AT Kearney

New Medicine for a New World

Time for Pharma to Dive into Digital

Pharma's customers increasingly live and interact in a digital world. The industry has been dipping a toe in the digital waters, but now it's time to take the plunge.

We live in a digital world. The way we interact has changed more in the past 10 years than in the previous 50, and this change is reshaping society itself. It's hard to believe that apps, social media, and everything that surrounds them date back to no earlier than 2007.

Communications of all types are increasingly intermediated through digital technologies. Many of us spend more time communicating in the virtual world than in the physical one. Some have created their own digital selves, with distinct characters and behaviors. With the expansion of interconnected Internet-enabled devices, the boundaries between the real and the virtual are increasingly obscure.

Pharmaceutical companies have been increasing their engagement with the digital world slowly and cautiously. But the industry has now reached a tipping point: it has to put an end to hiding behind the challenges of engaging with its stakeholders digitally and stop treating digital as an add-on to existing operations. Rather, it needs to embrace a "digital first" engagement model with fundamental consequences for its organization and capabilities.

This publication is part of a series looking at the future of the healthcare industry. To read or download other papers in the series, please visit www.atkearney.com/health.

Since the turn of the twenty-first century, digital has fundamentally changed our lives. In a typical minute today 204 million emails are sent, 571 new websites are created, 17,000 online consumer transactions are conducted with Walmart, 15,000 tracks are downloaded on iTunes, and 2 million Google searches take place. Of today's estimated 3 billion Internet users, more than 1 billion exclusively use mobile (rather than desktop) devices.

The impact on many industries has been sweeping. Business models in media and retail would be unrecognizable to someone from just 20 years ago, the telecoms industry has shifted from charging per minute to charging per gigabyte, and banking transactions have largely become virtual. In each case, digital technologies have empowered consumers to seek information and interact with suppliers in the way they choose, when they choose.

And over time, the role of digital has expanded (see figure 1). The Internet today may still be a treasure trove of one-way information for those wishing to discover more about a topic, a company, or a product, but it's much more than that. Not only have companies learned to segment their audience based on digital interactions, but they are also providing forums where users can share opinions and experiences—and drawing on user-created content to refine their offer. Companies sell digitally to customers located around the corner or around the world, digital marketplaces sprout up to more efficiently match supply with demand, and companies crowdsource ideas for product and service innovation. Yet the latest development is taking digital to another level altogether: immersive gaming, the Internet of Things, and wearable technologies are merging virtual and physical realities. And health is at the forefront of this latest wave of innovation.

Figure 1
Digital identities today are shaping real-world action

Stages of Internet engagement and select examples

Asking Finding information **Google**	**Sharing** Giving feedback and reviews **Trip Advisor**	**Transacting** Matching supply with demand **eBay**	**Cocreating** Making the total add up to more than the sum of its parts **Lay's**	**Changing** Making the digital self shape the "real" self **Zombies, Run! app**	**Being** Merging the digital self with the "real" self ?
WebMD Four out of five Internet users search for health information, with 50% of U.S. and UK physicians using Wikipedia to look for medical information	**PatientsLikeMe** A website to share stories, information, and personal health data that is analyzed to improve patient self-care	**NextGxDx** A comprehensive online market-place for genetic testing	**Foldit** A game that taps into group problem solving to crack complex modeling challenges. Collectively, solved in three weeks a problem that researchers had been studying for 10 years	**Re-Mission 2** Young people fight cancer in a game, translating into better real-world adherence to medications to stay in remission. A random controlled study showed 50% improvement in adherence among game players	? Continuous monitoring of vital signs and key indicators, with medical avatars (such as Apple's Siri) alerting users of problems and treatment options before symptoms arise

Medical example

Sources: Pamela M. Kato et al., "A Video Game Improves Behavioral Outcomes in Adolescents and Young Adults With Cancer: A Randomized Trial," *Pediatrics* 122, no. 2 (2008): e305–e317; A.T. Kearney analysis

Healthcare: A Reluctant Digital Convert

Despite being an information-intensive industry, healthcare's business model has remained strangely unaffected by the digital revolution until recently. Health is delivered in much the same way as it has always been, and the innate conservatism of the industry means it lags in usage of all the main digital technologies. This is about to change, however, and just as in every other industry, it is customers who are driving the transformation.

The old model where patients blithely accepted their doctors' judgment is quickly dying. Each month 19 million people search the health information website WebMD, and one-quarter of patients with chronic disease visit peer sites to "meet" fellow sufferers and discuss their health. Patients are increasingly showing up in the examination room with piles of information about their ailments, both real and imagined.

Digital should be the default approach to customer engagement, not a bolt-on.

The medical community is digitizing too. Approximately 50 percent of U.S. and UK doctors search Wikipedia for medical information. In fact, Wikipedia is now the world's most popular website for healthcare professionals and is often the first point of reference before they turn to more specialized databases such as UpToDate.com. Peer-to-peer platforms such as Sermo are becoming increasingly popular, and Twitter is emerging as a favored medium for specialists to swap news of latest developments.

Healthcare systems and payers are starting to recognize these trends. In 2013 alone, digital health funding globally rose 39 percent, to about $2 billion. In the United Kingdom, the National Health Service publishes a list of recommended health apps, and doctors will soon be allowed to "prescribe" apps to help manage conditions such as diabetes or stress in the same way they might prescribe a drug today.

The most interesting trend, though, is one that has gone largely unnoticed by health professionals: the convergence of consumer and medical technologies. Until recently, consumer health technologies were limited to wellness devices such as those from Fitbit and Nike, while medically credible devices were expensive and cumbersome. Today, however, companies are developing a new generation of consumer devices able to monitor critical biometric data such as heart rate, blood pressure, and electro-cardiac activity—and even to conduct complex analyses of sweat and blood. Manufacturers of many of these products will seek to register them as medical devices with the U.S. Food and Drug Administration (FDA). The emergence of Apple HealthKit and its competition from Microsoft, Google, and Samsung promises to greatly simplify the task of securely managing biometric data.[1] Soon, doctors will be faced with patients armed with mountains of biometric data and preliminary diagnoses to supplement their Wikipedia printouts.

It is no surprise that those industries that have taken digital closest to the heart of their operating model—consumer goods, retail, and financial services—are those that are most exposed to changing consumer needs. As patients digitize, so must healthcare systems. And if pharmaceutical companies are to remain relevant, they must too.

[1] To learn more, please see *Who Will Unlock the Power of Consumer-Led Digital Health?* at www.atkearney.com.

Pharma: just wetting its feet in the digital waters

The pharmaceutical industry has been cautious about moving into the digital space, for reasons both external and internal. Externally, health systems have been slow to adopt digital technologies, regulations have been ambiguous, and universal standards are not yet in place. Internally, many companies do not yet fully grasp what digital opportunities are available, what return on investment they might offer, or, for that matter, who should be responsible for digital affairs (see sidebar: Difficulties Real or Imagined).

All this is not to say that the industry has not been active. Every pharma company is experimenting with digital channels, and some are achieving scale. Merck's Univadis medical information platform is an invaluable asset for many clinicians, and MerckEngage is a great platform for digital communication. Other companies have focused on mobile, creating applications such as Sanofi's GoMeals (to help diabetics manage their food intake) or Janssen's Care4Today, a patient-oriented suite of health management solutions. Companies including Leo (www.morethanpsoriasis.co.uk) and AstraZeneca (simply4doctors.com) are using health information to drive traffic to company websites. Others are adopting social media such as Twitter to encourage conversations about treatment options and latest developments between doctors and key opinion leaders.

However, in most companies these efforts are still fragmented and uncoordinated. Typically they are treated as "nice-to-haves" that complement the day-to-day business. But there are exceptions to the rule. Novartis, for example, has announced that its participation in the digital world represents a key strategic initiative, and it has backed up its announcement with a raft of partnerships with companies such as Qualcomm for clinical trials and Google for intelligent contact lenses. Boehringer Ingelheim is widely recognized for its successful use of social media, and other companies are creating digital centers of excellence or new divisions focused on digitally enabled business models.

From Bolt-On to Digital First

Pharma companies can no longer afford to treat digital as an interesting bolt-on to traditional detailing and marketing. Instead, they need to make digital their primary approach to customer engagement.

Today, everyone along the pharma value chain—patients, physicians, pharmacists, payers, commissioners, regulators, and government authorities—has a digital "self" that is generally far more open to sharing in cyberspace than in the real world. Like it or not, key opinion leaders, doctors, therapists, and patients increasingly communicate in the digital domain, and pharma needs to be part of the conversation.

Difficulties Real or Imagined

One of the biggest internal barriers to digital adoption in the pharmaceutical industry has been the level of perceived risk, particularly in social media. Companies fear that digital will open the floodgates to a tsunami of adverse event reports, all of which would have to be painstakingly logged in accordance with law. Yet research from 2013 by Visible Technologies and Nielsen shows that fear to be unfounded. Of 183,000 social media posts analyzed, less than one in a thousand—just 138—were actual adverse events, which available administrative staff was able to process without difficulty. And today, even if the numbers were to rise, digital technologies would be able to monitor and automatically deal with the vast majority of adverse event reports.

At the same time, with the shift from blockbusters to personalized medicines, the industry's bottom line simply cannot bear the cost of launching products in traditional ways. And with call rates for sales reps as low as one or two per day in some markets, it seems that customers no longer value these expensive interactions. This is even truer in the area of specialist medicine, where clinicians are generally more interested in obtaining medical information and engaging with medically qualified scientists than in meeting with promotional representatives. And the fact is that digital interactions can be just as or even more effective than physical ones, at a fraction of the cost. Even partial adoption of digital can reduce promotional costs by between 20 and 50 percent. So it makes no sense to use the most expensive channel as the default.

"Digital first" reverses this logic: it prescribes that digital should be the presumed approach to customer engagement, while traditional physical channels should only be added if they can be proved to offer incremental, cost-effective benefits.

The benefits of a digital first strategy accrue not just on the cost side. Digital analytics, for instance, allows companies to better hone their communications to customers' profiles and, through better physician preference analysis, to target the greatest sales opportunities. Social media monitoring, website statistics, and keyword search can all improve the quality of interactions, promotions, and packaging. Tracking requests for medical information can provide leading indicators of clinician concerns and interests. And promotion campaign outcomes can be objectively assessed and sales and promotion costs compared. The list of benefits is long.

And while this paper focuses on the use of digital for customer engagement, digital has huge potential to transform all aspects of the health value chain (see sidebar: Digital beyond the Customer Engagement Model).

Digital beyond the Customer Engagement Model

Not only customers are digital. Science is digital too, with the most interesting new science to be found not in medical journals but rather in online blogs and discussion groups. And pharma companies would do well to establish digital open innovation platforms, following the lead of consumer goods and technology companies that have been setting the trend.

Digital is also central to value creation. Digital technologies enable real-time monitoring of outcomes and are the key to obtaining the data on real-world performance of therapies that payers and doctors increasingly demand. Companies likewise need to get to grips with the digital patient. The greatest opportunity to create value in health lies in changing patient behavior, and in the future "digital" medicines that help patients manage their therapy will be the standard rather than the exception.[2]

To be digital on the outside, companies need to be digital on the inside too, using digital platforms to strengthen communication and collaboration. Indeed, new talent expects these technologies and will increasingly be turned off by companies where email is seen as the height of digital sophistication.

To be truly digital, pharma companies need to take an end-to-end look at their business to understand how digital technologies can transform every part of the company. We will be exploring several of these themes in future posts and publications.

[2] To read more about the importance of behavioral change, please see *Prospering in a New Age of Medical Innovation* at www.atkearney.com.

Transforming the organization, tougher than mastering the technology

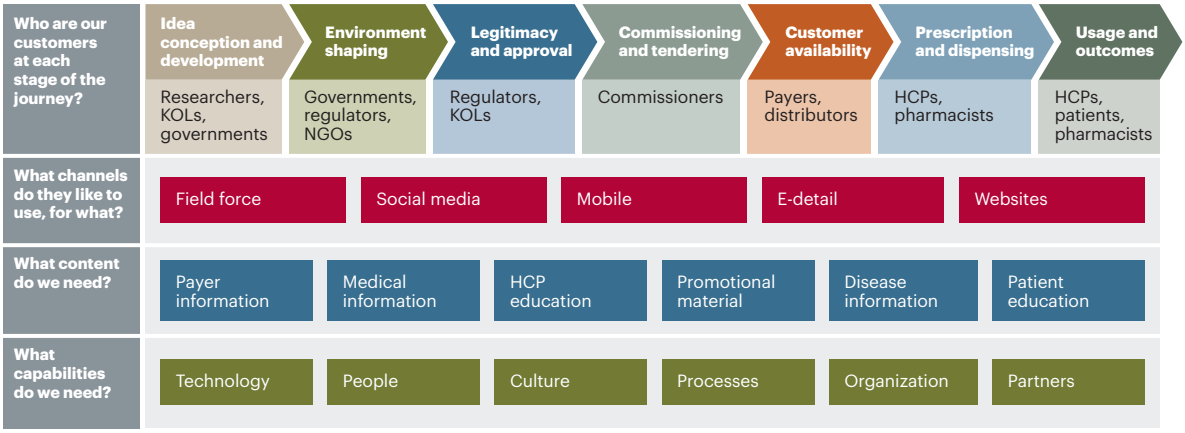
When a company decides to go digital first, the main challenge is one of organizational change, not technology. Indeed, there are an increasing number of technology platforms such as Veeva that can provide multichannel capabilities and enable digital content management. It's just that most organizations are not yet prepared to make full use of the functionality they offer.

To get the most out of a digital-first customer engagement strategy, companies need to develop a clear understanding of who their customers are and what their digital profiles are at every stage of a product's journey, from an idea in R&D to a patient outcome—and to rethink, in consequence, what channels should be used and with what content (see figure 2).[3] And then they need to develop the capabilities, mindsets, and behaviors across the organization to make the strategy work.

In **sales and marketing**, the sales force, for example, needs to move from a focus on maximizing call rates to become a team of communication specialists and coordinators who ensure that the right channels are used at the right time. These can include:

- Added-value websites to communicate technical medical information through education, coaching, and interactive tools such as co-browsing and visualization. When equipped with web chat and callback, such websites can be important channels for customer-driven engagement.
- Social media applications to help engage with patients and practitioners, encourage peer-to-peer communication among doctors and among patients, and even between doctors and patients.
- Mobile health (m-health) solutions, which can range from simple apps to provide health and wellness or disease support to patients to more complex apps to assist practitioners in assessing or remotely monitoring disease. The emergence of consumer-focused biometric monitors offers the intriguing possibility to close the diagnostic and treatment loop by monitoring the usage and impact of therapies in real time.

Figure 2
Applying digital to the customer engagement model



Note: KOL is key opinion leader, NGO is nongovernmental organization, and HCP is healthcare professional.
Source: A.T. Kearney analysis

[3] To learn more about the end-to-end customer engagement model, please see *Reconstructing the Customer Engagement Model from the Bottom Up* at www.atkearney.com.

Marketing professionals must also become digital natives, providing content that is both up-to-date and appropriate for multiple digital channels. Additionally, sales and marketing will have to become familiar with advanced analytics to monitor and measure consumption, as well as to develop and pass along customer insights.

One of the biggest changes is the approach to content development and management. Creating the interactive details needed for truly responsive customer engagement requires a good deal of thought and quite complex coding. Some of the more advanced players are centralizing marketing production in content "factories," calling into question the role of traditionally decentralized marketing organizations.

Similar challenges face the **medical function**, which needs to continually scan the environment for the latest data and learn to present and engage customers through multiple digital channels. For instance, it must monitor queries to distinguish signs of emerging issues and be able to participate in peer-to-peer discussions among clinicians.

The most fundamental change is a move from push to pull: enabling and encouraging customers to serve themselves and engage on their own terms, and participating in peer-to-peer discussions as equals. This is a far cry from the coverage and call rate models of success still prevalent in much of the pharmaceutical industry.

The whole approach to **legal and regulatory compliance and pharmacovigilance** must also be reconsidered. As regulatory systems struggle to come to grips with the digital world, companies have tended to play it safe and move slowly. The reality, however, is that a properly implemented digital strategy can actually improve compliance and reduce legal risk. Channels such as web chat provide a searchable audit trail. Centralized content production means that information disclosure rules can be hard-coded in rather than rely on training and manual compliance checks. Companies will need, of course, to develop clear policies governing social media participation, develop specific expertise in the emerging world of digital regulation, and create processes to facilitate the rapid creation and deployment of digital assets. And regulatory functions will also need to embrace digital by adopting technologies such as automated monitoring of reportable events.

Unless leaders understand the digital world and are committed to a "digital first" philosophy, none of this transformation will happen. In many companies, the leaders grew up in a world of sales reps that increasingly no longer exists. Companies should start by transforming the **leadership team** before attempting to transform the organization.

Achieving Digital First

Pharma companies embarking on the digital first journey need to obey a few golden rules.

Focus on the customer application. Too often companies enter the digital arena saying "We need an app" without thinking about why. The most successful companies develop their digital strategies after first asking themselves what problems they are trying to solve, what customer needs they wish to fulfill, and how digital technologies can address these problems. These questions need to be examined at a granular level, performing a detailed bottom-up analysis of key assets, mapping the digital profile of key customers along their journey, and establishing what technologies and applications can add the greatest value.

Build digital into the core business. Digital first must be a guiding principle in all parts of the business and should be explicitly incorporated into core business processes. This is particularly true for processes such as branding and strategic planning. Top management must challenge any parts of the business that have not explicitly considered the opportunities from digital in their plans.

Engage the entire business in the transformation. Many companies wishing to embrace digital create a center of excellence (COE). COEs can be a useful tool to inspire the organization to act, provide expertise and infrastructure, scan the horizon, and help to drive projects. On their own, however, they are not enough to truly embed digital in a company. Networks need to be nurtured to enable collaboration between digital champions, digital academies are required to build expertise, digital experts must be staffed in core business and support functions, and funding mechanisms must be put in place to encourage experimentation.

Top leaders are more effective at digital transformation when they themselves have been "digitally disrupted."

Move quickly. Digital life cycles are very short, often measured in months. Organizations need to be agile—experimenting, adapting, and moving on—and this can be a real problem for many pharma companies. New processes and governance mechanisms are often needed to overcome inertia and enable the agility digital requires. This is especially true in compliance and regulation. Letting months go by before new digital assets and channels are authorized simply will not do. Compliance, regulatory, and legal functions need to build the expertise to understand the true risks of digital, set out clear guidance, and respond quickly to requests for review.

Look outside. Digital innovation is everywhere, and it is relentless. Pharma companies need to watch their direct competitors and copy unabashedly those things that work. Greater insights and threats will increasingly come from companies such as Google, Apple, supermarkets, and consumer goods manufacturers that compete for customer attention. External partnering will become a core competence for the digital pharma company.

Experiment, but scalably. Small pilots that are quickly forgotten are a waste of energy. Companies need to experiment, but the experiments must be scalable: large enough to make a difference with learning that can quickly be deployed across the organization. Typical experiments might be to test an omnichannel customer platform in a country, replace physical with remote detailing in a geography, digitize the launch of a key asset, embed digital into a drug delivery system, or set up a social media platform to connect patients with each other and with healthcare professionals. Each of these experiments can become a building block of the new digital company.

Start with leadership. Becoming digital is core to a business's strategy and purpose. Unless top executives understand the digital world and are convinced that their businesses need to fully engage, they will not make the widespread changes that are required. Leadership teams should be "digitally disrupted" through intensive exposure to new technologies and given the opportunity to see how leaders in digital have transformed their businesses.

Act Now or Get Left Behind

Digital is changing every aspect of the way healthcare is delivered, and pharma industry customers are transitioning ever more quickly into the digital world. The race to win the battle for customer engagement in cyberspace has begun. Those who embrace digital into the core of their engagement model will see increased customer reach, lower costs, higher sales, and greater value creation.

All the pieces are in place to achieve this transformation. Technologies are readily available to enable digital customer management, and there are sufficient examples to show that the benefits of digitization far outweigh the costs. Regulation, while not fully resolved, is becoming clearer. Above all, the reduced effectiveness of traditional promotional spend and the increased difficulty in accessing new markets makes the transformation to digital both critical and timely.

Digital technologies have transformed many industries, and those that have prospered all have one thing in common: they have welcomed the disruption that digital has brought and rebuilt their businesses with digital at the core. It is time for pharma to do the same.

Authors

Jonathan Anscombe, partner, London
jonathan.anscombe@atkearney.com

Michael Thomas, partner, London
michael.thomas@atkearney.com

Chris Paddison, partner, Dallas
chris.paddison@atkearney.com

Keith Lostaglio, partner, Singapore
keith.lostaglio@atkearney.com

Jonathan Plimley, principal, London
jonathan.plimley@atkearney.com

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