits of these models extend to both hospitals and robotic manufacturers. Hospitals benefit from avoiding large upfront capital expenditures and gaining predictable budgeting, while companies benefit from a steady income stream and higher margins compared to upfront sales.

Which business models does your organization view as viable options for selling surgical capital currently and in three years?

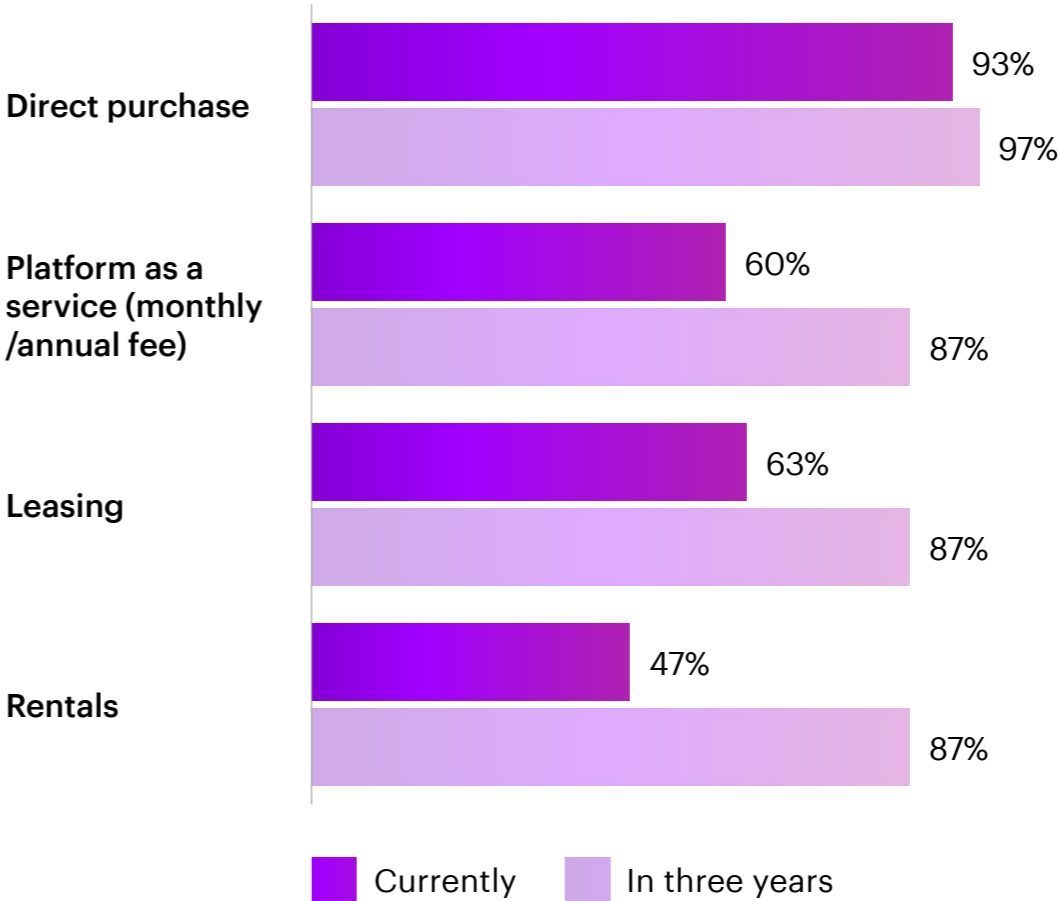


Figure 13 : General surgery explores new models. Direct purchase and Platform as a Service (PaaS) to dominate the viable business model landscape in next three years.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

Interventional systems, a precision medical robotics company, is focused on improving patient outcomes by expanding access to its micro-invasive interventions. The company has introduced a new subscription service for micromate, offering three package levels that include the miniature robotic system, the latest planning and navigation station, disposable accessories, and specialized services. The subscription fee is fixed, with no mandatory service agreements, ensuring predictable and cost-effective pricing.<sup>38</sup>

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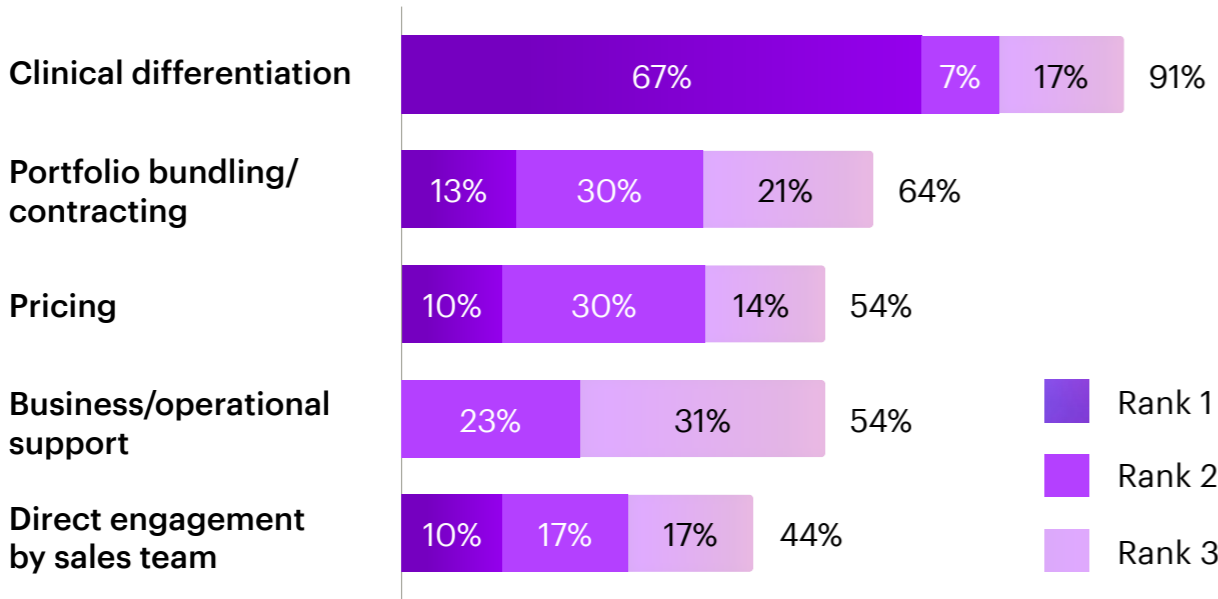


### Key insight 3

## Customize to capture the outpatient market

As mentioned, the needs of ASCs differ from those of hospitals. This is an opportunity for medical device companies to offer customized financing plans for equipment and even teams to help construct and design surgical centers. For larger, capital-intensive devices such as surgical robots, more companies have started offering per-procedure prices, leases, and payment plans.<sup>39</sup> Around a quarter of our respondents are engaging with ASCs directly and 80% are using a combination of direct and distributor channels. According to CXOs, the top three areas crucial for success in the ASC space for general surgery are clinical differentiation (91%), portfolio bundling/contracting (64%) and pricing (54%) (see Figure 14).

**In which of the following areas is your organization placing most emphasis to drive success in the ASC space for general surgery solutions?**

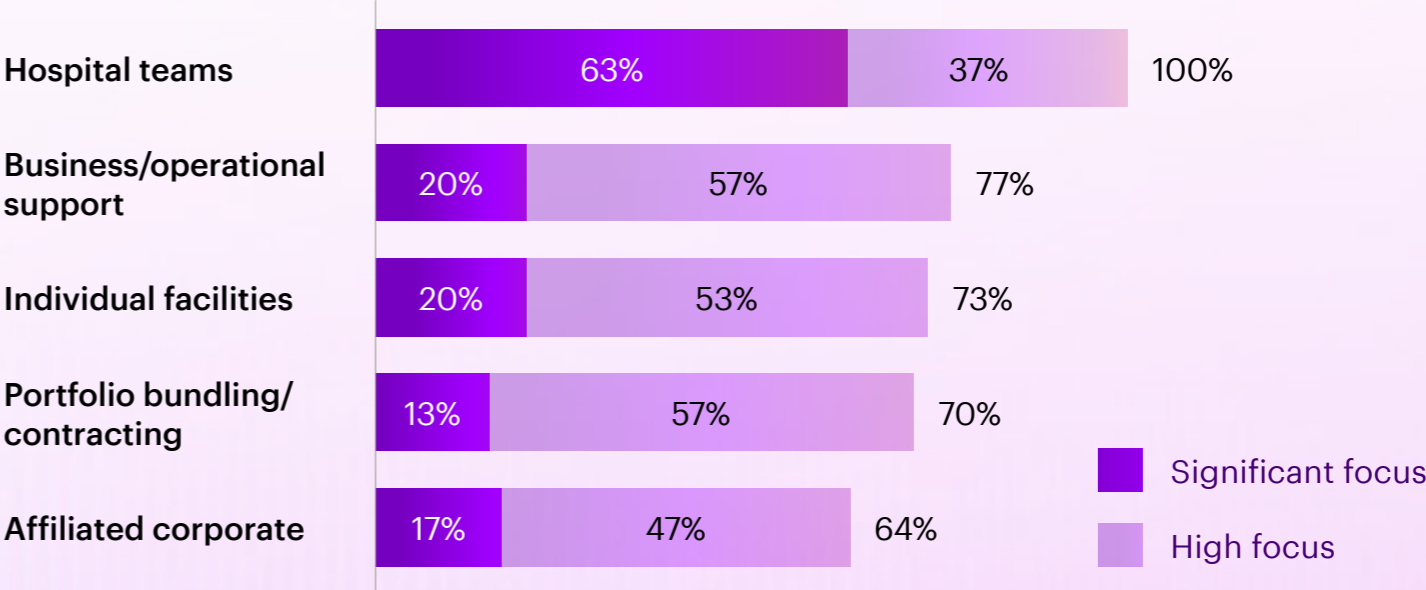


**Figure 14: Success factors for ASCs.** Organizations are emphasizing clinical differentiation in order to drive success in the ASC space for general surgery solutions.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

Success also requires a distinctive ASC channel strategy, considering key factors highlighted in our survey: engagement with hospital teams (100%), operational support (77%), individual facility focus (70%), portfolio bundling (70%) and affiliate corporate focus (63%) (see Figure 15). For example, DePuy Synthes, an orthopedic business of J&J, offers diverse pricing options, operational support, capital programs for equipment acquisition, rebates, coding assistance, and infection risk management services.<sup>40</sup>

**In your engagement with ASCs, approximately how much focus is placed on the following areas?**



**Figure 15: Design new ASC-specific strategy.** Organizations to focus beyond the financial component to drive engagement with ASCs.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

## Role of intelligent technologies

While venturing into adjacent value pools through connected solutions and services, general surgery device manufacturers recognize the need for a robust digital core and the latest intelligent technologies, including gen AI.

Over the past several years, general surgery manufacturers have seen the adoption of digital technologies and data tools accelerate—not just in the OR suite, but also along the entire patient journey. In fact, a significant majority of CXOs note a shift in resource allocations toward upstream care, with 90% indicating increased R&D spending and over 70% reporting a rise in capital budget allocation compared to three years ago.

The integration of intelligent technologies into medical devices presents a transformative opportunity in healthcare, particularly in early screening and post-operative analysis. One notable example from Endoscopy is GI Genius, a globally distributed AI-powered tool by Medtronic, designed for early detection of colorectal cancer.<sup>41</sup> Collaborating with Nvidia, Medtronic has enhanced GI Genius's AI capabilities, allowing third-party developers to refine AI models through the GI Genius AI Access platform. This innovation holds promise in improving patient outcomes and reducing medical variability, revolutionizing colorectal cancer detection.





Furthermore, AI-enabled devices can play a crucial role in collecting extensive patient data, with significant potential in post-operative analysis. In the surgical domain, applications include customizing general surgery devices through data analysis and pattern recognition, optimizing surgical instrument design based on various parameters like ergonomics, and enhancing overall surgical outcomes (see Figure 16).

To facilitate these transformations, it is imperative for companies to reimagine their existing technology and advisory ecosystems. This includes the development of advanced data capabilities specifically designed for unstructured and synthetic data. Companies should aim to create a robust architecture capable of seamlessly integrating multiple foundational models. Additionally, establishing clear AI governance frameworks and ethical principles is crucial for ensuring responsible and effective AI implementation within the MedTech sector.

**Which of the following does your organization see as the key applications/benefits of gen AI for general surgery businesses?**

**Assisting in postoperative analysis by processing patient recovery data, identifying patterns, and providing insights into the effectiveness of different general surgery devices in specific cases**

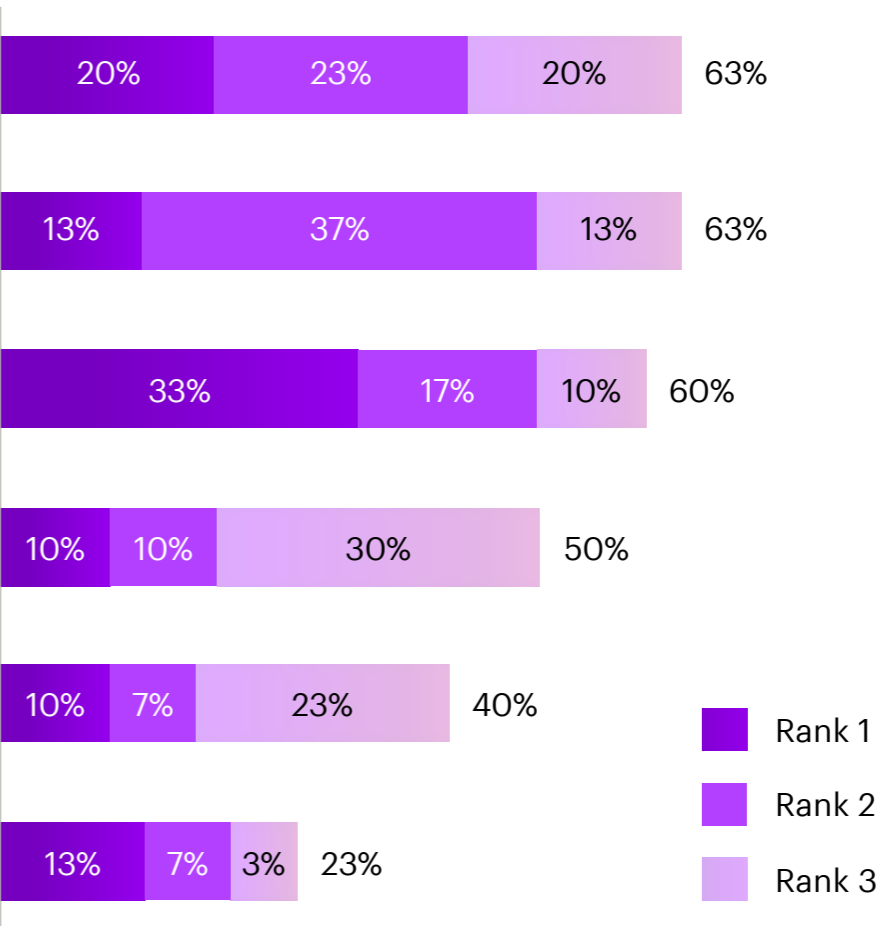
**Development of specialized general surgery devices tailored to specific procedures or patient demographics through data analysis and pattern recognition**

**Analyze parameters related to surgical instruments, such as ergonomics, material properties, and functionality, to optimize their design**

**Programming of surgical robots and analyze data from sensors and other sources, enabling robots to make informed decisions**

**Track and manage surgical instruments, ensuring efficient inventory management**

**Sales & customer support as well as assisting in regulatory filings**



**Figure 16: Strong digital core with gen AI.** A range of benefits with gen AI implementation, starting from post operative analysis to customized surgical devices.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.



## Way forward

To capitalize on these advancements, general surgery companies should pivot from selling platforms to offering Robotics-as-a-Service (RaaS). They should also transition from promoting branded consumables to fostering a brand-agnostic ecosystem, aiming to dominate the operating room landscape. Moreover, there's a critical need to expedite the shift of care beyond traditional hospital settings. Consider having remote procedures completely done by a robot. This requires leveraging AI and digital channels for patient engagement, introducing smaller and more user-friendly surgical platforms, and embracing innovative business models to improve affordability and accessibility of healthcare services.

By embracing these recommendations, general surgery companies can lead the charge in transforming surgical practices and enhancing patient care.

04 Improving diagnostic  
imaging



Compared to other MedTech segments, diagnostic imaging was one of the earliest to encounter cost pressures, due to substantial fixed costs associated with the technology. For instance, the acquisition of a single MRI machine can cost in the millions, excluding ongoing operational and maintenance expenses.

Further exacerbating these financial challenges is a significant shortage of qualified technicians. Over 80% of health systems worldwide have reported shortages in their radiology departments, a situation that is anticipated to persist over the next decade. Additionally, staffing fulfillment challenges are expected to intensify, with projections indicating a potential shortfall of more than 35,000 radiologists and other specialists by 2034 in the U.S. alone.<sup>42</sup>

On the other hand, diagnostic imaging companies are also relatively more advanced when it comes to incorporating the latest technological advances, having already made significant strides and securing numerous FDA approvals. Out of the 176 AI/ML-enabled medical devices authorized by the FDA in July 2023, 79% were related to the diagnostic imaging space. Moreover, medical imaging represents approximately 80% of the 692 clinical algorithms that have been cleared by the FDA to date.<sup>43</sup> This is pushing all the traditional players to add data/analytics/service offerings to stay relevant.



Key insight 1

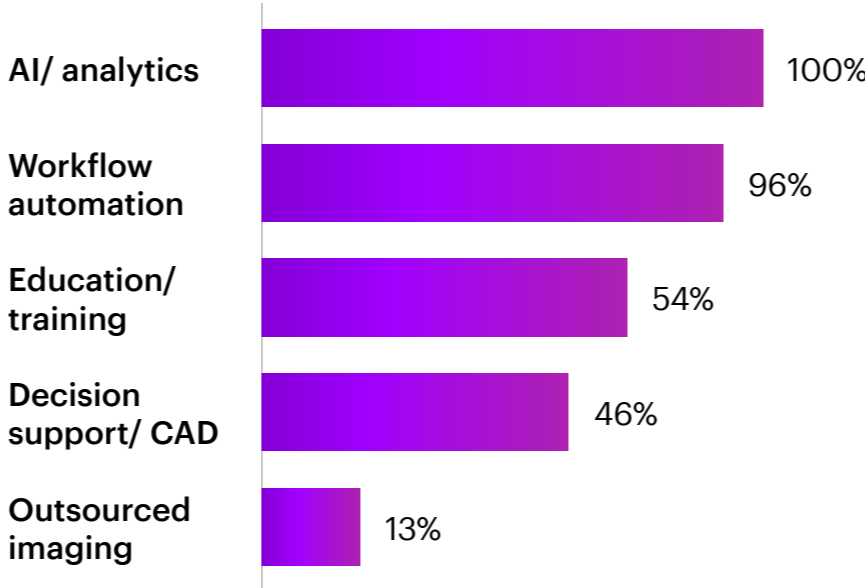
**Prioritize workflow optimization and scale clinical AI for long-term impact**

The diagnostic imaging segment is dealing with a significant challenge in enhancing workflow efficiencies and meeting increasing demands, which has been compounded by acute staff shortages. Burnout in radiology is increasing globally, with prevalence estimates reaching as high as 88% and 62% for overall and high burnout,<sup>44</sup> respectively. In a survey of 13,000 physicians across 29 specialties, radiologists were ranked in 8th position overall, with 49% of survey respondents reporting burnout.<sup>45</sup>

In response to acute workforce shortages and increasing burnout, companies are introducing a range of solutions, such as the syngo Virtual Cockpit platform by Siemens Healthineers approved by FDA in January 2024. The platform enables remote access and image acquisition for CT, MRI and positron emission tomography (PET), and facilitates radiologic technologists to be deployed across multiple sites.<sup>46</sup>

Workflow automation solutions presents a significant opportunity that can be harnessed in the near term—and our survey showed AI/analytics and workflow automation offerings as the top priorities for manufacturers to combat the workforce shortages (see Figure 17).

To address healthcare provider worker shortages, has your company prioritized any of the following solutions?



**Figure 17: Harnessing digital solutions to combat workforce shortages:** Diagnostic imaging units are prioritizing AI/ analytics and workflow automation solutions in their offerings.

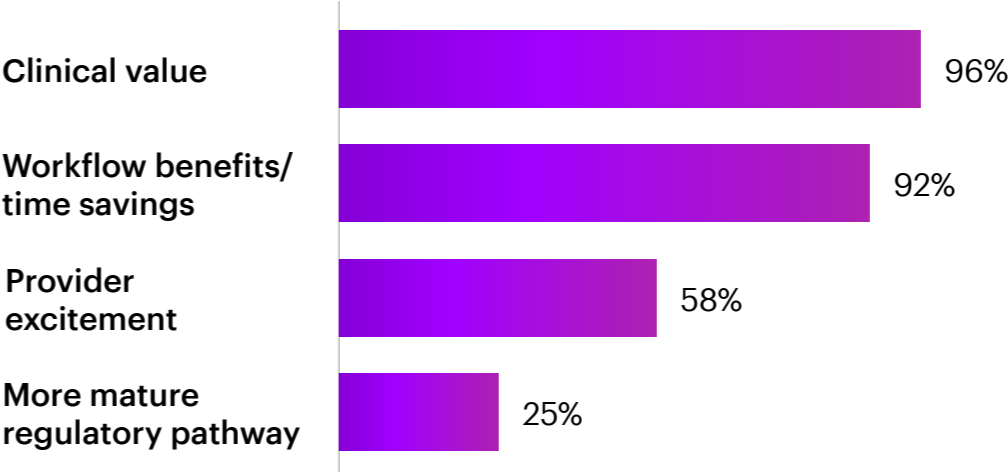
Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

Market leaders are aggressively launching new products in this space. For instance, Philips offers a series of products across the magnetic resonance (MR) workflow such as VitalEye, which detects patient

physiology and breathing movement, allowing routine MR examination setup to occur in less than a minute.<sup>47</sup>

Companies that are already focusing on the application of clinical AI in diagnostic imaging space have the opportunity to scale it significantly. CXOs agree: clinical value and workflow benefits and time-savings have been key drivers in incorporating AI algorithms into imaging platforms, according to our survey (see Figure 18):

What factors have been most important for driving the incorporation of AI algorithms into imaging platforms in your organization?



**Figure 18 : AI algorithms reinventing diagnostics units:** Clinical value and workflow benefits are perceived as the most important factors driving the incorporation of AI algorithms into imaging platforms.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

The popularity of ultrasound imaging devices is also rising, due to their ease of use, portability, and cost efficiency. Ultrasound devices account for 12% of the total diagnostic imaging devices in development, and the most expected device approvals in 2024 of any diagnostic imaging device market.<sup>48</sup> In response to this critical need, major organizations are moving quickly. GE HealthCare, for instance, has recently announced its receipt of a grant exceeding \$44 million aimed at developing AI-assisted, user-friendly ultrasound technology. The company's objective is to craft an intuitive interface that empowers clinicians to employ a broad range of healthcare screening methods, with the explicit aim of enhancing healthcare outcomes.<sup>49,50</sup>

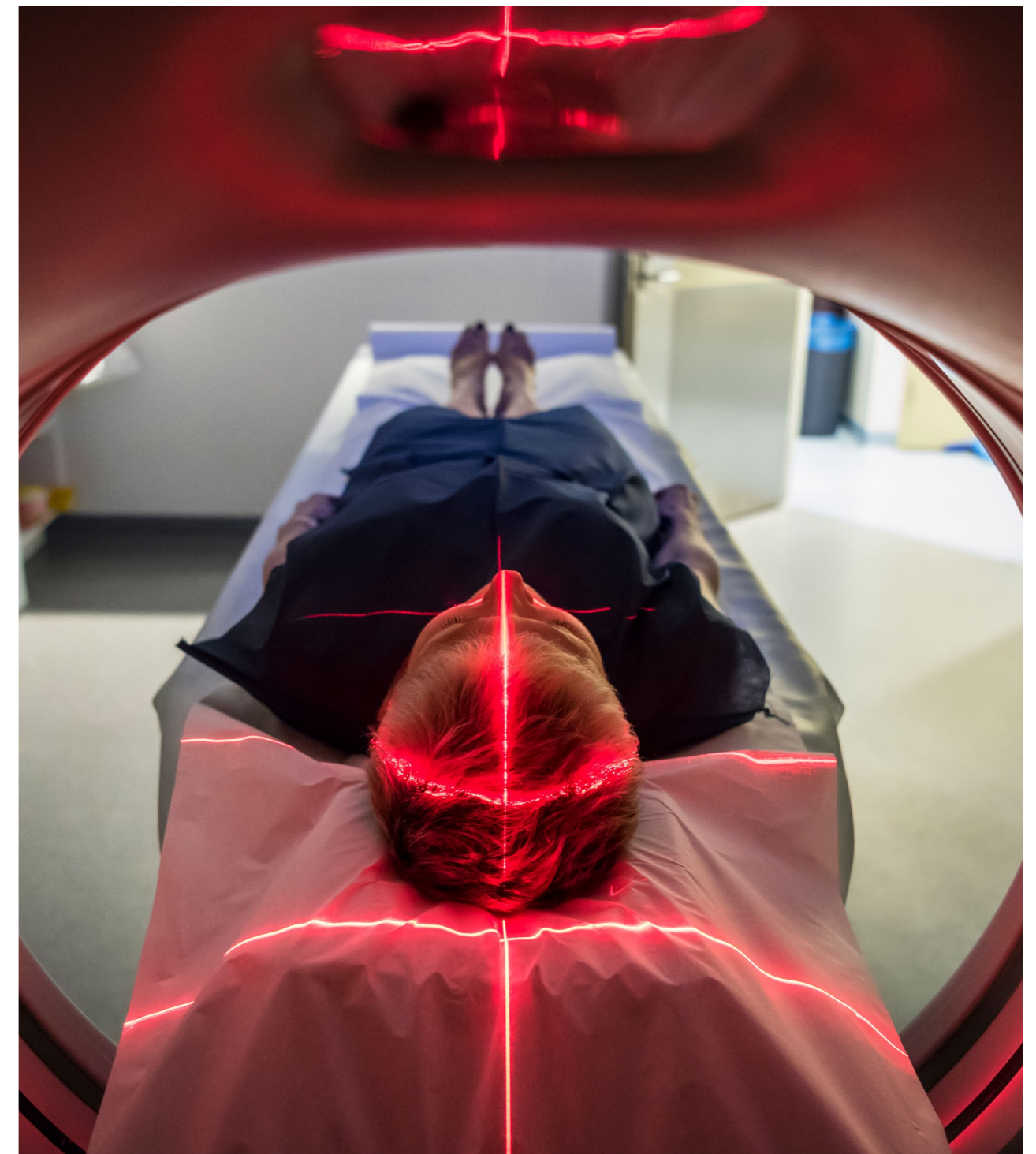
Overall, the efforts to integrate AI and ML into imaging equipment has accelerated with products boasting built-in capabilities. While big players have started to incorporate AI and ML into both clinical and workflow applications, there is still a need to scale these into broader solutions in a way that creates value for both providers and manufacturers. These examples showcase the work already underway:

- GE Healthcare uses deep learning reconstruction in an MRI algorithm to create finer image detail and improved image quality to help clinicians make diagnoses.<sup>51</sup>

- Philips uses an advanced CT reconstruction technique that leverages AI to reduce contrast dose, lower image noise, and improve the detectability of low-contrast.<sup>52</sup>
- Siemens Healthineers is developing a prototype of a software assistant for making radiological diagnoses.<sup>53</sup>

In addition to incorporating AI and analytics into medical products, algorithms are being developed and trained on vast datasets of medical imagery—including CT scans, MRIs, X-rays and microscopy images—to perform detailed analyses. Through this extensive training, AI systems can detect a range of abnormalities, such as tumors, infections, and fractures, enhancing diagnostic accuracy.<sup>54,55</sup> These AI systems could assist healthcare professionals in detecting anomalies when diagnosing illnesses. An illustrative advancement in this area is Google's development of a deep learning model capable of detecting breast cancer in mammograms with high accuracy and reduced instances of false positives.<sup>56</sup> As these deep learning diagnostic models continue to evolve, they are poised to become an indispensable resource for healthcare providers, significantly improving patient care outcomes.

All of this will help address the growing concerns around burnout while streamlining workflows to be more effective and efficient.



## Key insight 2

### Integrate imaging with procedures

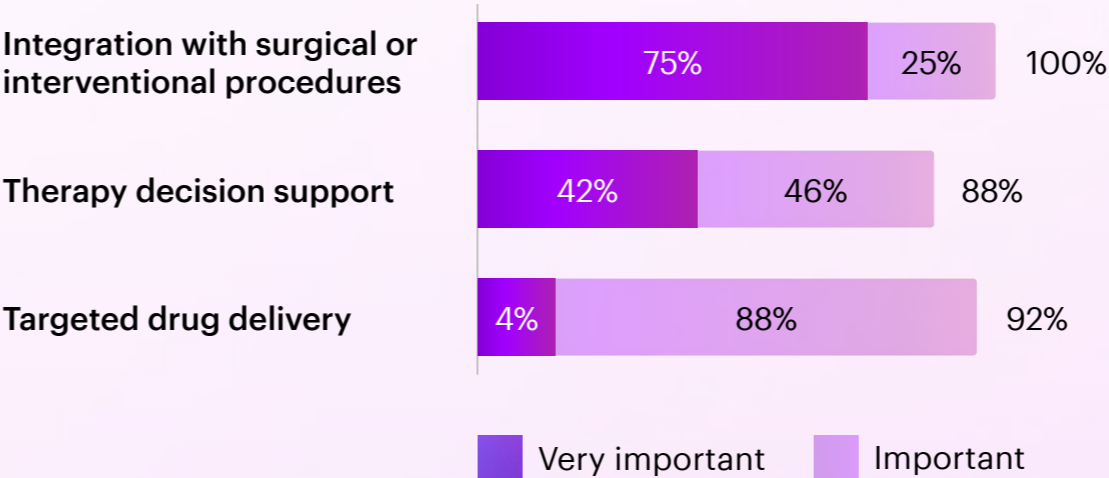
Radiology stands as the medical specialty most advanced in utilizing AI, especially in image interpretation. However, there remains a critical need to adapt the analytics and benchmarks from diagnostic radiology to enhance the operating room (OR) imaging environment, where AI support remains notably limited.

During surgical procedures, clinicians must gather and scrutinize data from diverse sources, including live 2D X-ray images, 3D ultrasound, intravascular ultrasounds, and physiological flow measurements. To address this complexity, manufacturers of interventional imaging equipment are progressively offering multimodal integration. This approach enhances intraoperative data with insights from various preoperative analyses, such as anatomical segmentations and preoperative planning, thereby supporting a more informed surgical process.

Our survey revealed that CXOs view the integration of imaging into various therapeutic interventions—such as surgical procedures, therapeutic decision support, and targeted drug delivery—as crucial for the future growth of their organizations (see Figure 19).

A prime illustration of integrating imaging with surgical procedures is the Hybrid OR at IHU Strasbourg, developed in collaboration with Siemens Healthineers. This innovative setup combines MRI, CT, cone-beam CT/angiography, and ultrasound imaging within a single OR suite, aiding coordinated and integrated information sharing to each interventional team.<sup>57</sup>

How important, if at all, is integration of imaging with therapeutic intervention for your business moving forward in the following areas?



**Figure 19: Success lies in integration.** Diagnostic imaging units must prioritize integrating imaging into diverse therapeutic interventions to catalyze growth.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.



Another recent example in this space is Philips' interventional application platform, IntraSight, which brings together imaging and physiology applications on a mobile system for coronary and peripheral artery disease therapy. As the application brings various information sources together in one overview, clinicians no longer need to pull this information from different places or look in different directions—saving them time and effort.<sup>58</sup>

Organizations are increasingly focusing on integrating imaging with decision support tools for healthcare providers. Although computer-aided detection (CAD) systems that do not utilize AI have been in use for the past 25 years, modern decision support systems offer significantly more advantages. These systems are designed to aid clinicians in diagnosing conditions and deciding on therapeutic strategies by analyzing a patient's status and comparing it with the treatment paths of other patients.<sup>59</sup> Moreover, image-guided drug delivery holds the promise of transforming care delivery in various conditions, including coronary artery disease, stroke, liver cancer, and spinal disorders. However, its greatest potential impact is observed in the treatment of lung cancer.

Lastly, with rising focus on minimally invasive techniques, the importance of image-guided therapy has increased multifold. Advanced imaging techniques, such as ultrasound, MRI, or nuclear imaging, can guide the delivery of therapeutic agents. Using image guidance, drug delivery systems can be precisely directed to the target site, ensuring accurate and efficient drug distribution. This approach allows for real-time monitoring of drug delivery and localization, optimizing treatment efficacy.<sup>60</sup>



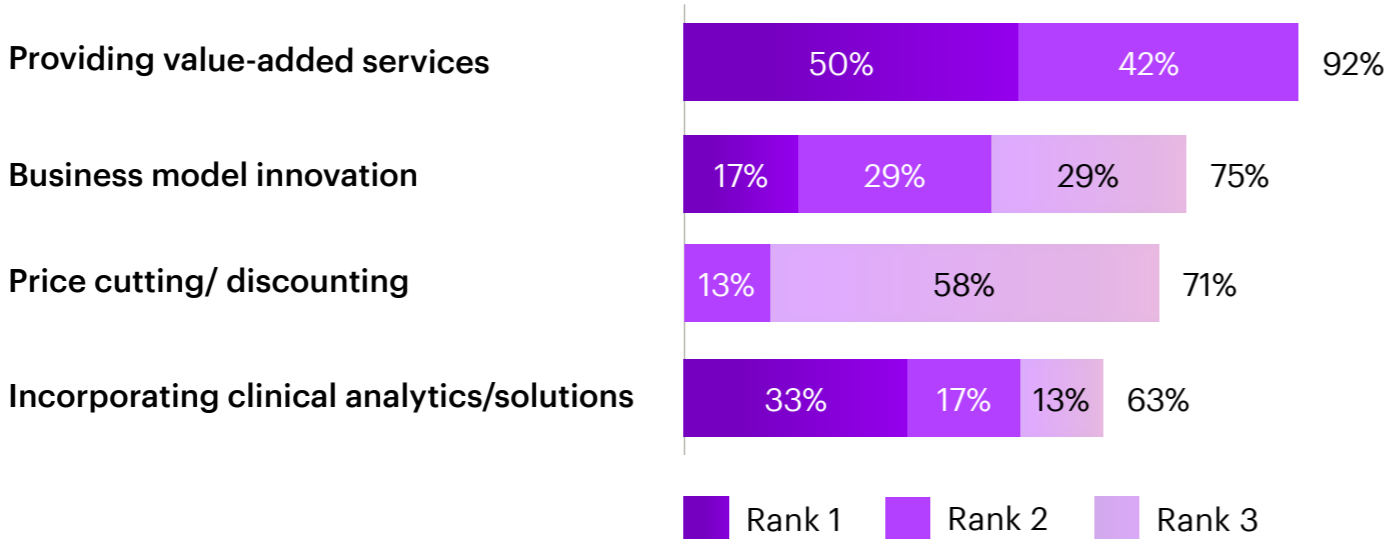
### Key insight 3

## Monetize through multiple streams

In response to the evolving market landscape where capital equipment is being commoditized, companies are reconsidering their strategic approaches to secure a larger market share. Market leaders will be the ones that shift their approaches toward delivering better outcomes utilizing their scale, extensive clinical expertise, digital platforms, and data obtained from their devices to refine existing services and introduce new offerings.

According to CXOs surveyed, value-added services are the primary source of value creation, with business model innovation following closely behind (see Figure 20).

**Which of the following strategies do you believe generate the most value?**



**Figure 20: Strategies generating most value.** Incorporating value-added services alongside existing offerings maximizes value for companies and customers alike.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

Value-added services aim to create additional value for customers by providing traditional offerings, such as break/fix services. However, market leaders should evolve to offer more advanced services to stay competitive. These advanced services can include expanded platform support, such as predictive maintenance and parts support, as well as workflow support through protocols, analytics, and advisory for improved lab efficiency.

Additionally, business support services play a role in expanding hospitals’ revenue pools, improving sustainability, and enhancing cybersecurity. Lastly, clinical, and patient services should focus on patient safety, image quality, interpretation quality, and other patient-oriented services. By incorporating these more sophisticated offerings, businesses can better meet the evolving needs of their customers.

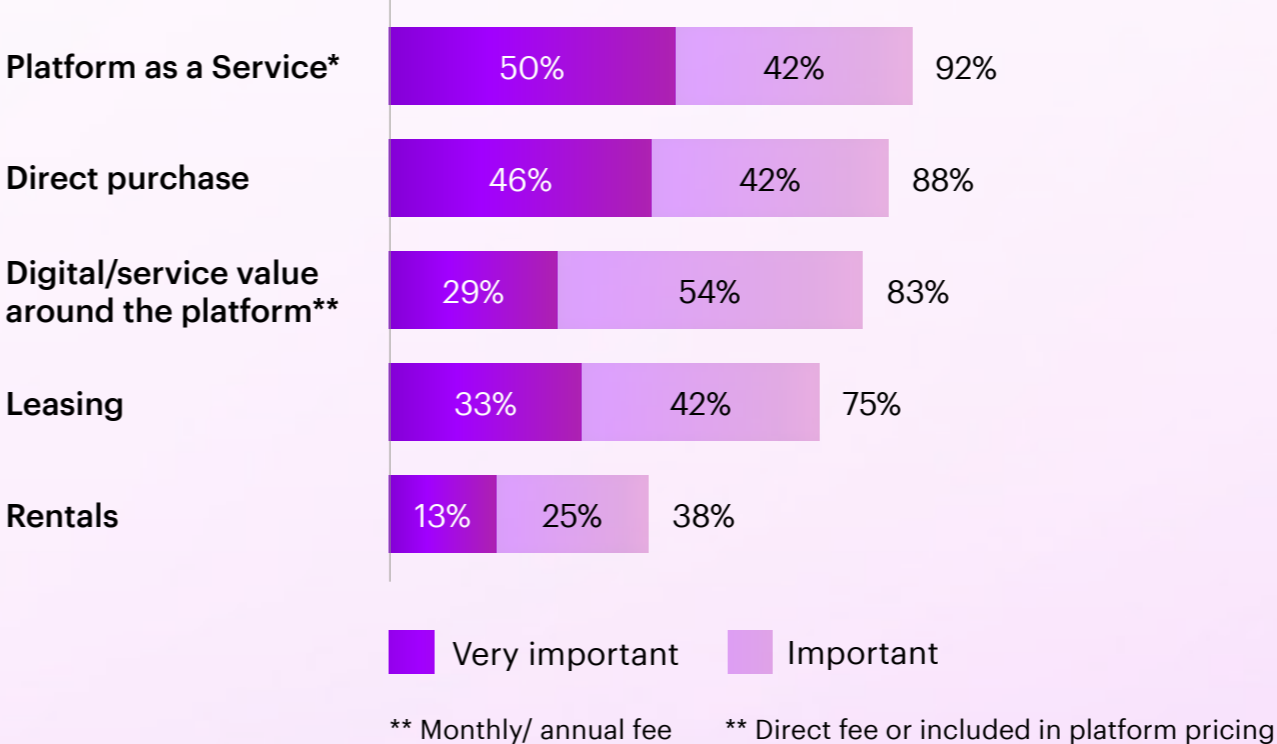
Some large imaging companies are already going beyond break-fix services and taking a more integrated approach that addresses the entire equipment lifecycle and technology infrastructure, layering in new value opportunities. For instance, GE Healthcare offers its Healthcare Technology Management program which includes service model optimization for efficient operations, reduced costs, and enhanced quality; integrated asset management with a data-driven focus on the entire equipment lifecycle; and sustainability & innovation, addressing regulatory requirements for safety and compliance as well as cybersecurity.<sup>61</sup>

Manufacturers must recognize that various strategies yield distinct value propositions. According to our survey, providing value-added services (and discounts) is closely linked to fostering deeper relationships with customers. Conversely, incorporating clinical analytics or solutions and innovative business models are strategies more frequently associated with the potential to create new revenue streams, compared to other approaches.

As the diagnostic imaging industry transitions from a product-centric to a solutions and services-oriented model, companies should consider new business models to reposition themselves as vital partners within this value chain. This involves adopting risk-sharing practices and offering services based on outcomes, all while avoiding placing undue pressure on the capital budgets of healthcare providers. While direct purchase is still an important business model for digital imaging company CXOs, the PaaS model surpasses that in the order of importance. In addition, augmenting value through digital services around the platform stand out as a significant monetization strategy for diagnostic imaging. (see Figure 21).

In fact, large imaging manufacturers are increasingly shifting towards the PaaS model to monetize software offerings. For example, Philips Healthcare has aggressively disrupted its traditional model using its Technology Maximizer<sup>62</sup> (which provides latest HW/SW updates upon release); PerformanceBridge (cloud-based analytics platform focused on operational improvement, optional add-on consulting services)<sup>63</sup> and RightFit Customer Service Agreements (customers can opt in to receive the latest HW/SW releases at a fraction of cost).<sup>64</sup>

**How important, if at all, are the following monetization options for your diagnostics business?**



**Figure 21: Monetize through new business models.** With increasing AI penetration in diagnostic imaging, new business models like PaaS are adding new dimensions to customer contracts.

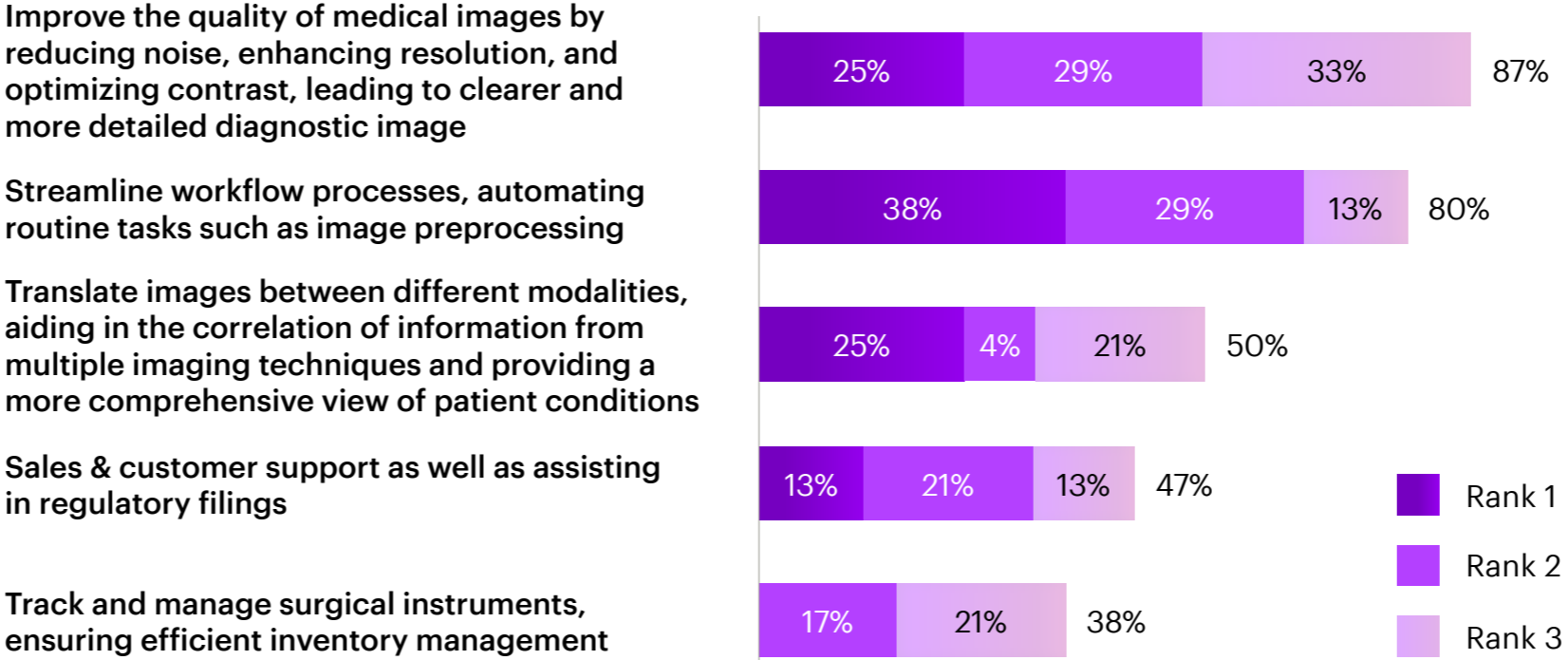
Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

# Role of intelligent technologies

Given that 80% of today’s healthcare data is unstructured and medical imaging accounts for 90% of the digital health footprint,<sup>65</sup> it is crucial for diagnostic imaging companies to establish a robust technological infrastructure. The transformation in diagnostic imaging over recent years goes beyond advancements in hardware, such as wearable technology or portable ultrasound systems. It also includes the automation of workflows and the streamlining of data transfer. To successfully introduce a new device to the market, companies must ensure interoperability, data sharing, and a mature digital infrastructure.

To offer the best-in-class products, companies need to harness new technologies with key focus on AI and gen AI capabilities. As per CXOs, the most important application of gen AI in diagnostic imaging is in improving the quality of medical images, followed by applications in workflow automation (see Figure 23).

**Which of the following does your organization see as the key applications/benefits of gen AI for diagnostic imaging businesses?**



**Figure 23: Revolutionize diagnostic imaging through gen AI.** The most desired benefit from gen AI in diagnostics imaging space is enhancing image quality and streaming workflow processes.

Source: Accenture Research MedTech CXO survey 2024. See About the Research for details.

As part of reinvention, diagnostic imaging companies should identify strategic opportunities where technology creates unique value propositions that are difficult for competitors to replicate. Cybersecurity practices should be embedded earlier in the lifecycle, spanning across technology and culture to prioritize resiliency. Lastly, a holistic integration strategy should be developed, one that is fit for purpose and adaptable to future technologies, achieved through intentional and flexible integration approaches.



## Way forward

The diagnostic imaging sector must intensify its integration of AI and ML across all facets of imaging especially to improve clinical value and workflow applications. Strengthening automation, analytics, and remote imaging capabilities will be crucial, particularly to address personnel shortages and cost pressures.

There will also be a significant push towards interoperability and seamless data integration with procedures, ensuring that imaging systems communicate effectively across platforms to enhance collaborative diagnoses and patient care. Enhancing HCP experience through integrating imaging with decision support tools will help better diagnosis.

To remain at the forefront of healthcare innovation, diagnostic imaging must continue to embrace new business models such as PaaS, or value-added services around the platform. In addition, they should consider forming strategic partnerships to accelerate technological adoption, broaden imaging applications, and ultimately improve patient outcomes by transforming diagnostic imaging into a more integrated, efficient, and patient-centered healthcare tool.

05 What to do next



The MedTech industry is on the precipice of a new frontier, fueled by the extraordinary power of intelligent technologies such as predictive and gen AI.

These intelligent technologies are revolutionizing the MedTech industry's entire value chain and require multiple strategic pivots. In detail, together with the industry specific forces, they create new opportunities to:

- **move upstream in the patient care pathway,**
- **disrupt the MedTech Value Chain model by automating, augmenting, and reinventing traditional workflows and drive top and bottom-line improvements, enhance the core product portfolio and create new revenue streams,**
- **promote a shift towards modern, less infrastructure dependent business models, and**
- **deepen internal & external ecosystem partnerships to benefit broader care continuum solutions.**

Reinvention is manifesting uniquely within each sub-segment, facing its own set of challenges from commoditization to pricing pressures in their core markets.

Based on our analysis, we have identified five key actions companies must take to successfully seize the opportunities offered by enterprise reinvention, gen AI, and an investment in a strong digital core:



## 01 Lead with value

Rather than focusing solely on technology, companies should prioritize understanding how gen AI can fundamentally redefine their value chain. They should seek opportunities not just for cost savings but to also to strengthen core offerings and tap into new value pools such as preventative space in diabetes and CVD, or post-surgery recovery space in general surgery. By taking strategic pivots explained above, companies can move away from low-value proof-of-concepts and embrace the full potential of gen AI.



## 02 Reinvent talent and ways of working

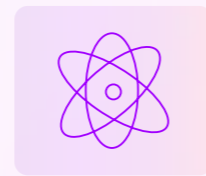
Realizing value from gen AI requires companies to fundamentally reimagine and redefine their processes and the way they work—and to support their workforce through the transition. Reinvention with gen AI requires significant investment in developing new skills, as well as substantial behavior changes, from the leadership team to each individual employee. In fact, over 90% of MedTech CXOs point out that they either need a total transformation of their reskilling strategy or significantly adjust it.<sup>66</sup> The effort this will take should not be underestimated but the resulting benefits in innovation and profitable growth are unprecedented.



03

### Understand and develop an AI-enabled secure digital core

In an age of continuous reinvention, the digital core becomes a primary source of competitive advantage. It leverages the power of cloud, data and AI through an interoperable set of systems across the enterprise—including enterprise platforms, automation, integration and security—that allows for rapid development of new capabilities. Companies must establish a robust digital core and data infrastructure to fully leverage the potential of gen AI and enable the continuous creation of new capabilities. This involves treating data as a strategic asset and investing in AI capabilities that enable hyper-personalization and automation at scale. Structured and unstructured data, as well as synthetic data, should be harnessed to drive insights, inform decision-making and create new market opportunities.



04

### Close the gap on responsible AI

gen AI introduces new risks and ethical considerations. Companies must prioritize responsible AI practices to avoid unintended consequences. These include things like generating content that contains unintended biases and discrimination in direct to consumer areas, and things like ethical or legal concerns about the origin and ownership of data used for AI application in a provider setting. By implementing responsible AI programs, companies can mitigate these risks and help ensure the positive impact of gen AI.



05

### Drive continuous reinvention

Reinvention is not a one-time exercise but an ongoing journey. Companies must foster a culture of continuous reinvention, and build the capability, approach and tools that enable them to adapt and innovate while maintaining day-to-day operations. Organizations must continually identify the next strategic bets and new performance frontiers and leadership must be incentivized and supported to achieve these goals.

Those who embrace gen AI in their reinvention efforts will be at the forefront, driving compelling personalized experiences, sustained productivity improvements, and creating new revenue streams.

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# About the research

Accenture conducted a survey in February 2024 of 44 top MedTech companies across the four distinct MedTech segments (Diabetes, CVD, general surgery and Diagnostic imaging) to evaluate the impact of technological disruption and evolving business dynamics on various aspects such as organizations’ business models, product portfolio, and priorities.

Approximately 100 C-Suite executives were surveyed to gather insights into these areas from across North America, EMEA (Europe, Middle East, and Africa), and Growth Markets.

The responses from CXOs were categorized into two primary groups: 50% of the responses were from CTO/CIO/CDO roles, while the remaining 50% were from CEO/CSO/CFO/COO/Chief Transformation Officer/Head of R&D/President of Business Unit roles. This distribution ensured a balanced representation of leadership perspectives within the surveyed organizations.

## The targeted list of companies included major players in the MedTech industry:

### Diabetes

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- Medtronic
- Abbott Laboratories
- DexCom
- Insulet Corp
- F. Hoffmann-La Roche
- Tandem Diabetes Care
- Ypsomed Holding
- One Drop
- Novo Nordisk
- Embecta
- Teladoc/Livongo

### Cardiovascular

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- Medtronic
- Abbott Laboratories
- Boston Scientific
- Edwards Life Sciences
- J&J (Biosense Webster)
- W.L. Gore & Associates
- Terumo
- Biotronik
- Becton Dickinson
- Koninklijke Philips NV
- Zoll Medical
- Teleflex
- Atricure
- Angiodynamics
- Endologix

### General Surgery

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- Intuitive Surgical
- J&J (Ethicon)
- Medtronic
- Boston Scientific Corp
- Stryker Corp
- Olympus Corp
- Becton Dickinson (CR Bard)
- Cook Medical
- Integra Life Sciences
- Applied Medical
- Baxter
- Teleflex
- Drager
- Getinge
- Conmed

### Diagnostic Imaging

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- GE HealthCare
- Siemens Healthineers
- Koninklijke Philips
- Canon Medical Systems Corp
- Bracco SpA
- Bayer AG
- Hologic
- Shimadzu Corp
- Hitachi Ltd
- Fujifilm Holdings Corp
- Hoya Corp
- Carestream Health

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