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KEY POINTS

- While medtech is an industry built on constant innovation, the level of change in healthcare, broadly speaking, has reached heights previously unforeseen.
- Medtech companies ignore these changes at their own risk. Product innovation alone is no longer enough, these authors argue, to ensure company growth.
- Identified here are a number of strategic options that device companies can employ to confront these new challenges and succeed in today’s rapidly changing healthcare environment.
- Among these proposed strategies are levers of scale, value proposition and business model transformation that medtech firms can use to differentiate themselves.

BY DAN SHOENHOLZ AND KEYURI SHAH

The medical technology industry has been grappling with significant challenges for several years. Limited R&D productivity, pricing pressures, consolidation of payors and providers, and regulatory changes, such as shifts to value-based reimbursements, have pressured financial performance and are challenging traditional approaches to the business. While medtech companies will continue to invest in R&D both to improve products and demonstrate their impact on health outcomes, a focus on product innovation will not be enough. Successful medtech companies will need to adopt one or more differentiated strategic options, focused on the levers of scale, value proposition and business model transformation, in order to succeed:

Category focus and scale: Where feasible, medtech companies must strive for scale in order to better position themselves with consolidating providers and payors. In pursuing this option, companies can achieve scale by either being a leading player in a specific technology or therapeutic area or being the single call point for customers across a vast number of products.

Value-based solutions: With the proliferation of cost-containment strategies in developed economies, companies would need to focus on bringing products to market that offer strong value at lower cost. The lower cost products will help to serve specific populations that may not need a differentiated product with all the “bells and whistles.” Additionally, having a mix of standard or lower cost products will be key to penetrating growing emerging markets.

Services solution: Developing wraparound services for core products that add value to hospital customers will enable companies to garner share by bundling products and services as an end-to-end solution for key therapeutic areas. In an environment where sales representatives are moving out of operating rooms, providing services will enable medtech companies to stay close to customers to understand their key pain points and unmet needs.
**Embrace data:** Medtech players can develop strategies around aggregating disparate information and extracting insights from their products. Embedded technology can become a core competency of medtech companies in order to drive better outcomes through product innovation and deliver care outside traditional settings — in patients’ homes, places of work and elsewhere. Partnering with other players will be an important element of success.

The strategies described above are not mutually exclusive, and the right approach will differ by company. A thorough strategic review, including development of an outside-in perspective, is necessary to chart the best course.

**Traditional Approaches No Longer Work**

Traditional approaches to managing business in the medtech industry will no longer serve the changing economic and regulatory environment. Now, more than ever, the medtech industry needs to realign in order to address the significant headwinds it faces. Since 2008, the top-line growth of the medtech industry has held steady at a new normal of less than 3% versus historical highs of more than 5% annual growth. In the same period, net income as a percentage of revenue held steady in the range of 4% to 5% (see Figure 1). This relatively modest top-line performance has been reflected in the overall industry’s equity performance, which only started to outperform the major indices in 2014 and continues to underperform the broader health care markets (see Figures 2 and 3). Among payors, there is an increasing focus on patient quality of care, with compelling evidence needed to justify the use of higher cost procedures over lower cost options, demonstrating product value to a customer base of payors and providers that is rapidly consolidating.

**Major Challenges Ahead**

**Lower R&D productivity and delays in FDA approvals**

Although total R&D expense has grown from its lows of 2007 at a rate of 1.5% per year, since 2008, R&D as a percentage of revenue has remained steady between 3.5% to 4.0% (based on company reports for pure-play US and European companies) (see Figure 4). Limited investment in R&D has slowed down innovation in the medtech industry and resulted in greater commoditization of products. At the same time, venture capital funding for early-stage companies has declined for two consecutive years, threatening the future of medtech’s innovation ecosystem.

**Changing regulatory environment**

Compounding the investment issues, the historical sluggishness of the FDA in approving new products has result-
ed in a significant backlog of pending PMA approvals, with rolling 12-month averages of PMA backlog averaging at 50 to 60 pending decisions since 2013. While there has been recent improvement, the number of these approvals has been inconsistent on an annual basis, ranging from 19 to 44 approvals and averaging about 30 per year (see Figure 5). Additionally, only about 30-35% of these PMA approvals can be attributed to larger medtech companies (revenue >$2b). The EU has recently introduced new regulations around labelling, compliance and safety. This will have an impact not only on new products but also on existing products, including increasing time to market, more stringent classification and labelling, post-market monitoring and compliance. These changes are likely to result in continued challenges for medtech companies in delivering growth through large-scale product innovation in the current business environment.

Separately, the Centers for Medicare and Medicaid Services (CMS) projects over 50% of its approximately $600 billion spend to shift to a value-based reimbursement model by 2018, where major joint replacements and hip and femur treatments are likely to be among the largest categories for potential savings. Recently announced guidelines for joint replacement reimbursement by CMS have further defined the environment going forward. Consequently, buyers are likely to put more emphasis on measuring and rewarding value, i.e., demonstrating improved outcomes and lowering total system costs. As mentioned in EY’s Pulse of the Industry report in 2014, customers—primarily hospital procurement groups—are already beginning to shift away from simple cost-driven purchasing decisions and are seeking value from medical products in the form of improved outcomes. This increasing customer focus on demonstrated differentiation and improvement in patient outcomes will further drive the need for medtech companies to invest in R&D that supports these objectives.

**Cost-containment strategies on the rise**

In addition to adjusting to newer regulatory models and a changing risk environment, medtech companies are facing significant pricing pressure as the result of consolidation among hospital customers and payors (see Figure 6). Mergers and acquisitions of hospitals continue at a rapid pace, with nearly 80-90 transactions being completed each year, with larger systems absorbing independent hospitals within their network. Concurrently, the recent consolidation in the commercial payor space means US payors themselves have greater scale and, therefore, greater negotiating power when it comes to market access and pricing.

In the US and other global markets, the cost containment strategies being implemented create new pressures to demonstrate how innovations and technological iterations provide meaningful clinical outcomes over lower cost options. Consequently, medtech companies have seen price declines in major categories. For example, prices for knee reconstruction and prosthetic valves have declined roughly 2-3% since 2010 and are likely to see similar decreases through 2019.
Prices are expected to remain flat for other major categories, such as hip implants, cardiac assist devices and other medtech products. For companies heavily focused on established products, new approaches will be required to sustain their margins. These include focusing on developing scale in core product categories and call points, as well as focusing on more efficient delivery of products to the markets.

**Strategic Options for The Future**

While investing differentially to focus on improved outcomes will remain important, pure product innovation alone is not likely to be sufficient. In this increasingly challenging environment, medtech players will need to look at a combination of scale, value proposition and business model transformation as levers to sustain growth and profitability.

**Category focus and scale**

Market headwinds are driving many medtech companies to reconsider the composition of their portfolios. Several companies, such as Johnson & Johnson (J&J), Endo International and Bayer Healthcare, have divested non-core assets (see Figure 3). Others, such as Zimmer and Biomet, have come together to increase the scale of their offerings. M&A activity remains at an all-time high in terms of both deal value and volume, attracting investment not only from core players but also private equity (PE) investors. For example, large strategic transactions, such as the Medtronic-Covidien combination, have driven up deal value, while, at the same time, PE funds have been investing in assets such as J&J’s Orthoclinical Diagnostics unit and Siemens’ Audiology Solutions business.

Despite significant M&A activity, medtech appears to lag the pharmaceutical industry, not just in deal volume but also in strategic changes. Starting in 2008, margin compression and patent cliffs in the pharma industry drove early portfolio rationalization where companies divested non-core assets. Today, the pharma sector has evolved from a period of rationalizing its non-core assets through divestiture to optimizing its portfolio, focusing on specific business segments or therapeutic areas. For example, Pfizer bolstered its Global Established Pharma (GEP) business by acquiring Hospira to become the largest biosimilar and generics drug developer, and its proposed combination with Allergan will deliver further scale and product breadth to the business. Bristol-Myers Squibb (BMS) has, on the other hand, continued to evolve into a specialty biopharma company, first shedding its non-core assets, ConvaTec (medtech) in 2008 and Mead Johnson (nutrition) in 2009, and, more recently, its diabetes business to AstraZeneca in 2013. Today, BMS is focused on areas such as oncology, immuno-oncology, virology and cardiovascular. Instead of growing revenues, BMS’s topline declined by 18% from 2007 to 2013 while its stock price rose 104% through early 2014 after the announcement of a series of

![Figure 3](https://example.com/figure3.png)

**Europe Market Capitalization Relative To Leading Indices, 2011–2015**

Source: Ernst & Young
**Figure 4**

**Global Medtech R&D Spend**

![Graph showing Global Medtech R&D Spend](chart)

Source: Ernst & Young

**Figure 5**

**New Product And Technology Approvals – PMA Approvals And % Approvals From Large Companies**

**First time PMA issued by FDA**

![Bar chart showing number of first time PMA approvals](chart)

Source: Evaluate Medtech 2015

**Medtech with over $2b revenue – share of first time PMA issued**

![Bar chart showing share of first time PMA issued](chart)

Source: Ernst & Young

**Medtech with over $2b revenue – number of first time PMA issued**

<table>
<thead>
<tr>
<th>Player</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medtronic</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Johnson &amp; Johnson</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Abbott</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Edwards</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Roche</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>St. Jude</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Siemens</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Stryker</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>General Electric</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total PMA issued</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: Evaluate Medtech 2014

*Data by player is available for first half of 2014*
divestitures. Pharma companies have also engaged in asset swaps, where Novartis sold its animal health business to Eli Lilly and vaccines division to GSK. Novartis agreed to buy GSK’s cancer drugs business, a key focus area for the company. As a result of these transactions, pharma companies are further ahead with regard to portfolio optimization and are more focused on core pharma products with their product portfolios divested of non-pharma assets, such as medtech, consumer, animal health and others.

While medtech companies lag pharma companies in terms of restructuring their businesses to meet new market challenges, some have begun to consolidate their businesses to drive scale either in specific therapeutic areas, technologies or product categories (see Figures 7 and 8). For example, Zimmer acquired Biomet to consolidate its position as a market leader in the orthopedic sector in 2014. More recently, Dentsply and Sirona Dental agreed to merge to become the leading manufacturer of professional dental products and technologies. At the same time, St. Jude Medical acquired Thoratec, inching closer to the #2 position in the cardiovascular market. The move provided St. Jude with the ability to boost its organic sales growth, adding complementary products in its portfolio and potentially entering new markets. Similarly, Boston Scientific made a series of acquisitions in recent years to broaden its ablation technology portfolio. While it acquired Bard EP in 2013 to treat patients with cardiac arrhythmias, it also acquired Endo’s American Medical Systems urology portfolio that leverages ablation to treat urological conditions. On the other hand, Medtronic, in order to fight stalling growth and profitability, significantly diversified its product portfolio through the addition of several new product categories and through its acquisition of Covidien, thereby building significant overall scale as the largest medtech player.

A medtech company can find success taking one of two approaches to increase its scale: focusing on a specific category(ies) or being a diversified player and serving more needs of a customer across a wide variety of categories. Diversified companies, such as Medtronic and Becton Dickinson, are well-positioned to serve hospital customers across a broad set of call points and cross-selling products, especially with group purchasing organizations (GPOs) and larger customers. Focused players, on the other hand, can consid-

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**Figure 6**

**Selling Price Trend**

<table>
<thead>
<tr>
<th>Category</th>
<th>2015-2019</th>
<th>2010-2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hip reconstruction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orthopedic prosthetics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardiac assist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prosthetic valves</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knee reconstruction</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Ernst & Young
**Figure 7**

**Business Models**

- Improved outcomes by better monitoring
- Higher delivery focus by allowing practitioners to leverage data
- Improve product innovations by targeting patient pools
- Retain bargaining power over customers
- Leverage distribution focus to increase market share
- Pricing pressure
- Tap emerging market growth
- Improve sourcing for developed markets
- Bring innovations to market more efficiently
- Improve profitability via higher margin service offerings
- Improve communication with patient pool
- Improve control over channel

Source: Ernst & Young

**Figure 8**

**Deals for Portfolio Rationalization**

<table>
<thead>
<tr>
<th>Divesting company</th>
<th>Business unit</th>
<th>Acquirer</th>
<th>Month</th>
<th>Deal value (USD m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johnson &amp; Johnson</td>
<td>Ortho clinical diagnostics</td>
<td>Carlyle Group</td>
<td>January-14</td>
<td>$4,150</td>
</tr>
<tr>
<td>Siemens</td>
<td>Audiology</td>
<td>EQT partners</td>
<td>November-14</td>
<td>$2,854</td>
</tr>
<tr>
<td>Johnson &amp; Johnson</td>
<td>Cordis</td>
<td>Cardinal Health</td>
<td>March-15</td>
<td>$1,944</td>
</tr>
<tr>
<td>Endo</td>
<td>AMS Men's Health and Prostate Health</td>
<td>Boston Scientific</td>
<td>March-15</td>
<td>$1,700</td>
</tr>
<tr>
<td>Novartis</td>
<td>Transfusion diagnostics unit</td>
<td>Grifols</td>
<td>November-13</td>
<td>$1,675</td>
</tr>
<tr>
<td>Bayer</td>
<td>Diabetes care</td>
<td>Panasonic healthcare</td>
<td>June-15</td>
<td>$1,139</td>
</tr>
<tr>
<td>Alere</td>
<td>Health</td>
<td>Optum</td>
<td>October-14</td>
<td>$600</td>
</tr>
<tr>
<td>GE Healthcare</td>
<td>Vital signs</td>
<td>Carefusion</td>
<td>November-13</td>
<td>$500</td>
</tr>
<tr>
<td>Symmetry Medical</td>
<td>OEM business solutions</td>
<td>Tecomet</td>
<td>August-14</td>
<td>$450</td>
</tr>
<tr>
<td>Bayer</td>
<td>Interventional unit</td>
<td>Boston Scientific</td>
<td>May-14</td>
<td>$415</td>
</tr>
<tr>
<td>Sirona Dental Systems</td>
<td>Sirona Direct Distribution</td>
<td>Henry Schein</td>
<td>June-14</td>
<td>NA</td>
</tr>
<tr>
<td>Zogenix</td>
<td>Zohydro ER franchise</td>
<td>Pernix Therapeutics</td>
<td>March-15</td>
<td>$384</td>
</tr>
</tbody>
</table>

Source: Ernst & Young
er vertical integration to serve all the needs of customers around specific therapeutic areas and gain share. Deciding on which approach to follow requires careful consideration of a number of factors, including size of the opportunity, leadership position of the company, relative market share and contribution to the top line and bottom line, among others. Companies need to take an outside-in view of their business to determine their market standing on an overall basis, as well as in each of their key business segments and therapeutic areas. Companies that are not in leadership positions in individual categories or technologies may find it challenging to sustain revenue and profitability growth, especially if their market share is significantly lower than that of leading companies.

In order to drive these mergers and acquisitions to obtain scale, companies need Firepower (i.e., a company’s ability to do transactions based on the strength of its balance sheet). Together, a company’s market capitalization, cash equivalents and debt capacity provide firepower to do deals. With declines in market capitalization and several recent transactions, several companies have lost firepower, according to our analysis. However, other companies, such as Medtronic, Abbott, Stryker, Boston Scientific and CR Bard, among others, continue to have significant firepower to drive transactions in the near future.

**Value-oriented play**

While playing for scale will be a critical strategic lever for medtech players going forward, they will also need to manage their product portfolio to fine-tune their value proposition—to immediate customers, as well as physicians and patients. This will require a wide-ranging product portfolio within a therapeutic area to suit the needs of varying customers. For example, in the case of total knee replacements (or similar joint replacements), the key objective is restoration of function. The needs of a teenager who is disabled

**Figures 9 and 10**

**Medtech companies can learn from their consumer counterparts that are adopting a “mass customization” approach, i.e., manufacturing and marketing products for specific audiences at a larger scale, thereby also significantly increasing variety and customization without increasing costs significantly.**
due to disease are different from a middle-aged woman leading an active lifestyle, including running recreationally, which in turn are different from a senior patient who needs a knee replacement driven by osteoarthritis.

Medtech companies can learn from their consumer counterparts that are adopting a “mass customization” approach (i.e., manufacturing and marketing products for specific audiences at a larger scale, thereby also significantly increasing variety and customization without increasing costs significantly). One such company, ConforMIS, is leveraging 3-D printing technology to customize joints to serve each individual’s unique anatomy. The premium products using this technology have been helpful to drive better outcomes, especially in restoring full function for highly active patients. Having said that, arthroplasty for a more senior patient or a less active individual would still achieve the objectives of reducing pain and restoring function through standard products. A combination portfolio of standard and premium offerings would enable serving a variety of customers.

Successful medtech players need to anticipate the coming “formularization” of their product lines and act proactively to develop products with value propositions that satisfy needs across a continuum of price points and use cases. For example, Orthonet, an orthopedic specialty benefit management company, works with both payors and providers, leveraging its experience in musculoskeletal conditions to review and manage cases, optimizing the cost of care on an individual case beyond utilization management services and pre-authorization checks. Medtech companies themselves have an opportunity to set the agenda in this area and respond proactively to changing industry dynamics.

As companies seek to expand geographically beyond developed markets to serve the nascent but growing medtech sectors in emerging markets, it will be essential to have a strong value-based/low-price offering. Based on a sample of 17 public medtech companies, our analysis indicated that emerging market revenues represented, on average, 16% of total revenue in 2014 compared to 13% in 2010. Analysis of revenue growth indicated that emerging market revenue growth was 5% higher than overall revenue growth for these companies in 2014 (see Figure 11). Dampening of growth in the US and EU is driving medtech firms to move into emerging markets where improving patient access to health is generating higher demand despite geopolitical and economic challenges. Participating in these markets will require companies not only to organize themselves differently and develop different capabilities, including garnering local market knowledge and training specialists, but also to bend the cost curve on products to compete with low-cost players and provide

---

**Figure 10**

**Snapshot of Key Therapeutic Areas**

<table>
<thead>
<tr>
<th>Market size (USD b)</th>
<th>65</th>
<th>42</th>
<th>26</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market share</td>
<td>100%</td>
<td>90%</td>
<td>80%</td>
<td>70%</td>
</tr>
</tbody>
</table>

Orthopedics | Cardiac devices | Ophthalmic devices | Neuromodulation

Source: Ernst & Young

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**Source:** Ernst & Young
affordable products. Medtech companies could do this by manufacturing the product more cheaply, for instance in a low-cost manufacturing base (e.g., Southeast Asian countries), or by engineering a simpler, lower-tech device. Smith & Nephew has deployed the latter approach via its Syncera pilot, which is centered on two key hip and knee replacement products. The pilot aims to reduce costs by decreasing the need for on-site technicians and other services associated with those devices. Smith & Nephew introduced the program first in emerging markets; but, in August 2014, it also launched a similar pilot in the US. The company deemed it a success in February 2015, slashing prices in half and maintaining margins by replacing the operating room (OR) technician with an iPad. According to company estimates, 5% to 10% of mature markets are ready for products like these, and their introduction has not cannibalized existing sales.

Establishing a presence in emerging markets will help revive some of the lost growth for established medtech companies; however, companies need to bear in mind competition from local companies, the regulatory and reimbursement environment, as well as the needs of local customers. Developing a value-based product for more mature markets has its own advantages but will need to be developed keeping in mind customers’ unmet needs and patient segmentation in specific therapeutic areas.

**Develop a services solution**

Hospital consolidation and the related shifting of buying power toward hospital administrators and GPOs have made it challenging for medtech companies to raise prices, as well as to organically grow market share. Additionally, the high cost of current sales and marketing efforts and the increased commoditization of products are moving sales representatives out of the OR. Hospitals are training their own staff to set up the OR and assist surgeons for certain procedures, e.g., joint replacement. As a result, hospitals are driving costs of the implant down by as much as 50%. Furthermore, sales and marketing efforts are disadvantaged as representatives no longer have the coveted one-on-one relationships with surgeons, preventing share capture and upselling. In order to combat these pricing as well as market share challenges, companies are looking to provide alternate services to maintain share. Additionally, as mentioned in EY’s *Pulse of the Industry* 2014 report, with shifts from a fee-for-service model to bundled payments, providing services allows medtech companies to “own” more of the bundle.

For example, Stryker participates in the surgical equipment and minimally invasive surgical products markets, both of which have been subject to pricing pressures and increasing competition resulting in some commoditization of its product categories. In 2010, Stryker acquired Ascent
(now Stryker Sustainable Solutions) to reprocess single-use surgical devices. Through this transaction, Stryker enabled its hospital customers to not only save millions in supply costs but also contribute toward their ecological goals. Consequently, Stryker is now entrenched among GPOs as well as major hospitals, allowing it to retain its place in the OR in addition to diversifying revenue through higher margin services. While overall revenue growth for Stryker has been at 5.2% annually from 2011 through 2014, its instruments business has grown at a CAGR of 7.7% for the same period. While some of this can be attributed to innovation, Stryker has been able to sustain share in this segment with its solutions business.

Sales and marketing efforts are disadvantaged as representatives no longer have the coveted one-on-one relationships with surgeons, preventing share capture and upselling. In order to combat these pricing as well as market share challenges, companies are looking to provide alternate services to maintain share.

Medtech companies can also develop services capabilities through relationships with strategic partners. Companies such as Medtronic and Fresenius are taking a services-oriented approach that utilizes a risk-bearing model in order to drive outcomes. Medtronic Hospital Solutions has partnered with three hospitals in the UK (two public, one private) to manage cath labs, including lab design, equipment finance, material and equipment management, and stock-up. Medtronic leverages best practices to drive efficiencies and lower costs. Through this model, the company is aiming to move away from a traditional supplier-customer model using a shared risk-reward model with a long-term agreement. The key objective is to document and track the cost savings generated and partake in any potential upside. Fresenius has adopted vertical integration around end-stage renal disease (ESRD) by providing not just equipment and managing more than 3,200 dialysis centers, but also managing end-to-end care of these patients. In 2014, it partnered with Aetna to develop a collaborative care model for Aetna’s Medicare Advantage patients with ESRD. Aetna’s nurse case managers work at Fresenius clinics to customize and improve quality of care received by these patients.

Embrace data

In order to prove better outcomes, companies not only need to find ways to track data but also to manage it. As described in EY’s Megatrends 2015: Health Reimagined report, health care is becoming more connected to daily life with enablers such as social media, mobile health and medical devices. This is generating reams of data from electronic health records, payor claims, mobile technology, etc., providing more incentives to utilize this “big data” across various sources. Eventually, this data will need to be used by medtech companies to develop customized products using breakthrough technologies. Additionally, companies will need to consider leveraging technologies to create new standards of care, particularly as improving upon existing products becomes more and more difficult. As delivery of care moves increasingly out of traditional settings to where the consumer is, medtech companies will need to innovate to stay closer to patients.

Propeller Health, a Wisconsin-based company, has developed a digital therapeutic platform for respiratory health management through sensors, mobile apps and services. Propeller focuses on asthma and COPD patients to help them keep track of their symptoms, triggers and use of the medications or inhalers by recording the time and place of their inhaler use. The data, collected through the patient’s smart phone, enables patients to understand their adherence levels and triggers, helping them to better manage their conditions. The data can also be easily shared with physicians to allow them to remotely monitor symptoms, as well as change the course of therapy as needed.

While small-medium enterprises (SMEs) and start-ups are driving much of this innovation, larger companies are proactively acquiring or funding some of these smaller companies in order to make themselves more relevant in key segments. For example, Covidien acquired Zephyr in March 2014, prior to its acquisition by Medtronic. Zephyr had developed a range of remote monitoring products for consumers to measure heart rates, stress levels and other parameters. Additionally, it has developed solutions for athletes, first responders and defense personnel to measure, track and improve performance of teams, as well as predict dehydration, potential injury from stress, exhaustion or stroke or potential episodes of trauma. Covidien created a health informatics and monitoring division using the Zephyr technology to leverage remote patient monitoring in the hospital or at home. This technology now enables caregivers to monitor vital information from multiple device categories, including ventilators, capnography monitors, depth-of-consciousness monitors, cerebral/somatic oximeters and pulse oximeters. In a similar vein, Medtronic has developed the CareLink Network, a remote monitoring service, for its cardiac care patients. A home monitoring device allows patients to send data from their cardiac device using a phone line to their care provider. The data can be easily imported into an electronic health record, and physicians can use the information to provide better directed care.
Leveraging data and creating digital platforms will be table stakes in the future. Not just medtech but also pharma companies, health care companies and non-traditional players are looking at ways to leverage data and technology to collect and analyze patient data to create newer paradigms of care. As companies are thinking through their R&D investments, they need to consider allocating dollars to their digital strategy and ways of enhancing their innovation to enable better patient care.

Choosing the Right Approach

Companies could adopt one or more approaches in order to address the changing environment in the medtech sector (see Figure 12). Each could start with just one business model or a parallel track adopting multiple business models. The path that these companies take, whether a single or multi-pronged approach, should be influenced by multiple factors, including the size and scale of their business, financial bandwidth and overall market performance. Leadership teams will need to take a critical look at their business and ask themselves some hard questions.

Adapt for Growth

Medtech companies have an urgent need to adapt their current strategies in order to overcome financial, regulatory, customer changes and pricing challenges in this sector and sustain historical growth and economic returns. Companies will need to revamp their business models and optimize their portfolios to drive scale in order to address many of the commoditization and pricing issues. In addition to this, companies will need to reconsider ways to address customer needs in core sectors by providing a diverse set of innovative products and/or wraparound services. Technology is likely to be at the core of this innovation going forward. A careful consideration of the company’s strategic and financial position will be required to get this mix right.

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Figure 12

Strategy to Adapt for Growth

<table>
<thead>
<tr>
<th>Assess market opportunity and relative positioning</th>
<th>Understand customer needs</th>
<th>Conduct an internal evaluation of portfolio</th>
<th>Drive decisions around business models</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the size of the opportunity for each segment, and how is it growing?</td>
<td>What are customer needs?</td>
<td>Which segments are driving revenue and profit for the company vs. which are lower contributors?</td>
<td>What segments should you invest, divest and maintain?</td>
</tr>
<tr>
<td>What is your current market position and relative market share?</td>
<td>Which needs are unmet around services, analyses and outcomes?</td>
<td>How are you positioned to drive unmet needs of customers?</td>
<td>What services, solutions and technology can you provide?</td>
</tr>
<tr>
<td>Which segments are you competitively better positioned to grow?</td>
<td>Which are the most compelling needs to address?</td>
<td>Which segments will you have challenges to grow and/or to address changing customer needs?</td>
<td>How else can you bolster your position?</td>
</tr>
</tbody>
</table>

Source: Ernst & Young