

The three rules in medical technology

The transformation of an industry



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Contents

Introduction | 2

Med tech: Inherently oriented to the three rules | 5

Med tech industry transformation | 7

Med tech leaders' insights | 11

Conclusion | 19

Endnotes | 20

Introduction

RECENT changes in the US health care ecosystem are having a profound and transformational impact on the medical technology industry. The Affordable Care Act has catalyzed changes in how med tech customers define value and which stakeholders are involved in decision making. While it has historically been a jewel of American manufac-

More than ever, success requires a clear and consistent focus on delivering differentiated value and performance to customers.

turing—one of the few domestic manufacturing industries that is a net exporter—med tech faces challenges to the legacy business models and strategic choices that these companies have used to excel in the past. More than ever, success requires a clear and consistent focus on delivering differentiated value and performance to customers.

The bar for demonstrating differentiated clinical and economic value is rising. The new

“value bar” forces med tech companies to rethink how they can effectively create a product portfolio that will meet this ever-increasing set of expectations. It is no longer sufficient to demonstrate marginal product benefits for new product launches.

The customer landscape is also transforming. Payers have become more stringent in their criteria for awarding coverage and reimbursement benefits. Physician practices are being acquired by large health care systems with varied provider models. These trends mean that a more diverse set of stakeholders are involved in the decision-making process for med tech products. Hence, med tech companies’ focus has shifted from selling to individual doctors to influencing a broader set of stakeholders to support product adoption.

To account for these new realities, med tech companies accustomed to exceptional performance will need to adjust their formulas for innovation and success. Their leaders will need to understand the universal elements that lead to exceptional performance for any business in any industry and tailor them to the med tech industry’s unique characteristics.

WHAT IS MEDICAL TECHNOLOGY?

With more than 500,000 distinct forms, medical technology encompasses a wide range of health care products used to diagnose, monitor, or treat the diseases and other conditions known to affect humans. These products may include:

- Technologies that enable treatment for specific therapeutic classes (excluding consumer care products)
- Diagnostics, products, and services that enable the detection of diseases and conditions
- Durable medical equipment, including instruments, equipment, and other products that assist providers and hospitals in delivering care
- Basic tools that are not applied in direct clinical care but are used for research, including microscopes, centrifuges, and thermal cyclers for polymerase chain reaction
- Drug-tech combination products, such as drug-delivery systems, that combine two or more regulated components

Source: Eucomed, "What medical technology exactly is," <http://www.eucomed.be/medical-technology>, accessed November 13, 2013.

Exceptional performance comes from three rules

Med tech leaders make critical decisions that impact employees, shareholders, patients, and the overall health care system. Their industry is much more complex than many others, which makes decision making even more challenging. This makes it important to make choices based on proven principles that lead to exceptional performance.

Various research efforts have tried to provide data-driven answers and guidance for creating an effective framework for success. *The Three Rules*, a 2013 book by Michael Raynor and Mumtaz Ahmed, brings discipline to the field by identifying three rigorous, research-backed principles that guide exceptional companies.¹ The three rules are:

1. Better before cheaper: Rather than competing solely on price, companies achieve

sustainable success by focusing on delivering differentiated value.

- 2. Revenue before cost:** The advantages of higher revenue are more valuable and durable than the advantages of lower cost.
- 3. There are no other rules:** While other pursuits are important and contribute to a company's success, they are ultimately the most successful when they fully align with and reinforce the first two rules.²

More information on *The Three Rules'* methodology and findings can be found in the sidebar "About *The Three Rules*."

How can the three rules be applied to the strategic decisions required to succeed in med tech? From a foundational understanding of the three rules, we can move forward to understanding how to apply the three rules' lens to med tech-specific issues and strategies.

ABOUT THE THREE RULES

More than five years ago, Deloitte launched the Exceptional Company research project to determine what enabled companies to deliver exceptional performance over the long term. Adopting a uniquely rigorous combination of statistical and case-based research, this project has led to over a dozen publications in academic and management journals, including the *Strategic Management Journal*, *Harvard Business Review*, and *Deloitte Review*.³ The fullest expression of this work to date is in *The Three Rules: How Exceptional Companies Think* (www.thethreerules.com).⁴

The project studied the full population of all publicly traded companies based in the United States at any time between 1966 and 2010, encompassing more than 25,000 individual companies and more than 300,000 company-years of data. Performance was measured using return on assets (ROA) in order to isolate the impact of managerial choices: Measures such as shareholder returns often confound company-level behaviors with changes in investor expectations.

Using a simulation model, the researchers estimated how well each company “should” have done given its industry, size, life span, and a variety of other characteristics. They then compared this theoretical performance with how well each company actually did. A company qualified as “exceptional” if it surpassed its expected performance by more than population-level variability would predict.

Not all exceptional companies are equally exceptional, however. The researchers identified “Miracle Workers,” or the best of the best, and “Long Runners,” companies that did slightly less well but still better than anyone had a right to expect. In the entire database, there were 174 Miracle Workers and 170 Long Runners.

To uncover what enabled these companies to turn in this standout performance over their lifetimes, the researchers compared the behaviors of Miracle Workers and Long Runners with each other and with “Average Joes,” companies with average lifespan, performance level, and performance volatility.

First, to understand the financial structure of exceptional companies’ performance advantages, the researchers pulled apart their income statements and balance sheets. This provided invaluable clues: Miracle Workers systematically rely on gross margin advantages, and very often tolerate cost and asset turnover disadvantages. In contrast, Long Runners tended to rely on cost advantages and lean on gross margin to a far lesser extent.

Then, detailed case study comparisons of trios—a Miracle Worker, Long Runner, and Average Joe—in nine different sectors revealed the causal mechanisms behind these financial results. Specifically, exceptional performance hinged on superior non-price differentiation and higher revenue, typically driven by higher prices. Nothing else seemed to systematically matter; in fact, exceptional companies seemed willing to change anything, and sometimes just about everything, about their businesses in order to sustain their differentiation and revenue leads.

Hence, the three rules:

- 1) Better before cheaper: Don’t compete on price, compete on value.
- 2) Revenue before cost: Drive profitability with higher volume and price, not lower cost.
- 3) There are no other rules: Do whatever you have to in order to remain aligned with the first two rules.

Med tech: Inherently oriented to the three rules

DESPITE the immediate challenges the med tech industry faces, its future appears secure. US med tech revenue was estimated at \$121.6 billion in 2012 and is expected to grow 5.4 percent annually to \$157.8 billion by 2017, driven by new offerings and increasing demand.⁵

The industry already has an inherent focus on the three rules:

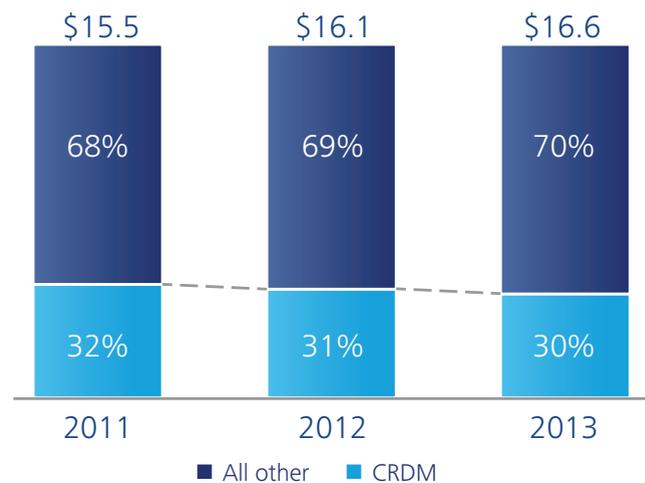
- **Better before cheaper:** Market dynamics encourage med tech companies to add as much value to their products as possible.
- **Revenue before cost:** Companies invest in innovation, incurring higher costs to generate long-term sustainable revenue.

These characteristics have positively impacted the industry's overall performance. The 15-year total shareholder return (1998–2012) for med tech companies was 7.8 percent compared to 5.2 percent for the Standard & Poor's 500. Within the industry, there are many examples of companies whose choices exemplify the three rules. Two in particular stand out: Medtronic and Stryker, which Raynor and Ahmed considered “exceptional” companies based on their rigorous adoption of *better before cheaper*.

Medtronic has created value across multiple markets with a common product platform and by diversifying its portfolio with innovative offerings. It leveraged the electro-mechanical technology of modulating physiology through electrical current to address spinal,

gastrointestinal, and neurological disease. Though Medtronic's product portfolio has always been anchored in cardiac rhythm disease management (CRDM), it has diversified into other areas to tap additional growth. In 1975, roughly 80 percent of Medtronic's \$100 million in revenue was generated from CRDM.⁶ That same year, Medtronic officially formed its neurological division to begin to differentiate its offerings. Today, CRDM represents 30 percent of a \$16.6 billion revenue base (figure 1).⁷

Figure 1. Medtronic business revenue mix, 2011–2013
(\$ billions)



Source: Deloitte analysis based on Medtronic 2011, 2012, and 2013 annual reports.

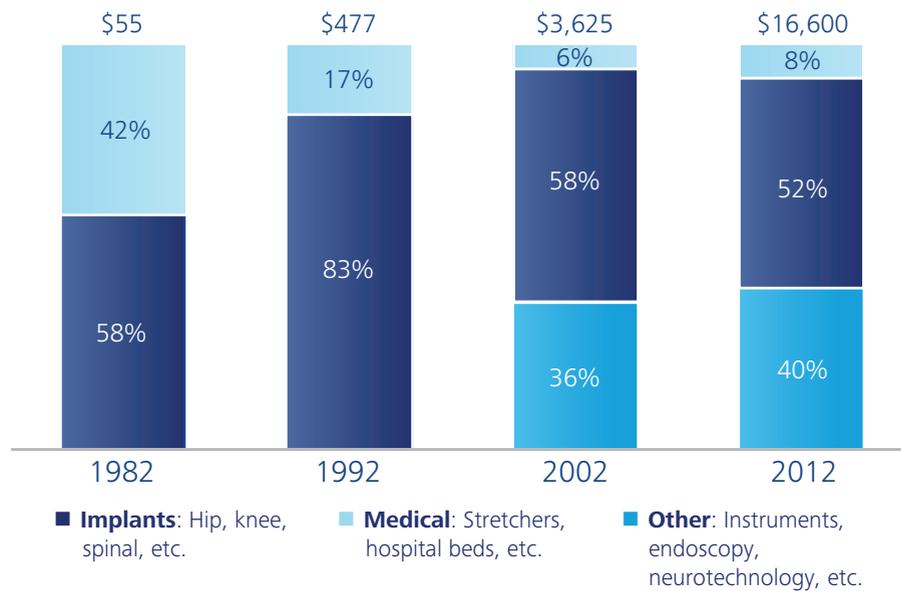
Graphic: Deloitte University Press | DUPress.com

One of the driving forces behind Stryker being considered “exceptional” was its eventual move upmarket from medical products (such as stretchers and hospital beds) to implants (such as hip, knee, and spinal implants). Stryker originally concentrated on relatively low-tech products such as mobile hospital beds and cast cutters, where clever design and close attention to the minutiae of daily use made the difference. This led to great success for the company and continues to drive substantial value today—but Stryker’s exceptional performance over the last decade can be tied to its shift in position from a maker of medical products into a high-tech implantable med

Clever design and close attention to the minutiae of daily use made the difference.

tech player (figure 2). The therapeutic nature of these products, the margins they command, and, until recently, the minimal price pressure of its market have helped Stryker achieve impressive financial results.

Figure 2. Medical products a shrinking share of Stryker revenue, 1982–2013
(\$ millions)



Source: Deloitte analysis based on Stryker 10K filings from 1982, 1992, 2002, and 2012.

Graphic: Deloitte University Press | DUPress.com

Med tech industry transformation

DESPITE the historical success of current models, there is no question that the med tech industry is going through a profound transformation. In particular, major changes are underway in four areas: reimbursement, the buying process, innovation, and the complexity of the marketplace. These shifting dynamics are forcing companies to reconfigure their strategies and business models.

Reimbursement scrutiny is increasing

Health care costs as a percentage of gross domestic product (GDP) have been rising. Many people know that the United States has one of the highest health care expenditures as a percentage of GDP—roughly 18 percent of GDP is spent on health care—while peers, on average, spend 9–11 percent.⁸ Few people, however, realize that increased spending has not correlated with improvement in outcomes and performance. In fact, the Commonwealth Fund found that despite having the highest per-capita costs, the United States ranked last out of the seven peer countries evaluated based on measures of health system performance in five areas: quality, efficiency, access to care, equity, and the ability to lead long, healthy, productive lives.⁹

Poor performance despite rising costs has increased the spotlight on the economics of all aspects of the health care system. The Affordable Care Act (ACA) attempts to bend the health care cost curve while improving quality. In particular, this legislation targets coverage and payment for health care products

and services. For example, the introduction of health care exchanges will change the payer environment in some ways that are predictable and in others that are yet to be determined.

Payers recognize that various forces are acting to change their model: the ACA, the substantial cost of health care, and the poor link between value and cost. One of the responses to these pressures is to ensure that med tech manufacturers are creating products that are demonstrating differentiated clinical benefit to patients. Payers are also expecting providers to demonstrate clinical value via compliance with treatment protocols. In addition to expecting more from med tech products in terms of differentiated clinical value, payers and providers are looking for proof of economic benefit.

Poor performance despite rising costs has increased the spotlight on the economics of all aspects of the health care system.

The med tech buying process is radically changing

Historically, private practice physicians were a primary, and oftentimes sole, decision maker for med tech product purchases. But more physicians are now becoming employees of health care systems versus being independent private practice owners. As of 2012, roughly 45 percent of all physicians were either

directly employed by or under contract with a hospital—a 32 percent increase since 2000.¹⁰ What's more, a 2013 survey of US physicians found that 66 percent of respondents expect physician-hospital integration to increase within the next three years.¹¹ As employees of health care systems, physicians are now just one part of a broader decision-making apparatus for purchasing choices. That apparatus now includes finance, operations, procurement, and other stakeholders with varying degrees of power and influence in the decision-making process.

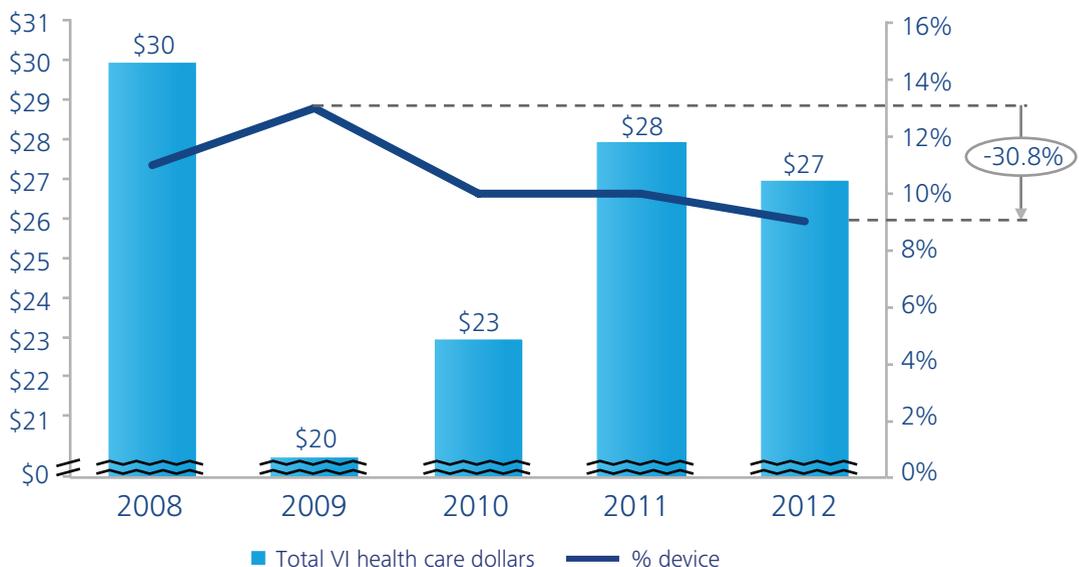
The emergence of multiple health care system models such as accountable care organizations (ACOs) and integrated delivery networks (IDNs) is not only increasing the diversity of parties involved in the med tech buying process, but also expanding the diversity of criteria emphasized in purchase decisions. The types of clinical, economic, and other non-product attributes (such as customer service) are weighted differently depending on the type

of health care system model, the type of med tech, and the type of party (such as finance, procurement, clinical) involved in the buying process. Too, the influence of payers and patient groups cannot be underestimated as key influencers in the overall adoption of a medical technology.

The innovation pipeline is facing challenges

Investing in innovation is becoming more difficult because of increased FDA approval complexity, poor patent regulation, and challenging economics due to hurdles associated with legislation and reimbursement. A powerful indication of this is the shrinking pool of venture investing in med tech. Venture-backed medical innovations have been a major source of new products and platforms that med tech companies have acquired or licensed to create future innovations and generate new demand. Med tech manufacturing received steadily increasing venture capital investments from

Figure 3. Medical device venture capital as a percent of total health care venture capital dollars
(\$ billions)



Source: Deloitte analysis based on data from Jonathan Norris, "Strong momentum in healthcare: Trends in mergers and acquisitions", Silicon Valley Bank, August 2013, <http://www.svb.com/healthcare-report/>.

Graphic: Deloitte University Press | DUPress.com

2001 to 2009, but investment peaked in 2009 at 13 percent of total health care venture capital dollars and has steadily declined since (figure 3).¹² The reduction in venture capital support for these innovations poses a severe risk to med tech companies' ability to address future unmet clinical needs and to create substantial future demand for their products.

Alternative investments in other sectors such as technology and social media are attracting more dollars because of the perceived lower risk, higher returns, and faster payback periods. Legislation such as the med tech excise tax—which imposes a 2.3 percent excise tax on the gross sales (not profit) of any taxable med tech, regardless of a med tech company's size or profitability—is making obtaining high returns even more challenging for med tech investors.

Another impediment to innovation is the US Food and Drug Administration's (FDA's) approval process, whose increasing challenges are creating additional risk and capital requirements for emerging companies and med tech corporate divisions. The FDA review process for med tech companies is almost twice as long as that of its European counterpart, the

European Medicines Agency, taking companies six months on average to get 510(k) approval in the United States compared to three months in Europe.¹³ In fact, based on a survey conducted by the *Journal of Medical Techs*, almost nine out of ten companies felt that the FDA is unnecessarily hindering innovation and decreasing American competitiveness.¹⁴ Longer approval timelines—up to 30 months between filing and issuance for a premarket approval (PMA)¹⁵—and a more stringent regulatory process in the United States have contributed to a decline in PMAs and 510(k) approvals (figure 4).¹⁶

Securing intellectual property has also been a challenge. The number of med tech patent lawsuits has nearly doubled over the last decade—42 cases were decided during 1995–2000, 45 during 2001–2005, and 79 during 2006–2011. Over 2005–2011, the med tech industry had the fourth highest percentage of patent litigation cases when compared to other litigious industries.¹⁷ Couple the factors above with a more stringent payer environment for reimbursements, and the picture is bleak for the innovation pipeline at the heart of the med tech industry.

Figure 4. PMA and 510(k) med tech approvals by the FDA, 1999–2010



Source: Deloitte analysis based on FDA data available at <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMN/pmn.cfm> and <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMA/pma.cfm>.

The marketplace is getting more complex

US med tech companies expect to face the dual challenges of understanding the dynamics of specific geographic markets and competing with a global landscape of med tech manufacturers, some already familiar with developing and commercializing products for international markets.

While emerging markets hold the promise of increased demand (*a revenue before cost* strategy), local regulations and expectations can limit market access. New geographic markets also have homegrown competitors that are

expected to shift the US-centric “skew” of the global competitive landscape. Although today the United States serves approximately 40–46 percent of the world market for med techs,¹⁸ emerging markets are fueling the growth of local companies. For example, as of 2011, Israel was home to roughly 500 med tech companies that generated \$1.6 billion in exports while also accumulating the most med tech patents per capita in the world.¹⁹ China is the fastest growing med tech market (30.6 percent CAGR during 2004–2008)—boasting approximately 12,000 med tech companies and growing by an average of 1,000 new manufacturers each year.



Med tech leaders' insights

WE conducted research into how executives at leading med tech companies were thinking about the changing marketplace, what changes they observed, and how they were responding to the changes. The result is a set of common strategic themes that we have dubbed *the four pillars*. They are:

1. **A broader view of innovation:** Offering value beyond product attributes
2. **New commercial models:** Engaging new influencers and adapting to heterogeneity
3. **Effective value articulation:** Communicating impact on new health care economics
4. **Advanced pricing:** Developing pricing capabilities to compete with precision

The four pillars through a three rules lens

Exceptional performance is not just about the set of strategies or activities companies choose. It is about how these activities embody the principles of the three rules. With this in mind, it makes sense to walk through each of the four pillars and explain how differences in execution align them more or less closely with the three rules.

One caveat: An action that is less closely aligned with the three rules does not necessarily make it a poor choice or a decision that will not create value. It simply means that there may be other alternatives that could lead to more successful long-term outcomes for a company and its stakeholders. The three rules point to the many varied ways companies succeed. They increase the *probability* of success; they do not guarantee it. That is why the rules are *better before cheaper* rather than *better instead of cheaper*.

Pillar one: A broader view of innovation—offering value beyond product attributes

Pillar one is about *better before cheaper*. It focuses on expanding value beyond the function or quality of a single product to that of a more difficult-to-replicate “system.” It recognizes the paramount importance of continuing to stoke innovation pipelines with products and services that have the potential to fundamentally improve clinical and economic value.

Exceptional performance is not just about the set of strategies or activities companies choose. It is about how these activities embody the principles of the three rules.

Companies can drive innovation in three ways. First, they can foster it internally. Companies can accelerate their own growth engines by investing in building an innovation capability. Doblin, the innovation unit of Monitor Deloitte, describes four key “building blocks”²⁰ of an innovation capability: new *approaches* to the processes and methods used to create innovations; new interfaces (and even structures) in the *organization* to house the capability; new funding mechanisms, employee skills, and other *resources and competencies* to fuel the work; and *metrics and incentives* to align action.²¹ By carefully designing,

orchestrating, and implementing these building blocks, companies can see dramatic improvements in their abilities to innovate reliably and routinely.

As an example, we are seeing a shift to more cross-functional development teams that integrate R&D, marketing, engineering, and other disciplines. Such teams more effectively connect customer insights with the biodesign process for product development, which can produce more holistic and systemic solutions.

Companies can also buy and integrate innovation. This would occur through acquiring other companies that have compelling technology platforms and expertise. These assets can further be leveraged by coordinating with the

teams that have fewer constraints than their corporate counterparts.

Naturally, these three options are not mutually exclusive, and they certainly can be stitched together simultaneously. All three are valid options. However, we suggest that they be done in a manner following the three rules for companies to get the most value from their innovation efforts.

Earlier, we mentioned that the innovation pipeline was being challenged by a more stringent FDA approval process and higher standards for reimbursement. As companies think about addressing these types of innovation challenges, they need to be careful to evaluate their innovation choices using the three rules.

Medtronic: Innovation through acquisition

Medtronic's 2013 acquisition of Cardiocom showcases the company's ability to innovate in product systems, service, and customer engagement—three types of innovation directed toward one market solution. With the Cardiocom acquisition, Medtronic is seeking to expand into disease management. Cardiocom had a portfolio of tele-health offerings such as home glucose monitors and scales to help doctors remotely monitor indicators of patient health. By integrating diagnostics, therapies, and patient management solutions, Medtronic can offer an innovative disease management service to help reduce readmission rates and save hospitals money.

Medtronic saw in Cardiocom a platform that could be applied to multiple chronic diseases. In fact, Medtronic plans to create a disease management platform around heart failure—a disease Medtronic is familiar with because of its implantable heart rhythm products. The platform also gives Medtronic the ability to complement its own suite of products and offer differentiated economic value to hospitals by helping to reduce readmission rates through chronic disease management.²³

parent company's engineering and commercial infrastructure. For instance, a company could license and integrate a technology that could help position its existing portfolio for a more premium, value-oriented market.

Finally, companies can externalize innovation by creating innovation ecosystems with academic, venture, and startup communities. This model would allow for a more distributed/networked element of innovation that capitalizes on resources and expertise that can complement a company's core internal R&D expertise. Partnering with biodesign fellowship programs could help companies stay at the forefront of solving unmet needs using

Should a company pay a premium for another company that has products that are “me too” in nature and demonstrate only modest incremental clinical gain? That company may have a product with features similar to those of its competition, but that costs significantly less. This seems appealing because the prospective target company, in theory, is adding economic value from simply being an inexpensive alternative. However, this “me too,” less-expensive orientation does not align strongly with the three rules. Companies should strive for products that add economic value to the health care system and create economic value and strategic durability for the company as well.

A three rules-aligned innovation orientation, in contrast, might involve a med tech company acquiring a technology that serves as a platform for other products that can be applied to multiple diseases. The acquired company might also have capabilities that create significant and clearly differentiated economic value, or that complement a suite of existing products to make the products worth more than the sum of their parts. In making such a decision, the company relies on factors other than price for its stakeholders' buying decision. Stakeholders recognize the clinical and economic benefits to the company's products and make choices oriented to those attributes rather than price. They are buying for *better before cheaper*. If companies evaluate their innovation choices through this lens, they will gain additional insights to inform how those choices can improve the likelihood of contributing to exceptional performance.

One approach to innovation that can help companies make three rules-oriented choices is Doblin's Ten Types of Innovation® framework (figure 5).²² Doblin's research shows that

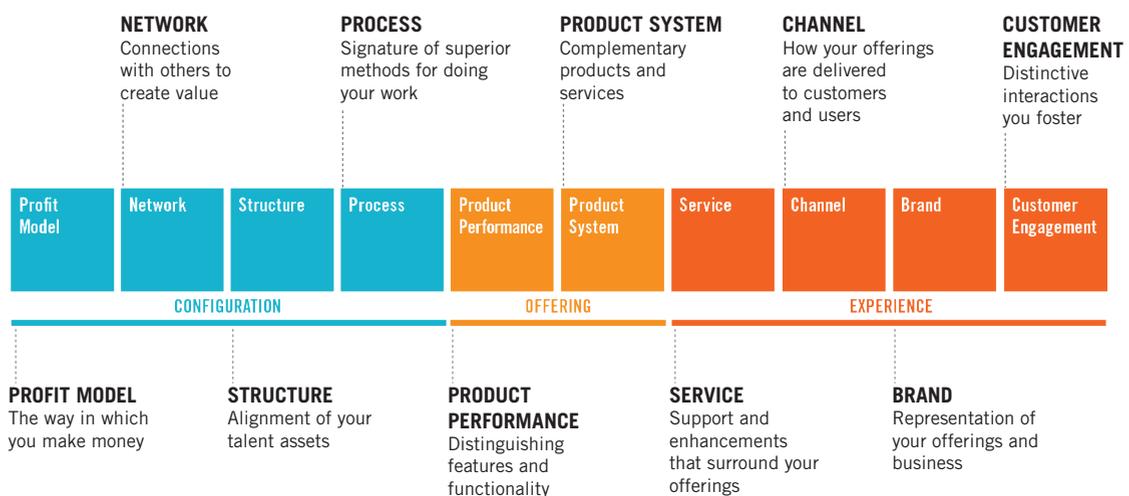
companies that look beyond product-only innovations to integrate multiple types of innovation into their offerings and businesses can earn higher returns and enjoy more lasting competitive advantage. To do this, a company must consider not only how to deliver better product performance, but also different ways the company can configure itself and deliver new experiences to its customers and end users.

Pillar two: New commercial models—engaging new influencers and adapting to heterogeneity

Pillar two is about *revenue before cost* and reconfiguring commercial models to interact with multiple stakeholders.

The health care system is changing. The emergence of ACOs and IDNs is a perfect example of how providers and payers are reconfiguring to deliver high-value care at reasonable costs. It is no surprise that the temptation for many med tech companies is to cut costs, which could be a mistake if used as a primary strategy.

Figure 5. Ten Types of Innovation®



Source: Larry Keeley, Ryan Pikkell, Brian Quinn, and Helen Walters, *Ten Types of Innovation: The Discipline of Building Breakthroughs* (Hoboken, New Jersey: John Wiley & Sons, 2013).

Graphic: Doblin.com/TenTypes

In addition, the scale and complexity of key stakeholders' influence on the purchasing decision for med tech products has increased. This new reality requires a different set of capabilities to successfully interact with stakeholders. Faced with this challenge, some companies have adjusted their commercial model by simply cutting investment in their field force. Unfortunately, this tactic fails to take into account the organizational designs (such as reporting structure and team-based selling) and capabilities (such as data analytics and clinical and strategic messaging) required to generate a more favorable customer environment.

Companies deciding to follow *revenue before cost* can limit SG&A reduction for reduction's sake and instead examine their field

Historically, companies have approached the market with a homogenous field force. Today's market requires a tailored field force that aligns to different types of stakeholders (such as payers, ACOs, IDNs, and more), with market "archetypes" varying by geography. Two, these tailored field force models will require an updated set of capabilities that align to a new commercial service model that includes new influencers and new incentives (figure 6).

Pillar three: Effective value articulation—communicating impact on new health care economics

The market and regulatory environment is driving the whole med tech industry toward *better before cheaper*. Providers are being held

Engaging new influencers and adapting to heterogeneity

In the Deloitte Global Health Reform Survey, nearly half (46 percent) of the companies surveyed indicated that they were not thinking about changing their sales model from a physician-centered to a more payer- or patient-centered one in the next three years.²⁴ These companies are likely to be caught flat-footed as other companies expand their sales force to one that is versatile enough to influence physicians, procurement professionals, and operations experts. Companies are doing this, in part, by equipping their sales force with iPads and apps designed around patient and physician education.²⁵

Another strategy can be to identify a key account manager (KAM) who serves as the primary point of contact for a health care provider account. KAMs serve as ambassadors for the company and the central source for matching company resources to account needs and requests. For example, a KAM might determine that the primary decision maker for a particular health care provider is the procurement group. That KAM would coordinate with the proper commercial and finance experts at the company to collect and share the business case with the provider's procurement team.

force's configuration and their field reps' skill sets. They would likely understand and invest in a field force model that is more aligned to the current buying environment. They would also likely invest in training and recruiting to create a field force that possesses skills that may be less related to selling to an individual physician and more related to selling to an account or "committee" of stakeholders.

With regard to new commercial models, med tech companies will have to accomplish two things. One, they will need to recognize the extent of the heterogeneity in the market.

to higher standards that are tied to reimbursement. The Center for Medicare and Medicaid Services (CMS), for instance, has a value-based payment scheme that will be fully implemented within the next four years, putting up to 8 percent of CMS reimbursement at risk by 2017.²⁶ Companies will need to position their value propositions to address this type of reimbursement environment. With the emergence of various ACO models, there will be a shift from volume to value that med tech companies will need to understand. ACOs that follow a population health management model will put

Figure 6. Commercial capabilities for today's med tech market



Graphic: Deloitte University Press | DUPress.com

less priority on driving volume through their facilities than on the overall quality of care delivered to a community.

Of course, the first step in effective value articulation is having a better product. Then, med tech companies will have to revisit the types of data they are generating from their clinical trials and competitive comparisons to ensure they are providing the evidence needed to demonstrate the types of value that align with each stakeholder's clinical and economic expectations. For example, collecting and analyzing data that show how a medical technology outperforms its competitors in increasing hospital revenue, improving quality of care, or reducing overall health care system costs—for instance, data on hospital stay reductions, treatment avoidance, or comorbidity reduction—can be extremely valuable. These are data points that can support the communication of the *better before cheaper* aspect of a product. These data points can also address the types of value drivers for a varied set of stakeholders. That said, simply having the right clinical and real world data is not enough. Being able to analyze data and translate it into a value proposition that speaks to multiple stakeholders will be just as important.

Articulating the non-price value of a product is critical in this regard. Companies that create products of marginal clinical benefit but that are less expensive than the competition can certainly address the economic value of their product. They can create messages that emphasize their products' price advantage. But they may be missing out on a greater opportunity to demonstrate the clinical and economic superiority of their product. The same holds true for the med tech industry at large. If med tech companies focus primarily on the cost aspect of value, they may narrow the discussion and limit the opportunities for customers to see a product's value beyond price. In effect, they might condition customers to think simply in terms of price instead of in terms of non-price value, with potential negative consequences for the industry's current and future products as customers increasingly bring a price-centric mindset to the market.

Some companies are unable to convey messages about a product's clinical and economic benefits, not because their product has no such benefits, but because they lack the data to support what they may anecdotally know. Companies aligning their value articulation with *better before cheaper* will seek to generate

data and create corresponding messages that inform and condition their market to understand the value of their products beyond their price. They will articulate a value proposition that helps the market weigh non-price value attributes more heavily in their decision-making criteria.

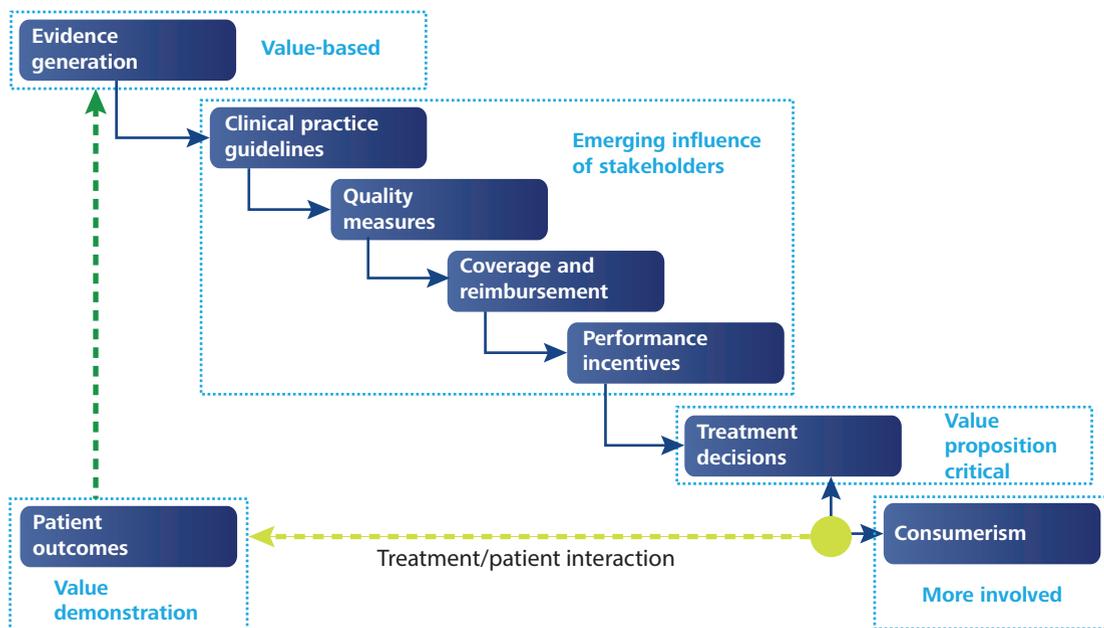
Med tech companies will face several challenges in value articulation. They will have to enhance their studies and build analytic

capabilities to explain a product's economic impact from multiple stakeholders' perspectives. The value captured by this data will need to be communicated with marketing and sales tools tailored to a new commercial model. With digital technology being integrated to everyday life, companies will need to understand how to integrate digital sales capabilities to make information more interactive and personal.

Philips Healthcare: Articulating *better before cheaper*

Philips Healthcare demonstrates *better before cheaper* through the careful articulation of its products' value proposition. The company includes clinical trial data that demonstrate reductions in hospital stays among patients receiving its products. Philips describes its value-generating framework in four words: acquire, analyze, interpret, and present. By collecting and analyzing data on millions of patients via monitors, telemetry, and patient care solutions, Philips is able to meaningfully generate credible and appealing messages. It is able to demonstrate the real-world clinical value of its products and offer actionable insights aimed at improving financial outcomes and saving lives. The company can also link how its products' differentiated clinical benefit leads to economic benefit by reducing hospital stays, reducing funds used for medications, or improving patients' economic productivity.²⁷

Figure 7. Value articulation cascade



Source: Deloitte Consulting LLP proprietary framework

Pillar four: Advanced pricing— Developing pricing capabilities to compete with precision

It is important that companies compete on dimensions other than price (*revenue before cost*). That said, price does matter. Being able to determine and secure the best price for a product—one that reflects the full value and benefit to stakeholders—is important. Hospitals are coming to the negotiating table more prepared than ever to secure favorable pricing—hiring specialists such as chief procurement officers

the price of a product—the inputs that go into a more value-based pricing approach.

At a minimum, med tech companies will need the pricing capabilities to compete and understand how their pricing decisions impact their bottom line (for instance, the ability to calculate true costs and margin contribution). As they move into new and innovative pricing models, they will need to develop more advanced pricing capabilities that draw on a thorough knowledge of pricing data to construct a more sophisticated analysis.

EMD Serono: Risk-sharing with payers

Med tech companies are behind biopharma companies in terms of developing innovative outcomes-based contracting. As capitated and accountable-care models grow, med tech companies are not well-positioned in terms of the capabilities needed to help manage costs and outcomes. This is a potential blind spot that the industry will need to begin to address.

We were not able to identify a publicly available example of a med tech company using outcome-based pricing. This is likely because the opportunity to gain a competitive advantage with pricing in med tech is constrained by long contracting cycles. Many pharmaceutical companies, however, have been thinking creatively about how to structure contracts and pricing to drive adherence (and therefore volume) while also reducing overall cost of care and improving outcomes. So let's look at biopharma as a proxy.

EMD Serono has announced two risk-sharing agreements for its multiple sclerosis (MS) drug Rebif. The first agreement offered additional rebates to Cigna when patients on Rebif had more hospitalizations and emergency room visits than expected. In exchange, Rebif received favorable formulary placement. As it developed more advanced pricing and data analytics capabilities, EMD Serono was able to offer an even more innovative version of this contract to Prime Therapeutics. Rebates were tied to the overall cost of care relative to MS patients using other drugs. The agreement created aligned incentives for all stakeholders—patient, payer, and manufacturer—by potentially increasing Rebif's prescribing volume, generating cost savings, and improving outcomes.²⁸

and MBAs to manage the process. Med tech companies will need to be equally prepared. They should understand how to craft pricing strategies that generate economic value for the health care system and returns for their employees and shareholders.

It will not be enough to think of pricing on just a gross-to-net basis or to base pricing on historical competitive prices. Pricing will need to take into account how a product can increase provider revenue, enhance operational effectiveness, improve clinical outcomes, and create economic value. These are the factors payers and providers consider when evaluating

Companies that focus on *better before cheaper* and are able to articulate value with the data and product profile to back it up will have more options and opportunities to drive revenue with pricing. They can develop pricing models that can optimize revenue based on non-price value attributes. This can help generate margins that can be reinvested in further growth and exploration to solve additional unmet needs.

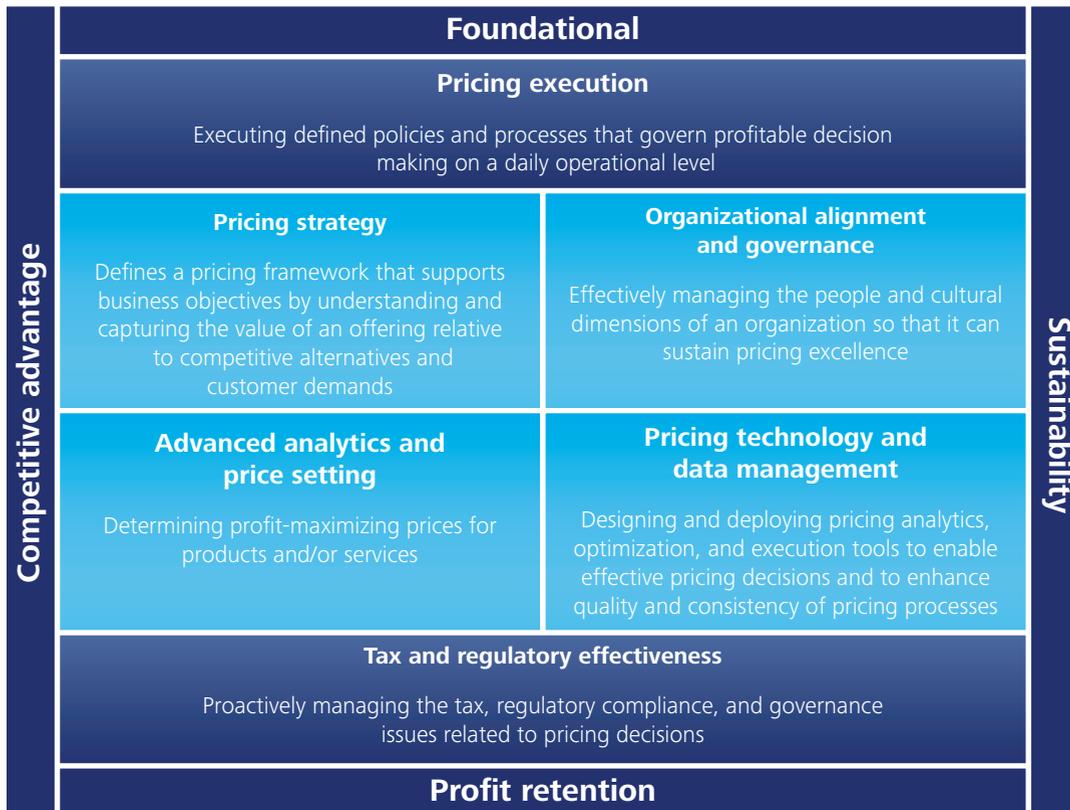
Value-based pricing is one approach that med tech companies may need to consider when developing an appropriate pricing strategy. This will require advanced business skills and data sets such as patient-reported

outcomes, hospitalization data, and treatment avoidance data, all of which can impact med tech pricing. However, before considering more value-based pricing strategies, med tech companies need to be able to price effectively with standard pricing approaches. Given hospitals' increasing sophistication in purchasing, pricing needs to be much more analytical and tightly controlled.

Med tech companies have an opportunity to build a pricing function that creates a strategic advantage and aligns with the three rules.

To accomplish this, companies can develop a pricing function based on four basic components (figure 8). The “foundational” pricing component is essentially a company’s core price execution capability. The “competitive advantage” component is supported by pricing strategy and advanced analytics. The “sustainability” component will take into account organizational alignment, governance, pricing technology, and data management. Finally, “profit retention” will be achieved through tax and regulatory effectiveness.

Figure 8. An integrated pricing and profitability management model



Source: Julie Meehan, Mike Simonetto, Larry Montan, and Chris Goodin, *Pricing and Profitability Management: A Practical Guide for Business Leaders* (Singapore: John Wiley & Sons, 2011), Fig. 1.3.

Graphic: Deloitte University Press | DUPress.com

Conclusion

BY following the four pillars in ways that align with the three rules, med tech companies can gain more accurate insights into their stakeholders' needs. Product pipelines and services could generate offerings with a stronger clinical and economic value proposition. The ability to communicate product value across multiple dimensions to various stake-

**Traditional med
tech business
models are quickly
becoming obsolete.**

holders could be in line with market preferences. Pricing can be more representative of the true value a product can deliver, and could be supported by capabilities for estimating and securing the appropriate price for products and services.

Recent changes in the US health care ecosystem are having a profound and transformational impact on the med tech industry. Companies are being forced to change core aspects of their business—how products are evaluated, purchased, and developed. Traditional med tech business models are quickly becoming obsolete. Many med tech companies recognize the degree of change in their market and are looking for ways to adapt. Together, the three rules and four pillars offer a simple, yet sophisticated solution.



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