Capturing the $100 billion opportunity for Life Sciences: are you a digital transformer or follower?
Get ready to be disrupted.

There is some big money at stake as a result of the digital revolution in healthcare. Accenture estimates that digital disruption has the potential to unlock more than $100 billion of commercial value in the US over a five-year period through new digital business models. It is not a matter of whether this value will be created in the coming years, but rather who will capture the lion’s share of the market and money. Will it be traditional players in life sciences? Players from other segments of the healthcare industry? Companies from consumer products, high tech, or communications? Or will entirely new companies emerge to seize the prize?
With the healthcare industry poised for radical changes, traditional life sciences companies must decide whether they will lead the charge by becoming a digital transformer or let this shift of value happen around them, and accept being a digital follower. Companies that aspire to become digital transformers must take a fresh look at their capabilities and business models and address a key question: How can digital unlock significant value for our business and patients?

In many cases, the digital opportunity is hard to digest. It is a large landscape with many different opportunities and players. To help simplify the digital landscape, Accenture has defined where we see the biggest value for the industry in digital (see Figure 1). Many companies are pursuing opportunities to digitize the customer experience and their operations. Several life sciences companies are already increasing revenues and decreasing costs by doing so, and the money on the table is indeed significant: in the US branded pharmaceutical market, customer experience could drive $4.6B in incremental revenue and digitizing commercial operations could yield $5.2 billion in cost efficiencies industry-wide over five years, according Accenture’s analysis. These opportunities are real and have benefits beyond the numbers including speed and simplification. They must be part of the agenda and leaders need to address these at the core. However, improvements to discrete business processes in life sciences, whether externally or internally focused, represent only a relatively small portion of digital’s potential full value in the US healthcare market.

Figure 1. Sources of Commercial Digital Value in Healthcare for Life Sciences

Note: These are cumulative estimates for the US market over a five-year period. Source: Accenture Analysis, 2014. See Research Methodology.
Capturing the big money

To capture the bigger prize offered by digital, companies from within and outside the traditional life sciences industry are embracing digital to design and build entirely new business models that are dramatically changing the healthcare industry. Creating these breakthrough models involves a “both-and” proposition: It is about both growth and efficiency and creating new combinations of information, business resources and digital technologies to produce innovative outcomes. It is also about going beyond the confines of traditional industry, product and customer boundaries to find entirely new ways to meet customer needs. Customers are at the center of a digital business, requiring leaders to adopt an “outside-in” perspective—from the customer’s experience inward to the company’s operations.1

To avoid losing significant amounts of money and customer mindshare, life sciences companies need to extract maximum value from digitizing the customer experience and their operations. They must also prepare to both capitalize on and defend against digital disruptions that create entirely new businesses to avoid being overtaken by more nimble digital players or more innovative competitors.
Capturing a piece of the prize: digitizing the customer experience and operations

Accenture estimates that an average top-25 global pharmaceuticals company can generate up to $170 million in revenue upside and as much as $190 million in savings over five years by digitizing its current models for the customer experience and operations (see Figure 2).

**Figure 2. Life Sciences Digital Value Tree for Commercial**

<table>
<thead>
<tr>
<th>Levers</th>
<th>Drivers</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase Revenue</td>
<td>Grow Customer Reach</td>
<td>$30 million to $70 million over five years</td>
</tr>
<tr>
<td></td>
<td>Improve Customer Experience &amp; Protect Reach</td>
<td>$100 million over five years</td>
</tr>
<tr>
<td>Decrease Cost</td>
<td>Customer Facing Efficiencies</td>
<td>$75 million over five years</td>
</tr>
<tr>
<td></td>
<td>Structural Cost Savings</td>
<td>$70 million to $115 million over five years</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Digitized Value</th>
<th>$170 million revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>$190 million cost savings</td>
<td></td>
</tr>
</tbody>
</table>

Note: These estimates are for the US market over a five-year period.

Digitization drives revenue increases by allowing companies to expand customer reach as well as improve the customer experience and protect their existing customer relationships. A life sciences company can reach more customers by using digital technology to leverage externally focused assets more effectively—enabling revenue growth of $30 million to $70 million over five years. By using digital to improve the customer experience and protect reach, life sciences companies can grow top-line sales by an estimated $100 million over five years.

Digitization drives these improvements by enabling consistent messaging across channels, higher levels of customer loyalty and retention, increased cross-selling and conversion, and the ability to reuse successful assets. It also allows companies to continue marketing mature brands that have lost support for funding of traditional promotional activities.

Digitization also allows companies to reduce costs through structural cost savings and customer-facing efficiencies. Structural cost savings, estimated at $70 million to $115 million over five years, arise from process efficiencies driven by digitization and automation, better asset utilization promoted by optimized production and inventory planning, and agile virtual organizations enabled by mobility and seamless cooperation. Customer-facing cost reductions, estimated to be $75 million over five years, result from using digital to enable greater efficiency in terms of cost or reach as well as to create more opportunities for self-service.
Disrupting the game: shift or control?

Life sciences leaders need to avoid the trap of thinking that by digitizing customer experiences and operations they have transitioned to a digital business. On its own, digitizing discrete processes does not change the business model or the business’s growth potential. For example, issuing tablet computers to sales reps can increase efficiency, while deploying customer mobile apps helps increase transaction activity. However, neither of these uses of technology are true game changers of the overall customer experience.

In contrast, digital disruptions create entirely new ways of interacting across multiple dimensions—both internally and externally. Two broad categories of disruptions that have occurred in other industries are poised to impact life sciences:

1. Shift value within or across industries.
   Digital has both removed intermediaries within an industry’s value chain, such as book stores and recruiters, and added intermediaries, such as stores for digital music and mobile apps.

2. Change the nature of control points.
   The critical control points for influencing decisions or actions within healthcare value chains have also changed. Physical presence and scale and scope have ceased to be the sole influencer as digital technology has promoted the emergence of new control points—including customer data, subscriptions and personal, smart devices.
Shift value within or across industries
Innovative companies are already taking multiple approaches to shift value within life sciences or across industries:

Provide a substitute for treatment or medication.
Apps and wearable devices are being used to delay or prevent the need for additional treatment or medication. They are also functioning as medical devices that relate to specific conditions or promote general wellness. A smartphone app called AliveCor® runs an algorithm that detects atrial fibrillation, a serious type of heart arrhythmia. When a user places his or her hand over a small device that fits on the back of a smartphone, the app measures the heart’s electric signals radiating through the fingers. The results are transmitted to a cardiologist for evaluation to diagnose a possible condition and potentially make treatment decisions.

Enable the sharing economy.
Patients and providers are using digital technology to share medical resources and costs. Going beyond offering discussion groups and advice, new communities are forming in which patients or providers can share medications and supplies at lower cost than charged by traditional pharmacies and equipment suppliers. A digital startup called Cohealo has developed a cloud-based software solution that helps hospitals share their medical equipment, giving each one access to significantly more equipment than it individually stocks.

Convert healthy activities into currency.
Innovative companies are using digital technology to enable consumers to receive monetary rewards for health-conscious behaviors—in effect, converting healthy activities and compliance into usable currency. For example, wellness-focused companies such as Redbrick Health have set up programs that reward people (often employees of participating companies) for healthy activities, including tracking progress and completing challenges. Participants can log in their activities in exchange for points that can be applied to purchases. A mobile app called HealthPrize rewards users for taking their medication. By replying “yes” to daily texts or emails from HealthPrize asking them if they’ve taken their medication, users accumulate points that count toward receiving gift cards or other rewards.

Change the nature of control points
Two approaches are emerging to change control points in life sciences:

Set the standard for treatment.
Treatment algorithms and remote monitoring can replace individual decisions by healthcare providers, and thereby set the standard for routine treatment decisions across a therapeutic area or for individual patients. For example, the power of supercomputers can be leveraged to provide diagnosis and personalized prescriptions.

Create new intermediaries.
Digital technology allows patients to find and contact healthcare providers who are available to offer telemedicine on-demand from anywhere in the world—or even make house calls. Having access to such intermediaries can replace the need to contact a primary care provider for advice relating to minor ailments or vaccinations. Walgreens is piloting a service that gives patients in California and Michigan 24/7 access to physicians through its mobile app. For conditions that don’t require a physical exam, such as pink eye or bronchitis, physicians can offer a diagnosis and treatment and write prescriptions. Doctor on Demand is one of a few apps that offers appointments with state-licensed doctors over video for just $40. The doctors can also prescribe medications and send them to your local pharmacy. In addition, the car service Uber recently partnered with the Harvard Medical School to deliver free flu shots in a one-day pilot program called UberHEALTH. Uber drivers brought a registered nurse to administer a flu shot to customers who requested one anywhere within the three test cities of New York, Boston and Washington.
Valuing the digital opportunities for diabetes care

The ways in which these digital disruptions will affect each stage of a patient’s preventive care, monitoring and treatment can be understood by reimagining a typical interaction between a patient with type 2 diabetes and a healthcare provider (see Figure 3).

Figure 3. Diabetes Patient Journey: The Potential Digital Disruption

Source: Accenture, 2014
The treatment of type 2 diabetes alone has the potential to shift more than $100 billion in value from traditional to emerging business models over a five-year period. An analysis of how digital disruptions would shift value in the U.S. demonstrates the potential for disruption by incumbents and new entrants:

**Provide a substitute for treatment or medication.**
Considering that 86 million Americans are pre-diabetic, the potential exists for $3.8 billion in annual savings if improvements in diet and exercise result in a 20 percent decrease in the likelihood of progression to type 2 diabetes. Other types of behavioral modification programs, such as the Diabetes Prevention Program Outcomes Study, have demonstrated that it is possible to decrease the likelihood of progression by 20 percent.

An example of a digital substitute is WellDoc’s BlueStar® platform. Recently approved by the FDA, the platform is the first mobile prescription therapy for type 2 diabetes. It provides real-time motivational, behavioral and educational coaching to help patients self-manage their diabetes treatment plan and is reimbursable by insurers.

**Enable the sharing economy.**
In the $3.359 billion diabetes medical supplies market, a total of $400 million to $500 million could be saved if anti-diabetic supplies were fulfilled through sharing among patients. The sharing economy promotes savings through lower costs as well as by reducing the “grey” market for diabetes supplies. The impact is several orders of magnitude larger if the trend moves into anti-diabetic agents.

The app HelpAround, which allows patients with diabetes to share supplies and advice, demonstrates the sharing economy in action. In addition to providing discussion forums and 24/7 access to nurses via a call center, the app lets users ask community members to help out with problems—such as providing blood glucose test strips if they run out of supplies when traveling. Sharing within the HelpAround community can eliminate the need for users to seek advice or supplies from a physician or pharmacy, thereby reducing costs.

**Convert healthy activities into currency.**
If converting activities into currency promotes an increase in medication adherence of even just 20 percent, total healthcare spending could be reduced by $1,074 annually for every person with diabetes. The total savings would be $1.4 billion.

Nike’s wearable fitness device, called FuelBand, illustrates how digital technology allows diabetes patients and others to convert healthy activities into currency. Consumers earn reward points by using the devices to record their fitness activities. Nike recently piloted a program in New York City that allowed consumers to use their reward points as currency to purchase items like socks, shirts and hats from a vending machine set up exclusively for that purpose. Imagine applying the same concept of currency to adherence, where patients could use their pillboxes as a form of payment if they have been taking their medications appropriately—adherence would be confirmed by sensors in the pillbox that are linked to a payment system. Could this be an approach to crack the adherence challenge?

**Set the standard for treatment.**
Using treatment algorithms and automation to replace routine diabetes-related decisions by healthcare providers could not only free up physician time, but also improve clinical decisions. For instance, by helping to prevent misdiagnoses that lead to higher healthcare costs, automating diagnosis decisions for type 2 diabetes could enable an annual savings of $1.9 billion.

**Create new intermediaries.**
For each type 2 diabetes patient, at least $697 per year could be saved by using digitally accessed intermediaries and remote monitoring for diagnosis and treatment—resulting in total annual savings of $19.2 billion. For example, a website called HealthTap allows diabetes patients and other consumers to submit questions to a pool of 60,000 doctors. Users who subscribe to the site’s “prime” service can text or conduct a video conference with a doctor at any time.
To capture the full value of a digital business, life sciences companies need to begin taking two major steps today: 1) understand and extract the value from digitized customer experiences and operations, and 2) prepare to capitalize on—and/or defend against—the shift in value that digital disruptions will create.

To maximize the value of digitizing the customer experience and their operations, companies should start with a rigorous and scientific evaluation of their current digital landscape—including spending, resources and suppliers. For example, one company found that it had more than 200 digital platforms across more than 10,000 assets and more than 800 digital suppliers. Companies can use this type of fact base to benchmark their digital capabilities relative to competitors. They can then apply the results of the benchmarking in a value-targeting exercise that identifies and validates priority areas for investing in digital.

To capture the big money, life sciences companies need to consider each type of digital disruption. To do that, companies should take the following actions:

1. Assess the opportunities and risks pertaining to digital substitutes.
2. Conduct a robust and ongoing patient value analysis based on real-world examples.
3. Define the "rep of the future" to effectively convey the value proposition of therapies to new intermediaries unbounded by geography.
4. Build capabilities to facilitate and engage with customer communities, to capitalize on opportunities in the sharing economy.
5. Develop an ecosystem for digital currency and rewards.
1. Assess the opportunities and risks pertaining to digital substitutes.

A company needs to consider how it could enter the digital substitutes market, as well as how it could defend against new entrants by increasing the value of therapy provided through traditional patient services.

2. Conduct a robust and ongoing patient value analysis based on real-world examples.

The objective should be to identify sub-populations that would receive the most benefit from therapies and services in therapeutic areas where digital resources provide a standard for treatment decisions. For example, a leading pharmaceutical company wanted to understand which diabetes patients were not achieving the best clinical and emotional outcomes, so that it could proactively work with doctors and patients to better manage the disease and improve the patient experience. With Accenture’s support, the company used predictive intelligence solutions and analytics expertise to pull together information from disparate sources, enabling the company to see exactly why and where patients fall short of successfully managing the disease. By gaining this understanding, the company was able to strongly advocate for specific treatment standards.

3. Define the “rep of the future” to effectively convey the value proposition of therapies to new intermediaries unbounded by geography.

Reps, whether actual or virtual, will need to reach out to healthcare providers who interact with patients online or via call centers from anywhere in the world. Life sciences companies will need new strategies for curating content in order to promote therapies to providers who can only be reached through digital technology. Sanofi has created a web site, called “DX: The Diabetes Experience,” to provide a hub for content from its Facebook® page, Twitter® feed and Diabetapedia reference guide. The site also offers information about support programs and treatment. 19

4. Build capabilities to facilitate and engage with customer communities, to capitalize on opportunities in the sharing economy.

To become a facilitator of the sharing economy, one pharmaceutical company is using social networking and crowdfunding to create a virtual support system for patients seeking to live a healthier life. Accenture helped the company identify business and technology requirements for profitably creating a way for family and friends to digitally share their emotional and economic support with people striving for better outcomes. Additionally, companies should seek to defend their current market position against the emergence of the sharing economy by identifying ways to strengthen their personalized patient services.

5. Develop an ecosystem for digital currency and rewards.

Life sciences companies will need to build capabilities and partnerships to enable better adherence and compliance through direct, relevant incentives for patients. Ecosystems that include companies in diverse industries—technology, telecommunications, retail and financial services—will be essential for success.
The big question: will your company be a transformer or a follower?

In thinking about its role in the digital economy, each life sciences company faces one overarching question: Are we going to be a digital transformer or a digital follower? Accenture’s research shows that digital transformers focus nearly twice as much of their digital investments on growth (40 percent) as digital followers (23 percent). Digital transformers also expect to excel in areas that illustrate this growth focus: sales (58 percent vs. 31 percent for digital followers), new sales channels (55 percent vs. 30 percent for digital followers), new products and services (58 percent vs. 34 percent for digital followers) and customer experiences (70 percent vs. 53 percent for digital followers).20

Digital transformers in life sciences recognize that the days of slow and steady evolution in the industry are over. Many industries that also once measured change in decades now experience digital disruptions that shift the landscape over a period of a few years, or even faster. Although the future course of digital disruption in life sciences is far from certain, it is clear that radical changes are already making the industry more dynamic and volatile than ever before. Whether incumbents or new entrants, the biggest winners will be those companies that look to lead in digital with a focus on value and embrace the wild ride ahead.
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Research Methodology
Our analysis of digital benefits is based on 5-year revenue projections for the entire branded US pharmaceutical market, Accenture estimates on marketing and sales spend in proportion to revenue, and Accenture client experience with potential revenue generation and cost savings from digital initiatives. The analysis is a directional estimate of a blended digital benefit for the industry; taking into account the varying levels of direct sales support and marketing promotion for pharmaceutical brands based on life-cycle stage (e.g., new vs. mature). A formal benchmarking study was not undertaken as part of this analysis.

Our estimates for the impact of digital services on diabetes are based on the 2014 CDC diabetes prevalence figures on the number of diabetics and the cost for treating diabetes in the US. For each disruption, the impact was calculated based on the change to the number of patients, visits, or expenses as described in each section.

About Accenture Life Sciences
Accenture's Life Sciences group is dedicated to helping companies rethink, reshape or restructure their businesses to deliver better patient outcomes and drive shareholder returns. We provide end-to-end business services as well as individual strategy, digital, technology and operations projects around the globe in all strategic and functional areas—with a strong focus on R&D, Sales & Marketing and the Supply Chain.

We have decades of experiences working hand-in-hand with the world’s most successful companies to improve their performance across the entire Life Sciences value chain. Accenture’s Life Sciences group connects more than 10,000 skilled professionals in over 50 countries who are personally committed to helping our clients achieve their business objectives and deliver better health outcomes for people around the world.

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Accenture is a global management consulting, technology services and outsourcing company, with approximately 319,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world’s most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US$30.0 billion for the fiscal year ended Aug. 31, 2014. Its home page is www.accenture.com.

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