Part II

Navigating the Digital Age

What senior leaders worldwide have learned from pushing the boundaries of change.
Cognizanti is an annual journal published by Cognizant. Our mission is to provide unique insights, emerging strategies and proven best practices that globally-minded companies can use in their quest for business and IT performance excellence.

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The Global Mosaic That Is Digital

Look around. Our personal and professional lives are increasingly conducted through a screen, app or voice interface. And this phenomenon of relying on digital approaches to get things done will only accelerate, globally.

That’s why we dedicate this issue of Cognizanti to the digital movement taking shape worldwide. We continue our exploration of digital through the eyes of practitioners – namely, our clients – who are pursuing digital that truly matters in ways that advance their market leadership, both regionally and globally.

In the pages that follow, we present essays written by senior leaders at Aetna, Asian Paints, IDP Education, LifeBridge and Mizuho, whose ambition is to steer their organizations into a brighter digital tomorrow. Notably, the authors include doctors, a CEO, an innovation leader and of course IT executives, underscoring the wide array of business and technology influencers who drive digital strategy and execution.

From Aetna, you’ll hear how the company is seeking to transform from a health insurer to a wellness company. Mizuho, the Japanese mega-bank, explains how it is applying blockchain, big data analytics and AI, along with fintech partnerships, to deliver customer-oriented innovation to relevant areas of its global business. You’ll learn how IDP Education is working hard to extend its support for customers to every stage of their international education journey and beyond, with personalized, relevant content.

LifeBridge, a major U.S. regional health provider network, reveals how it’s applying new-age consumer-style digital engagement to enhance physician communications and patient care coordination. Lastly, Asian Paints – the third largest provider of paint in the Asia-Pacific region – presents a colorful canvas of design thinking, behavioral and data sciences and modern enterprise systems, detailing the company’s pursuit of leadership in the paint-as-a-service and home decor markets.

Sprinkled in, as always, are commentaries that offer insight into major developments that drive our digital age. We open with a fact-based look at blockchain’s slow but steady move from the lab to a mainstream force in enterprise computing. Veteran IT industry commentator Gary Beach offers advice on filling in the talent gap that threatens the entire digital movement. Bruce Rogow punctuates the issue with a cautionary tale and lessons learned, crafted from interviews with top senior business and IT leaders who have come up short in their initial digital initiatives. Bruce’s advice: Do a better job of anticipating factors that conspire to undermine even the best efforts.

We hope you enjoy and benefit from the views shared by your colleagues and our commentators. And if you’d like your own digital journey featured in an upcoming issue of Cognizanti, or in our Digital Perspectives app (available both at the Apple App Store and Google Play on smartphones and tablets), contact me at Alan.Alper@cognizant.com. You can also share your point of view on our Cognizant Connections e-community.
Organizations worldwide see blockchain as a significant force for their business and industry, and are well on their way to developing a strategy, with an eye on reducing operating costs, automating key business processes and enhancing trust and transparency, our latest study reveals.

As the whipsaw volatility of Bitcoin’s cryptocurrency simultaneously excites and generates fear among digitally-minded investors, a movement is quietly taking hold at organizations worldwide: applying Bitcoin’s underlying technology – blockchain – to resolve the essential business challenges of trust and transactional integrity that have vexed e-commerce decision makers for a better part of this millennium.

While still in the “prove it” phase, many business and technology leaders worldwide see blockchain’s distributed ledger technology and built-in encryption capabilities on private and public networks as fundamental to enabling virtual business – from R&D, supply chain management and assembly, through sales, distribution and after-market support – to take on many of the same characteristics as physical business by essentially guaranteeing that all trading parties are who they say they are, and enforcing their contractual obligations. And via the technology’s encryption and immutable records, they also hope to keep out prying eyes and ne’er-do-wells who seek to inflict harm on the digital value chains proliferating throughout the globe.

Our recent global study of 3,000-plus senior executives found that a vast majority see blockchain as critical to reducing operating costs by allowing their organization to plug-and-play on shared IT infrastructure (private and public); automating key business processes with smart contract technology; and pursuing business opportunities that emerge from new collaborative ecosystems worldwide.

In fact, an overwhelming majority of our respondents across banking and financial services, manufacturing, retail, healthcare and insurance, and spanning IT, operations, innovation and functional business roles in Asia-Pac, Europe and North America, see blockchain as a significant force that will impact their company (92%) and industry (86%) in the years to come. They believe blockchain will empower their organization to reimagine and reinvent their business.
Many see blockchain’s ability to unlock business opportunities in new markets (53%), service lines (56%) and customer segments (52%). Their rationale: Blockchain provides the technological wherewithal to stay ahead of the competition and mitigate the threat of digital disruption. They estimate that in the short term, blockchain will generate cost savings of 2.5%-plus, and lead to revenue growth of 5% to 10%.

Treading Cautiously

The blockchain adoption journey is well underway, with most organizations deep into defining a blockchain strategy, finalizing budgets and organizing teams. Most respondents estimate their blockchain budgets to equal 2.5% to 10% of total IT spending and report that they have established teams (of six to 15 people) dedicated to blockchain initiatives. Respondents expect to encounter skill gaps arising from blockchain’s growing impact and have drawn up action plans that combine traditional training and innovation lab approaches.

When asked about their strategy, respondents revealed that they are embracing a multifaceted approach (see Figure 1). In order of priority, the components include identifying innovation opportunities; assessing impact on existing systems; evaluating blockchain along with other emerging technologies such as Internet of Things (IoT), advanced analytics and robotic process automation; and identifying processes to which smart contracts can be applied.

Paradoxically, despite recognizing the potential for breakthrough innovations, only 12% cite altered or new business models as a strategy component of their move-forward thinking. This is further corroborated by the majority view that blockchain is unlikely to affect their current operating models (47%) or fuel new operating models (13%).

**Top Strategy Components**

Respondents were asked to identify the components that make up their blockchain strategy.

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forming dedicated teams to identify use cases and opportunities for innovation</td>
<td>20%</td>
</tr>
<tr>
<td>Implementing internally to assess benefits and implications of blockchain for existing systems</td>
<td>15%</td>
</tr>
<tr>
<td>Assessing the impact of blockchain alongside emerging technologies such as IoT, advanced analytics and robotics</td>
<td>15%</td>
</tr>
<tr>
<td>Identifying processes that can be improved through the use of smart contracts</td>
<td>10%</td>
</tr>
<tr>
<td>Understanding regulatory implications of moving processes to blockchain</td>
<td>10%</td>
</tr>
<tr>
<td>Working with industry partners/consortia to identify areas to focus on or avoid</td>
<td>10%</td>
</tr>
<tr>
<td>Enabling new or extended business models based on blockchain platforms</td>
<td>7%</td>
</tr>
<tr>
<td>Replacing current systems with blockchain solutions</td>
<td>5%</td>
</tr>
</tbody>
</table>

Base: 3,236 respondents. Multiple responses allowed.

Figure 1
Given the nascent stage of the technology, most organizations are carefully testing the waters with proofs of concept (PoCs), pilots and prototypes. Choice of platform also reveals an interesting mix. A majority of respondents indicated interest in permissioned (40%) and open (37%) blockchain networks, while the choice of private blockchain networks garnered a small percentage. This is indicative of the fact that organizations realize that the value of blockchain is in supporting multi-party ecosystems, not internal operations. The preference for closed or permissioned platforms in their current projects seems to stem from a lack of trust across existing ecosystems, with half of the surveyed respondents saying they have only a “medium level” of trust in their partners (see Figure 2).

Hurdles Along the Path
Change management is critical to embracing the collaborative culture that is core to blockchain’s shared technology and operating models. This appears to be a work in progress, according to respondents. Legacy systems integration is another key challenge that respondents are contending with via a mix of approaches that include outright system replacements, workarounds or hybrid models.

Topping the chart of internal barriers to blockchain adoption are understanding blockchain and relevant use cases that demonstrate business benefits, followed by communicating blockchain’s business value to key decision makers. External roadblocks, meanwhile, include perceived concerns about privacy and security, scalability, standards and interoperability.

More Trust Needed
Respondents were asked to indicate the level of trust they had in their ecosystem partners.

Base: 3,236 respondents.
Figure 2
The Road Ahead

Organizations embracing blockchain would do well to create a cohesive strategy that positions the distributed ledger technology as radically transformative rather than as just another architectural layer. Strategy, therefore, should be focused on developing a blueprint, generating top management buy-in and spotting ways to create new approaches for interacting and transacting.

Given that material benefits of blockchain can only be unlocked through shared business and technology models, organizations must learn to work with partners on developing and adopting mutually agreeable standards that become the foundation for collaborative ecosystems. Learning to play in an environment comprised of shared infrastructure and data is critical to unlocking value.

Other critical success factors include building cross-functional blockchain project teams that transcend IT, setting clear goals around business issues and objectives to be achieved, iterating and learning on the go without waiting until costs and benefits are clear, staying flexible and adapting to the likely business-technology challenges that will occur as blockchain takes root (such as integrating legacy with blockchain platforms), and experimenting with a variety of networks, both permissioned and permissionless.

Perhaps most critically, organizations need to use business needs and desires as their yardstick to guide planning and success metrics, rather than being influenced by the blockchain buzz emanating from the cryptocurrency trading craziness that has even the most savvy investors perplexed.

Author

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The success of a new healthcare business model means offering features, functionality and value that consumers find indispensable – delivered by Aetna Health.

Not too long ago, most of us didn’t have electronic navigation in our cars. We’d unfold a map or ask a gas station attendant for directions. Now, we won’t get in our cars for even short trips without activating some form of GPS capability or launching an app telling us which lane to be in to get off at the correct exit. Many of us wonder how we lived without those apps.

That’s the same level of experience and reliability we strive to deliver to our members at Aetna Health with our health and wellness management platform. It’s our challenge, and our opportunity, to build solutions for needs and desires our members can’t quite articulate yet – just like we didn’t know we needed maps on our phones. Our hope is to create tools, especially a new mobile app, that members will use as frequently and effortlessly as they do their digital maps, music and social media apps.

We will reach this goal in phases, and as we hit our milestones, we’ll also help our parent company, Aetna, transform from a health insurer to a wellness company. Technologies such as analytics and Internet of Things (IoT), as well as our engagement strategies, will help us meet our members where they are and deliver just what they need, whether it’s sending a reminder to refill their prescription when they walk into a pharmacy or issuing a reward for reaching 10,000 steps. Our ultimate goal is to significantly reduce healthcare costs by helping our members get and stay healthy through our effective care and wellness tools (see Figure 1, next page).
Delivery Across the Continuum with a Holistic Member Focus

Aetna Health combines the human touch with a variety of digital tools to give members the personalized and context-aware advice and information they need to reach their health goals.

![Figure 1](image)

Integrating the Mobile Experience into Members’ Daily Lives

We engage our members through our Aetna Health platform, which delivers personalized health advice, health tools and trackers, and the ability to connect their fitness and medical devices and communicate with coaches.

Our CareEngine platform powers the personalized insights offered by Aetna Health. CareEngine digests lagging and real-time data from medical claims, doctor’s office visits and medical adherence, such as whether a member fills or refills a prescription. Members can also share data about their daily activities through various wearable and in-home devices.

Using thousands of clinical rules and analytics, the CareEngine platform sorts members into appropriate health management programs so they get the right support at the right time. Our programs include lifestyle and wellness coaching, as well as management for chronic diseases like diabetes.

CareEngine continually generates member-specific insights, such as “Care Considerations,” personalized health alerts sent to members and their care managers and health coaches. The platform also generates daily worklists for our 3,000 care managers so they can personally follow up with members by phone or e-mail (see Quick Take, next page).
Quick Take

Actively Managing Member Health with a Human Touch

At Aetna, we use a lot of technology to help members meet their health goals. Our CareEngine platform stratifies high-risk members, identifies the best health management programs for them, and personalizes the information they see on the care and wellness platform. Members can upload their own data from a fitness band or home health device to earn incentives. We offer multiple communication channels to support member preferences.

Yet to help members incorporate healthier behaviors into their lifestyle, we must uncover their motivations for improving their health, help them understand what they can do to reach their goals and identify the best way to encourage them to act. Our care manager-coaches build a rapport with individual members to understand these factors on a personal level.

Coaches seek to learn more about what’s driving individual members to change their behaviors, such as staying in shape to live longer so they can see their grandchildren grow up. Understanding members’ motivations helps the coach add a human touch to the individualized information and analysis that CareEngine provides. Coaches can understand members’ personalities and stress points in ways even the best analytics can’t.

Coaches and members can check in daily via phone, e-mail and the Aetna Health Care and Wellness platform. Our technology provides information and insights to augment the encouragement and support coaches provide. As a result, members tell us, “I never feel alone,” as they work toward a goal or manage a chronic condition or rehab an injury. The human touch is a key factor in keeping our members healthy.
The Aetna Health mobile app signals a radical shift in how we can engage members and make our services a constant in their lives.

Aetna Health Experience

Our member credo is “you don’t join us; we join you” – and that means serving members through their smartphones. As our clients see a growing reliance among their employees on their phones, they’re asking for mobile health management and wellness tools. While our members can access the Aetna Health Care and Wellness platform online, we wanted to rethink how engagement could be delivered through mobile.

The Aetna Health mobile app focuses on the end-to-end experience because it signals a radical shift in how we can engage members and make our services a constant in their lives. After conducting extensive research and focus groups to find out what members wanted, we determined that the app would initially offer recommended health actions, coach messages, digital coaching, and health assessments and incentives, all personalized for individual members.

Although it doesn’t sound revolutionary, we had to focus a lot of energy on ease of use and the member’s experience with the tool. We addressed these questions from a member’s perspective:

- How does it connect with my life?
- How will it always be available to me?
- How does it stay smart about me to tell me what to do?
- How do I track all data associated with me that I am willing to share?
- How do I customize it to make it more personal to me?
- How do I use it to get to a real outcome?
- What is my overall end-to-end experience?

We take our “you don’t join us; we join you” credo literally with our mobile app. Through the app, we want to issue offers and reminders that make sense in the context of where individual members are and what they’re doing. If the app knows a member is in a pharmacy, that’s a great time to send a prescription refill reminder. One challenge will be keeping the app integrated with the web platform; another will be achieving the right balance between the app’s proactive offerings and its responsiveness to members.

We can incorporate dozens of fitness wearables and other devices into CareEngine to power the Aetna Health app. Because Aetna partners with Apple, we are also tightly integrated with Apple devices and can create features that span that company’s devices and capabilities to engage our members.

In tandem with the digital mechanics of an engagement experience, we continuously refine how to help members effectively engage with care managers to meet personal goals, such as remembering to regularly take medicine for a chronic disease or meeting weight loss and fitness targets. Cognizant works with us on a variety of key member-facing systems and business processes, including rewards and incentives customized...
for our members. One person may be willing to walk an extra thousand steps for a gift card; another may prefer to accumulate “hearts” or points in a competition with other members; and another may just want help organizing goals so there’s some activity she can accomplish every day.

We must personalize member experiences because different age groups have different needs. A relatively healthy 20-year-old may want fitness and wellness tips, while a 50-year-old with a chronic health condition is likely to be more concerned about receiving medical advice or what to do if they forgot to take their medicine. Again, it’s about us addressing member needs within the context of where they are emotionally and physically.

The Bottom Line
With our app and engagement strategies, Aetna Health is positioned to meet our clients’ health management needs. Employers and health plans expect population and care management services to ensure they have healthier employees and members who won’t need expensive health services or who use fewer services because we help them manage their conditions effectively.

Similarly, Aetna realized we must do things dramatically differently to successfully transition from a health insurer to a wellness company. That’s our response to the healthcare industry’s changing reimbursement and value models, which will reward quality of care over quantity. In that world, we have to find better ways to engage members than handing them a clipboard and pen at the doctor’s office.

That’s a huge mind and cultural shift. Aetna Health is a differentiator for Aetna, a technology enablement tool that signals to our clients and the industry that we need to work together to find new ways of improving care.

As we and Aetna continue to evolve toward serving consumers, we’ll need to continue investing in delivering best-in-class service advocacy. Meeting our members where they are means recognizing they have many needs that affect their ability to manage their health conditions.

Aetna Health is a differentiator for Aetna, a technology enablement tool that signals to our clients and the industry that we need to work together to find new ways of improving care.
How will we measure the success of our Aetna Health platform in such a complex world? We measure healthy days, the adoption rate for our services and, most importantly, whether adoption impacts medical costs. Coming full circle, our ability to engage members and keep them engaged will likely affect adoption rates.

We’ll continue to push the adoption curve, prove the concept and work with partners to create and sustain members’ motivation to use the app. We will focus on the experience to make sure the app remains easy and simple to use.

Our nirvana would be for members to use the app on their home screen, just like texting and e-mail or their favorite navigation app, blending it right into their lifestyles. When we hear our members ask, “How did we ever live without this?” we’ll count that as one more major measure of success.

Author

Steve Roberts leads an Aetna Health technology center of excellence as Head of Population Health IT that builds and maintains consumer, provider, government and multi-payer software solutions focused on our health and wellness platform. The center of excellence includes development, architecture, business analysts, quality assurance, and support and operations for Active Health Management (AHM), providing actionable insights, meaningful engagement and comprehensive care management. Steve has been with Aetna since 2013.

With more than 20 years of experience in healthcare IT, Steve has held senior executive positions within Henry Schein, Allscripts, GE Healthcare and McKesson. He holds a degree in business administration from Augustana College and an MBA from Northwestern University, Kellogg School of Management. Steve can be reached at RobertsS5A@Aetna.com | www.linkedin.com/in/stevenmroberts/.
Thanks for the haircut!

Great meal ... here's my share of the bill.

Here's payment for walking my dog.
This Japanese financial services firm has achieved global digital megabank status by leveraging the latest tools, developing fintech partnerships, nurturing a collaborative culture and disseminating customer-oriented innovations to relevant areas of the business.

Mizuho Financial Group is a large Japanese financial services organization with $1.8 trillion in assets under management. Our group's business is spread across the globe, with a presence in 38 regions, and boasts of a robust customer base, fortified by a deep understanding of our customers, developed on the strength of a rich information base built over time.

A few years ago, however, we realized that sitting on our historical strengths wouldn’t be enough to remain a leader in the future.

We therefore began modernizing our retail banking group by focusing on technological innovation brought about by advanced digital technologies.

We started with a strategy whose objective was to enhance customer service and establish Mizuho as a digital-age megabank. The main technologies we chose to drive our digital transformation strategy were blockchain, big data analytics and AI. The strategy's success pivoted around partnerships with fintechs and other vendors, as well as the establishment of a business division whose sole purpose was to develop and drive innovation across the group’s businesses.

Until recently, established banking regulations’ limited financial institutions’ fintech voting rights to 5%. When this barrier was dismantled in 2014, the door was opened to innovation driven by new-age technologies developed by digitally-native companies. This regulatory change empowered financial institutions to invest in fintechs in order to set up financial IT companies to advance their digital transformation initiatives.

On the economic front, our topline strategy was built on a healthy spread between lending and deposit rates. A decades-long ultra-low interest rate regime and reduced demand...
for lending services placed an enormous challenge on us to have the capital needed to invest in digital innovation. As a result, we focused on cost reduction and innovations that would make our products and services more appealing to customers and to enhance satisfaction through digital channels.

Institutionalizing the Push Toward Digital

Prior to 2015, the organizational unit set up to drive digital innovation was in the form of a project team. Upon my arrival to the digital innovation team from a branch banking role in 2015, I moved to set up a digital strategy incubation project team as an independent unit within the Mizuho group.

Mizuho group’s businesses are organized as companies by customer segment. This structure called for an institutionalized approach to transferring the digital project team’s transformational innovations to the various businesses within the group. To support this, we reorganized the team into a digital innovation department to develop and drive digital technology-powered innovations across the group’s businesses.

In 2017, we created the role of chief digital innovation officer (CDIO), who is charged exclusively with the agenda of driving digital innovations. This practice differs from those of similar types of banks that combine other tasks and responsibilities with this role. In our case, the role has the sole purpose of driving digital in a significant way.

We take a two-pronged approach to managing digital development and deployment. One, the digital innovation department gets involved with the business department that is creating the proof of concept (POC) to determine how the innovation can support new ways of doing business. Two, we identify opportunities to address difficulties and challenges confronted by the business lines that can benefit from innovative digital solutions, and then build appropriate solutions.

Winning through Fintech Collaboration

In October 2016, we set up a laboratory to drive open innovation through our association with fintechs. The lab combines our deep expertise in financial services with the technological prowess of fintechs, which are focused exclusively on technological innovation and can speed time to market of new applications driven by digital technologies.

It is important to propagate the technology and ideas we sourced to the entire group. While doing so, we’ve also been able to disseminate the behaviors and atmosphere that help to inculcate a new culture and way of doing business across the group. For example, our FINOLAB, which is situated next to our Otemachi head office, is set in a laboratory-like environment, where venture companies staff our digital innovation department. Meanwhile, other partners pursue digital innovations by actively engaging among themselves.
FINOLAB offers an open, collegiate environment that fosters a flow of ideas among individuals from not just different units but also from external entities. Unlike a traditional Japanese company, it is more akin to a network-based graduate school laboratory or a lab within a Silicon Valley start-up. The lab applies contemporary practices such as Agile development methods and design thinking principles, while enabling individuals to network with other experts, fostering an innovation culture. FINOLAB offers an open, collegiate environment that fosters a flow of ideas among individuals from not just different units but also from external entities. Unlike a traditional Japanese company, it is more akin to a network-based graduate school laboratory or a lab within a Silicon Valley start-up.

We've worked closely with fintechs to improve the user interface (UI) and user experience (UX) aspects of our customer interfaces. At an applications programming interface (API) level, systems functionality is provided by the bank, but the UI is provided by our collaborating fintech start-up. The initiative significantly improved the customer experience from the use of improved UI and UX.

On the business front, fintechs typically lack customer relationships. As financial institutions join hands with fintechs and collaboratively offer customer services, customer ownership is likely to emerge as an issue. Customers are more comfortable dealing with a trusted bank. Mizuho intends to guard its ownership of customers by carefully balancing its fintech partnerships. In the early stage of these partnerships, it remains to be seen how they will evolve and lead to new sustainable business models.

Our Three Digital Levers: Blockchain, AI and Big Data

Blockchain, AI, and big data analytics are the core digital technologies that we chose to focus on to drive business results:

- **A partnership with Metaps and WiL.** This collaboration has led to our new financial settlement service offering using digital wallet technology. Targeting smartphone users, the service analyzes customer payment behavior via AI-based algorithms and provides contextually relevant advice. This value-added service goes beyond existing bank settlements for utility payments or settlements using credit cards.

- **Big data analytics and AI-based lending services.** In association with SoftBank, we launched a company called J.Score, which – starting in September 2017 – renders score-based personal lending services. The company makes use of big data and AI to power its innovative services. Customers enter their basic financial information such as lifestyle, smartphone utilization, Mizuho bank financial information and user profile, and the bank's AI-based systems then analyze their data and provide lending scores. Based on the score, customers can see what their potential interest rate would be. The rate is generated entirely through an AI-based mechanism, obviating the need for face-to-face discussion with a human being.
Leading with blockchain. We are applying blockchain thinking and technology to develop a solution for sharing sensitive documents among the group’s worldwide subsidiaries. Our initial tests using blockchain show that the approach could enable the bank’s subsidiaries to tokenize internal money transfers, eliminating the need for cumbersome and manual data reconciliation. Our trials confirmed that blockchain can create an effective platform for information sharing among multiple group companies, resulting in potential cost savings and enhanced usability. The solution was designed using Ethereum for smart contracts, BigchainDB for decentralized storage and InterPlanetary File System (IPFS) for decentralized file transfer. In addition to meeting the business need, the project helped us understand how to leverage the different strengths of platforms to build an overall solution. (For more on this topic, see “Financial Services: Building Blockchain One Block at a Time.”)

In April 2017, we announced our intention to use Corda, the open source distributed ledger platform developed by industry consortium R3, to digitize trade documents such as letters of credit and bills of lading. The goals are to reduce fraud, optimize the speed and efficiency of transactions and enhance visibility for all parties involved in trade finance.

We are undertaking a J Coin initiative in collaboration with external entities through the use of shared infrastructure and expertise. Employing the model of shared resources tends to drive down the costs involved with embracing new-age technologies, resulting in a win-win scenario. The Financial Services Agency (FSA), the regulator of financial services in Japan, is encouraging the use of shared technology models like blockchain for the benefit of all financial institutions.

Reaping advantage with robotic process automation: As part of our endeavor to extend digital into our branches, we’ve also launched AI-powered humanoid robots that assist our customers in areas such as account opening and analyzing insurance coverage.

Our Outlook

The rise of new-age digital technologies also poses the threat of disintermediation of incumbent financial institutions such as ours in the areas of settlement and lending. Tax regulations, for instance, and the need to evolve our business to accommodate our new digital platform based-lending businesses are key challenges. While there may be changes in how we acquire customers in the medium term, in the long term only those financial institutions that sustain businesses with low margins will remain viable.

The utilization of robotic process automation (RPA) and AI is a primary focus area for us today, based on the level of expected benefits. Our RPA experts are analyzing routine...
Our RPA experts are analyzing routine business and IT processes throughout the organization to identify areas for automation. These successful initiatives are leading us to build many automated processes throughout the Mizuho bank businesses.

We are working with various partners to launch a company called Blue Lab to stimulate revenue growth and reduce operating costs. Blue Lab’s goal is to add 100 billion in added value by around 2020 through cost reductions, increased profits and the value of the new ventures. We want to create a business that will impact the profits and losses of the group in at least two or three years, including the creation of new business and enabling them to provide various levels of industry support.

Footnotes

1 The Banking Act was amended in 2014, relaxing limitations on holding of voting rights by banks in other companies.


Author

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A widening IT skills gap is preventing many companies from cashing in on digital’s bright promise, casting a dark cloud over the global economy. Here’s how business leaders can attract, develop and retain the talent needed to succeed in today’s digital era.

I often start my C-level keynote speeches by asking the audience whether their company has formulated a digital strategy. In most cases, I see a roomful of hands raised in the air. I then instruct the audience to keep their hands raised if their company’s technology strategy is aligned with their digital business strategy. Most hands remain raised.

Borrowing a phrase from the software development community, my third directive is a showstopper; I ask the execs to keep their hands up only if their company has a talent strategy optimized to support their digital business and technology plans. Some shake their head. Many look down. Nearly all lower their hand to their side. This is not what I’d want to see. The essence of digital success, after all, can be likened to the proverbial three-legged stool, consisting of these components: a comprehensive transformation strategy; a supporting digital technology strategy that factors in both new and legacy technology; and a multifaceted, multigenerational digital talent strategy. Without all three in place, a business’s digital efforts will likely fail.

The Skills Gap: Myth or Reality?

The lack of attention to a digital talent strategy is particularly troubling when you consider the nearly six million jobs that, according to the U.S. Bureau of Labor Statistics, are unfilled, or “open,” in the country. Many employers claim these jobs are open because they cannot find workers with the required skills. Not everyone agrees – job candidates say the open jobs would be filled quickly if employers were to offer competitive salaries. Welcome to the skills gap debate, an employment enigma, where open, unfilled jobs are often perceived by some economists as a harbinger of a growing economy.

But another – and I believe more accurate – interpretation is that this very real and measurable skills gap is something execs should be not only aware of but also ready to act upon. Consider that Oklahoma State University’s Skills Gap Misery Index suggests the supply-demand talent gulf is 29.7% wider now than it was in the year 2000. When you add in today’s highly in-demand digital roles, such as cybersecurity behavior analysts, cloud aggregation specialists and chief robotics officers, it’s clear that the talent gap could cause a significant drag on the economy.

According to the global job posting company Indeed.com, the talent imbalance costs the U.S. economy $160 billion each year. That’s
equal to $993 million every business day. Tom Monahan, managing partner of Norton Street Capital, warned at a recent conference that on average, the skills gap lowers a company’s annual productivity by 10%.4

The Widening IT Skills Gap

When I spoke with the tech industry trade association CompTIA for a column I write for The Wall Street Journal, I learned that 548,000 technology jobs are “open” in America. But hold on. Here’s a startling adjunct fact from CompTIA: Those 548,000 positions are IT jobs “open” 90 days or longer. Do the math, and that projects out to 49,320,000 days of lost technology-driven productivity every quarter. Factoring in that data, it is understandable why C-level executives have increased their investments in artificial intelligence, robotic process automation and smart machines.

The Future Talent Pipeline Is Leaking

Here’s the elephant in the room: Does the next generation of U.S. IT workers, particularly those 30 years of age or younger, have a strong foundational base of skills necessary to compete in the Fourth Industrial Revolution?5 Data addressing that question is ominous. Since 2000, global assessments of 15-year-old students in math, science, reading and collaboration suggest the skills of young Americans are markedly inferior when compared with peers in other nations.6

Results from the U.S. Department of Education’s “National Assessment of Educational Progress” further expose the U.S.’s talent pipeline crisis. The agency reports that the percentage of students determined to be “proficient” – think grade level “B” – in math and science examinations alarmingly erodes from fourth to eighth to 12th grade.7 These folks are the future of the U.S workforce. I am convinced it will take a generation, and probably longer, to measurably improve the pipeline of digital talent in the U.S. To buttress a lackluster national education system, employers must create “cultures of learning” within the walls of their company aimed at upskilling workers.

If these measures are not adopted in the near future, U.S. employers will be forced to rely on the interconnectedness of the Internet to source talent in other parts of the world. This a strategy that will not “Make America Great Again.” Nor will increasingly restrictive immigration policies favored by the Trump administration.

‘Soft Skills’ Are Hard to Find

I frequently ask C-level executives which talent/skills are most important to their company. Responses vary. Frequently cited are technical “STEM” skills in science, technology, engineering and math. Many more, however, place importance on talent attributes called “soft skills,” such as the ability to communicate, collaborate and make sense of large amounts of data. The
Institute for the Future’s “Workforce 2020” report features the most comprehensive list of “soft” skills I’ve ever seen compiled in one place. I recommend downloading it. I also recommend Hit Refresh, the best-selling book by Microsoft CEO Satya Nadella, who touts another important soft skill that is hard to master: human empathy. 

Digital Jobs Now In Demand
Upscored, a New York City-based talent platform company, correlates skill demand with supply to determine which digital jobs are in high demand. According to the company’s data, the five most difficult digital jobs to onboard are: algorithm design, distributed systems, machine learning, mobile development and data science.

Digital Jobs Over the Horizon
Upwork, a Mountain View, Calif.-based freelance employment service, matches employer demand with freelance talent supply and releases a quarterly report that ranks the highest-demand freelancer jobs. This is a “canary-in-the-coalmine” compilation of positions employers will be competing for in the immediate future. The five most popular freelance jobs in Upwork’s most current report are: robotics, blockchain (enterprise applications), Bitcoin (cryptocurrency trading), penetration testing and react.js (a JavaScript library). Does your organization have a talent acquisition strategy for each of these positions?

Location Matters
An often overlooked component of the digital talent gap is location. Employment data suggests the availability of IT talent differs widely by regions and states. The U.S. Department of Labor’s monthly job opening labor turnover report claims the talent gap is widest in the South (2,096,000 open jobs) and the Midwest (1,550,000 open jobs) and less acute in the West (1,368,000 open jobs) and East (983,000 open jobs). (See our recent report “Space Matters: Shaping the Workplace to Get the Right Work Done” for more on the emergence of geographic talent clusters.)

This gap also varies from state to state. Log on to the Massachusetts Technology Talent and Economic Reporting System. Produced by the Massachusetts High Technology Council, “MATTERS” is a real-time database that ranks talent for all 50 states in the following areas: STEM degrees per capita, relocation of college-educated adults, bachelor degree holders in the workforce, and tech employment as a percent of total employment.

Purple Squirrels and Pink Unicorns
These are code words used to describe overly selective hiring practices aimed at hiring the “perfect” – usually external – job candidate. Is your company guilty of overreliance on this practice? Do this. Select several open tech jobs at your company. Cut and paste the listing into a Word document. Count the words. How many are over 500 words? How many include the phrase “five years of experience required”? How many narrow the search further by requiring a bachelor’s degree in a national talent pool where 70% of the workforce never graduated from college? A more manageable path to bridging the digital skills gap is to internally create the perfect job candidate through comprehensive skill development programs.

Keep Your Selling Shoes On
While most of this commentary focuses on how to attract and hire talent, another vital issue is retention. Millennials, now the largest component of the workforce, are notorious job hoppers. Business and technology executives must develop strategies that brand the company as a “best place to work,” promoting issues like work/life balance, diversity and an opportunity to do meaningful work. While online labor markets make it easier to find talent, they also make it harder to retain talent. Corporate branding is a “must-do” component of any solid digital talent strategy designed to attract and retain talent.
Workers’ Mantra: Don’t Call Us; We’ll Call You

Today, employers drive the employment process. Moving forward, as many global economies remain at near full employment and millions of jobs remain open, the model will flip. Workers will control the employment market and the hiring process.

By 2020, labor market experts predict over 50% of the workforce will be “contract” or “gig” workers, essentially labor mercenaries working for themselves.14 (For more, see my commentary in Cognizanti Volume 9, 2016, “Jumping on the Gig Economy.”) To survive, a company's digital talent strategy must not just include “gig workers” but also leverage contract work as a cornerstone employment strategy.

‘Talentism’ Is the New Capitalism

Talent acquisition in the age of digital transformation is a structural employment problem that will require bold thinking to resolve. Finding a solution is predicated on the acknowledgment that – as Dr. Klaus Schwab, executive chairman of the World Economic Forum, says – “talentism is the new capitalism.”15

In this era of talentism, the employment supply-demand model has undergone a structural shift. From here forward, talent doesn’t need your company; your company needs talent. Those businesses that fail to craft a solution to this looming talent challenge, and nurture a culture of learning within their organization, will be on the wrong side of the digital talent equation.

Homework Assignment: How Aligned Are Your Digital Talent and Transformation Strategies?

The following matrix can help your organization determine whether its technology and talent strategies are aligned. Plot your dots! Let us know what you see.
IDP, a leading international educational service provider, seized the opportunity to support its customers at every stage of the international education journey — from searching for and attending a university, to career services and lifelong learning — with personalized, relevant content.

IDP has been operating for close to 50 years, creating a huge network of opportunity, with more than 700 counselors in over 30 countries.

When I came onboard as CEO two years ago, IDP was performing well, but with the rapid technological advances in international education services, it was clear that continuing to do what had worked in the past would expose us to disruptive threats to our leadership position. In my new role, I met with many different groups — employees, education providers and customers — to better understand what those changes needed to be. It quickly became clear that it was the professionalism and compassion of our education counseling teams that separated us from our competitors in a crowded space.

Our customers trust our counselors’ advice at life-changing junctures. Our teams take pride in understanding all the details so they can find the country, institution and course that will position our customers for success.

While this trust and bond existed face-to-face, the journey with IDP became disjointed once students moved beyond their home country to their new study destination. Our task was to remedy this, in a way that we’d remain robust and fit for purpose as consumers grow more accustomed to digital communications every day.
Offering Students Richer Resources for a Lifelong Journey

Studying overseas is a huge emotional and financial decision. The importance of providing our customers with the best advice and support is not lost on our teams, who spend 16 months on average with a student and his or her parents in the counseling process. Our customers’ educational journey begins before we first speak with them. They’re talking to their friends about studying overseas, reading university blogs, looking at school websites. And it continues all the way to when they graduate and begin employment in their chosen field – sometimes over many years. We wanted to serve students by offering them lifelong learning and career services.

We knew we built great relationships with our customers when they were in their home country, but that relationship was often lost when a student moved to their study country, as our systems didn’t speak to each other. This meant our customers weren’t aware of the support available to them once they started their studies, such as the events we hold for students to meet each other, or the workshops we run to help them prepare for internships and part-time work.

This is why we made it a top priority to build a customer platform that would guide students on their journeys and establish an ongoing connection with them, enabling services like accommodation support, insurance referrals and, eventually, career support.

Our goal was to create the world’s leading global platform and connected community for international students.

IDP’s Digital Transformation Vision

A bold strategy to transform our industry by establishing a digital platform that enables and empowers a connected customer journey.

Using an integrated global platform...

...ensures that we understand the needs and expectations of students and clients.

The world’s definitive international student dataset and connected community.

Connecting our customers to success.

Source: IDP Education

Figure 1
Nurturing a Culture of Innovation

Traditionally focused on performance, we needed to embed and celebrate a culture of innovation through all levels of the business. Through strategic planning with key teams from across the world, we determined that customer experience and continual innovation would be the keys to unlocking our future success. By nature, our students are globally mobile and digitally savvy. We needed to be accessible whenever they needed us, through channels that suited their needs. We needed to place the customer at the center of everything we do. That is our True North.

Our board recognized that technological strength was key to meeting our goals, and as we began to identify what was needed to transform our organization, we knew we had to choose strategic partners. I was very aware of how other industries like retail, financial services and transportation were transforming, and was also aware of Cognizant’s strong track record in this space.

We worked with Cognizant to develop our roadmap and document all the elements of our vision, while keeping the students very much at the center. It quickly became clear that we needed better data, systems and processes.

For example, over the last two years, IDP teams around the world have tested new systems and platforms to improve the customer experiences at our student recruitment events. At one stage, different teams were using four separate event solutions. It was clear we needed a single platform that could meet our customer and staff needs.

Similarly, we’re now one-third of the way through consolidating our customer relationship management and contact center systems.

We needed to place the customer at the center of everything we do. That is our True North.

When that’s complete, we hope to have a single view of our customers, and consistent and streamlined processes for our staff.

Supporting Individual Customer Needs

To be successful, our programs need to be built with, and for, our customers. We recruited internally to build a team of global customer ambassadors, selecting people from our regional offices who were digitally minded and customer-centric. These individuals are tasked with running co-design sessions with customers to ensure everything we build reflects their behaviors and needs.

Our ambassadors and teams led many roundtables, which was important because our customers’ needs are very different depending on their home country, culture and personal preferences. While all students are unique, and it’s dangerous to over-generalize, there are certain regional trends that we need to be aware of, such as the influencers in the students’ decision-making process. In North Asia, for example, parents are very heavily involved in decision-making, and that’s not necessarily true for other countries.

Despite these distinct cultural differences, there is a core mindset that unifies our customers. Around the world, IDP students are purposeful and progressive, and our services needed to reflect this.

We want to personalize the experience to each unique individual through smarter marketing automation systems, building a platform that will serve a contextually correct experience to each customer. You can only do that through technology and data. For example, we know some students aspire to attend highly ranked universities, while others are looking for more practical, vocation-based courses. Our data informs our
Translating human empathy to the digital environment is core to what we do. It’s about offering an opt-in capability but also letting users go gracefully if this is requested.

 personas, which helps us group our content. It is then up to us to develop those crucial one-on-one relationships.

There’s always a balance when you’re collecting customer data. We have to maintain the utmost of respect for our customers. Translating human empathy to the digital environment is core to what we do. It’s about offering an opt-in capability but also letting users go gracefully if this is requested.

Early last year, we acquired a company called Hotcourses in the UK, which maintains the world’s leading course search database. In doing so, we gained search engine optimization and digital capabilities, letting us support students earlier in their decision-making process.

The acquisition also gave us access to data that provides us with real-time insights into the online behavior of our students. When globally significant events unfold, such as political elections or policy changes, we can see the immediate shifts and swings in search activity as students reconsider their destination preferences. This gives us the opportunity to provide relevant content across our digital platform that not only responds to this change in search activity, but also offers students a trusted source of information that assists with building credibility and loyalty in today’s fast-paced news cycle.

Staying Ahead with Digital

We’re close to 18 months into our digital transformation, and while we still have more to do, it’s inspiring to see the growing enthusiasm of our teams as they build their skills and gain confidence in new digital capabilities.

What we do at IDP is life-changing. Together with Cognizant, our students and our teams, we have laid the foundation to build our connected community for our next generation of global leaders.

Author

Andrew Barkla is the Chief Executive Officer and Managing Director of IDP Education, a global leader in international education services. He was appointed CEO of IDP in 2015 and has extensive experience in the technology, services and software industry, with over 20 years of senior management experience in roles across Australia, New Zealand, Asia and North America.
A consumer style of engagement is supercharging physician communications and patient care coordination at a major regional health network.

Most industries today are actively engaged with how to deliver great experiences to target customers. Until relatively recently, that has not necessarily been the case for healthcare, which has lagged in engagement technologies for physicians and patients, our primary customers.

Even before "patient-centered" and "healthcare consumerism" were buzzwords, LifeBridge Health’s vision was to deliver the same level of best-in-class services and experiences to our customers as they receive when they interact with other service providers, from online retailers to travel providers. Our goal was to solve important business and communication issues with leading-edge engagement capabilities that would also support our overall digital transformation strategy, designed to deliver better patient and population health services.

The solution we implemented uses consumer-like service and technology options to make it easy for physicians to access our health system, coordinate care and empower our patients to manage their health. So far, the benefits include better care delivered with greater efficiency, more satisfied physicians and healthier patients, and robust engagement resources that support a range of uses well beyond what we initially envisioned. The solution has also helped us build market share and a reputation for quality care that spans the state of Maryland.

Coordinating Great Performance

Quality and cost are rapidly becoming the measures by which insurers will calculate reimbursements for LifeBridge and other providers vs. healthcare’s traditional fee-for-service model. The Department of Health and Human Services intends to tie 80% of all
Medicare fee-for-service to quality or value measures by 2018, and the overall industry expects the majority of reimbursements to be pay-for-performance-based by 2020. These trends make efficient care coordination and patient and physician engagement extremely critical capabilities for delivering high-quality care at great value.

Effective coordination of care helps prevent test and procedure duplication, ensures physicians inside and outside our facilities have all the information they require to make the best decisions for their patients, and equips patients to follow pre- and post-discharge regimens and manage their health conditions.

One means of accomplishing better care coordination is to adopt the “hospitalist” model. A hospitalist is a physician whose entire focus is caring for patients while they are in the hospital. Ideally, the hospitalist coordinates care with the specialists treating the patient, such as surgeons and oncologists, and with the patient’s primary care physician (PCP) outside the hospital.

The challenge is that hospitalists simply can’t be on a first-name basis with all the PCPs and specialists in a major health network like ours, or in a large city like Baltimore and its suburbs, where we operate.

Our scale is considerable: LifeBridge has almost 1,238 beds across four hospitals, one of which is a teaching facility and the largest community hospital in Maryland. We also offer a range of destination programs, operate a health and fitness group, and have many subsidiaries and affiliates, all spread over a roughly 100-mile radius of urban and suburban settings.

Given our size, we were seeing a breakdown in “warm handoffs,” in which a hospitalist and a PCP share detailed notes when a patient is admitted to or discharged from the hospital. This failure to connect is more than a cosmetic issue; it has a direct impact on the quality and cost of care. Post-discharge care can be less effective if the PCP doesn’t have a full picture of what occurred in the hospital. It can also lead to patients using expensive emergency care departments for follow-up services and/or being readmitted to the hospital. Care coordination is clearly essential for ensuring patients have the best possible experience at LifeBridge, which in our view extends to their ability to manage their own health once they are back home.

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Our thinking was to create an engagement platform that would offer PCPs in our communities an easy way to connect with hospital-based providers so they could exchange notes and engage in useful warm handoffs.

A Platform for Engagement

Our thinking was to create an engagement platform that would offer PCPs in our communities an easy way to connect with hospital-based providers so they could exchange notes and engage in useful warm handoffs. The platform would have the best features that online retailers, airlines, financial services providers already deliver. It would store transaction histories, offer suggestions and provide customizable options.

We initially scoped a pilot to see if we could combine people, process and data effectively to deliver the services we envisioned. The pilot results would help us gauge whether it made sense to invest in rolling out the platform on a broad scale.

We had worked with Cognizant previously and were well acquainted with the company’s global clinical services, including a call center in Manila staffed with U.S.-trained registered nurses available 24x7. The nurses are equipped with Cognizant’s cloud-based OnVida engagement platform. We worked internally to develop the call scripts the nurse agents would use and the processes the physicians would follow.

The engagement pilot, launched in July 2015 after about six weeks of planning, included these basic mechanics:

- An automated workflow engages nurse agents in the call center to make contact with physicians via their preferred communication method (phone, secure e-mail or text).
- The nurse agent then coordinates a connection between the care team via text, phone or e-mail, whichever communication preference is dictated by the use case executed.
- The nurse captures the notes from the conversation, entering them into the platform and the electronic medical record (EMR).

The platform is also designed to help patients follow post-discharge orders. A call center nurse contacts the patient to answer questions, review care instructions, coordinate medicine deliveries and even organize transportation for the patient to reach follow-up appointments.

Making Connections

The engagement program, called LifeLink, has come a very long way since we launched it with 10 nurses and a call volume of 1,000 contacts in the first month. Today, 30 nurse agents support more than 22,000 contacts per month and a range of additional features.

We have integrated our EMR system with the OnVida platform, which enables automated physician consult orders. A physician creates a consult order in the EMR, and the EMR automatically populates OnVida with
a worklist of patients requiring consults. The nurse agents use the platform capabilities to connect consulting specialists with the ordering physician and PCP via their preferred channels. If physicians have all selected the secure texting app as their channel, the entire process is fully digital. Such automation improves compliance too, with the EMR record updated to show that the consult, in fact, occurred.

We’ve also added remote patient monitoring to our suite of engagement services, beginning with a population of patients with congestive heart failure. Our nurse practitioners enter threshold parameters for blood pressure, weight and medical adherence when they enroll a patient into the system. The system alerts our remote nurse agents when a threshold is exceeded so they can contact a patient’s physician through the engagement platform. Through the program, patients have 21.5% lower odds of a 30-day readmission than in the year prior, when LifeLink was not in operation.

Our nurse agents also enable us to centralize patient transport arrangements, working with ambulance companies and Uber Health. With a central transport hub, we can ensure adherence to the transit service guidelines established for Medicare, Medicaid and private health plans.

The Rules of Engagement

In all these applications, the platform enables the community-based PCP to rightfully remain the captain of the ship throughout patients’ treatment journey, including their time in a LifeBridge facility. It delivers simplicity, intuitiveness and ease of use – all the qualities of a retail engagement model. The results have been significant and measurable, including:

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**LifeBridge Engagement Platform Connects Primary Care Physicians and Hospitalists**

The LifeBridge LifeLink engagement platform streamlines the warm handoff process between a PCP and a hospitalist or other physician. The PCP needs to contact a call center nurse just once; the nurse manages the other connections based on the platform data and ensures the handoff call is documented.

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**Figure 1**

- Patient is admitted via the ED.
- System recognizes physician’s phone number and pulls up patient profile.
- Nurse representative answers and contacts attending physician.
- Nurse arranges callback time with PCP.
- Nurse calls PCP and sets up three-way conferencing for warm handoff.
Increased patient interaction after hospital discharge. This has led to improved patient follow-through, appointment scheduling, medication adherence and follow-up with primary care. This is important for ensuring continuity of care for patients among our facilities.

A 15% reduction in no-shows via reminder calls.

Streamlined management of acute care patient transfers. Transfers to LifeBridge Health hospitals from other care facilities have more than doubled, with the process being managed through a single integrated call center.

We learned some interesting lessons on the way to achieving these results. While we’d envisioned a white-glove, concierge-style service for physicians, it turned out that the physicians we serve were too busy even for salutations such as “How are you today?” They wanted to get to business, fast. As a result, we rewrote call scripts on an almost daily basis in the early days. Conversely, patients needed a warmer approach on follow-up calls to establish trust between themselves and the call center nurses.

Again, engaging patients and physicians in their preferred communication styles is more than a matter of style points. Rather, it yields objective data that helps us identify issues and pain points that affect care quality so that we can address them. In one of our facilities, the data showed the call center nurses were having difficulty reaching patients after discharge. An investigation revealed that at this facility, nurses had to make initial contact with patients before they were discharged instead of afterwards to establish trust and get the best phone number to ensure follow-up.

Lowering Costs, Accelerating Speed

The platform also helps us avoid costs while ensuring patients get proper care. Patients often come to emergency departments (ED) with chest pain, but certain low-risk patients could receive a stress test and echocardiogram at a clinic or other lower cost location. ED physicians are reluctant to let these patients do so, however, because of their concerns the patient won’t follow through. With the engagement platform, a nurse calls the patient while she is still in the emergency department and tells her where and when to go for the test. The nurse follows up with the patient to ensure the test is completed and also connects with the ED physician to relay the results and close the information loop.

The platform also accelerates our ED response times. Our ED physicians simply hit a pre-programmed speed dial to summon the right clinical team, e.g., #1 for a STEMI heart attack, #2 for a stroke, #3 for acute care, etc. This new process has reduced door-to-needle and door-to-balloon times – key measures, respectively, for good outcomes for heart attack and stroke patients.

We use the analytics and metrics built into the platform to refine performance, such as eliminating call holding time, which is not acceptable in an emergency care setting. Critical calls are now routed to our most senior nurse agents – agents who our emergency physicians know personally – and their task list is divided among three agents,
each of whom immediately goes into action so the necessary steps are carried out simultaneously. One might order an ambulance, for example, while a second alerts a clinical intervention team (for instance, the cath lab), and a third reaches the hospital operations officer with news of an acute patient’s arrival. This change has compressed a 20- to 25-minute process to literally a few minutes. In fact, the nurse agents work so quickly that the patient is often still on the ambulance gurney when the cardiac or stroke teams arrive.

The platform and agent nurses are available 24x7, so a physician may call at, say, 2:00 a.m. to request a same-day appointment at our new neuro-urgent care center, or a patient may connect with an on-call provider.

On a wider scale, these platform capabilities support our accountable care organization (ACO) initiative and our entire Medicare population through connections with the Chesapeake Regional Information System for Our Patients (CRISP), a health information exchange (HIE). LifeBridge Health Medicare population members are registered in CRISP. When a Medicare patient arrives at any hospital in the CRISP network, CRISP automatically notifies our nurse agents, who then alert the patient’s PCP. CRISP’s clinical information portal is being integrated into our EMR environment, which will further streamline our nurse agents’ abilities to keep PCPs informed.

Also, CRISP helps us identify high-risk patients in our population areas, so we may ensure they have 24x7x365 access to our nurse agents and the engagement platform to support early interventions.

Continuing to Connect, While Protecting Privacy

LifeLink enabled us to achieve a 98th percentile ranking on the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) patient satisfaction survey, which we conduct through the engagement platform. This is indicative of the difference we’re making in how patients perceive LifeBridge and has given us impetus to continue expanding the reach of the engagement platform.

Looking ahead, we plan to build a clinical command center that would help us coordinate care management with services such as scheduling, bed control, teletriaige and telemedicine, and integrate the efforts of nurses, social workers, PCPs and specialists. Nurse agents would be the primary coordinators, with the engagement platform helping them connect to patients, deploy ambulances and establish telemedicine links to patients’ homes so physicians can decide whether to treat in place, order an admission to a chronic care facility, or send the patient to an ED.

We envision these efforts being coordinated across our entire system vs. in hospital silos. That said, we must be sensitive to HIPAA compliance, such as keeping all patient data in U.S.-based data centers, and security and privacy practices. We have drawn a firm line between our EMR and its clinical data streams and the patient engagement platform and its tools. While we may integrate additional third-party systems into our nurse agent platform, the EMR will likely remain a standalone entity.
In the meantime, we are establishing ourselves as a hub of care and a “transfer to” location. Our reputation for high-quality care is growing across the state, quite a feat for a midsized community hospital system. Physicians and patients outside of our network routinely call and ask for care services at our facilities. From the very start, our goal was to make it as easy as possible for physicians to access our healthcare system’s services and provide their patients a high level of care. Our growing market share and satisfaction scores suggest we are succeeding.

We must also interact with members of the community who may never become patients at any of our hospitals, and the platform provides options for us to engage with them in ways never before available in healthcare. Delivering the same level of technological capability that our physicians and patients enjoy in consumer settings will help LifeBridge thrive under value-based reimbursement models by offering top-notch medical care at great value. In turn, this success will enable us to fulfill our primary mission of maintaining and improving the health of the community we serve.

Authors

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Asian Paints: The Digital Odyssey of a Serial Reinventor

By Harish Lade

A leading Asia-Pacific paint company has woven a modern digital backbone into the fabric of its organization to deliver a superior consumer experience. Its goal: become the top player in the paint-as-a-service and home decor markets.

Asian Paints is the leader in the Indian paint industry. With a consolidated turnover of over $2 billion, our company is the third largest paint company in Asia, a top-five player in decorative paints worldwide and the tenth largest coatings company globally. Our operations span 16 countries (largely emerging markets), with 25 paint manufacturing plants across the globe, servicing customers in over 60 countries. We distribute our products through carefully nourished relationships with over 45,000 dealers spread across India for over 75 years.

In India, customers buy paint from hardware stores and hire painters, contractors or architect interior designers (AIDs) to do the painting. The do-it-yourself model doesn’t exist in the region. While the per-capita paint consumption in India is far lower than in Western countries, we’ve seen high growth over the last decade, spurred by increased consumer awareness and higher discretionary spend due to the growing Indian economy. Our growth mantra has been to create demand through the continual and proactive introduction of innovative products and services. That goal has been ably aided by a modern IT backbone powered by enterprise applications from SAP and the company’s HANA in-memory database, which automates manufacturing and supply chain management (SCM) and enables more seamless omnichannel journeys.

Complacency has always been anathema to our company. Whether we’re launching innovative products or introducing new services for the digital age, we’re continuously reinventing the company, keeping the customer at the center. Our relentless customer-centric efforts have established us as a leading Indian consumer brand, despite the fact that paint is not a regularly used product.
From Products to Services

A decade ago, we began transforming from a predominantly brick-and-mortar product manufacturer into an agile and adaptive enterprise that helps customers make their homes beautiful.

Our services transformation began with our painting-as-a-service offering, when we launched a toll-free telephone service for customers to request home painting. This required a major mindset shift and was the first step toward offering differentiating décor services.

The next step was reimagining our business as a home décor business. This change emerged from our understanding of the painting-as-a-service ecosystem and the number of customer touchpoints involved. Home renovations typically require customers to work with dealers, painters and contractors, while high-end projects could include architects and interior designers. At any point in the project, customers typically experience unexpected problems and setbacks. We have an opportunity to unlock value and address a larger share of the customer’s wallet by working through these issues with customers or eliminating the problems completely.

When customers seek to change their home décor, they also need assistance with coordinating colors and textures that mesh with their existing décor. So, while paint remains the core of our business, we also began offering consultancy services beyond our professional painting services, which helped us differentiate ourselves and position our company as a partner with customers as they work to beautify their homes.

Other strategic shifts include foraying into emerging markets and extending our home décor umbrella to include kitchen and bath spaces. This required us to make a few acquisitions and extend our enterprise in newly collaborative ways. This has been a significant shift involving cultural change and new IT systems.

Digital-powered Endeavors

In order to provide a consistent customer experience across multiple touchpoints and offer optimal product and service delivery, we needed to ensure strong digital enablement across the value chain. This drove us to digitize the organization’s functions end to end, from customer engagement systems, to all front-end CRM and dealer management systems and all supply chain and manufacturing operations. This meant keeping IT as a foundational element to make people efficient, accountable and focused precisely on the customer. Data analytics has been another foundational element across the value chain.

Key digital initiatives that powered our transformation include:

- **Getting our arms and mind around the manufacturing supply chain.**
  While paint manufacturing is not complex, we needed to improve our operations with large-scale automated factories. At the scale required, we needed fully-digitized recipe management, with full integration of shop floor operations with our SAP ERP system.
Using data to add intelligence to a complex supply chain. Our industry is beset by seasonal uncertainties. Further, roughly 60% of our costs are attributable to raw materials, and about 50% of our raw material requirements are met through imports. We were using JDA Software’s advanced supply chain planning solutions for over two decades to help us plan better; however, given the increasingly VUCA world (with its volatility, uncertainty, complexity and ambiguity), global events often disrupt availability and impact costs. Macro factors and directional trends, such as commodity demand fluctuations and price volatility in international markets, significantly influence our cost structure. Effectively handling these uncertainties required us to remap procurement that typically deals with unstructured data. We developed an advanced SCM application using IBM Watson, which informed more effective decision making amid continuing uncertainty.

It’s crucial in the paint product category to ensure service levels at the dealer counters and availability of the range of SKUs. We’ve enabled optimized shipment creation and tracking to ensure high order fill rates. In some markets, we offer twice-a-day delivery to our dealers. Our SAP HANA platform-based solution reinvented our order servicing by empowering the sales team with timely information about the current stock, and the distribution team about inventory levels and possible SKU shortages. The distribution team is empowered with real-time visibility across all the company depots, and into shifts in demand and production schedules for effective decision making, as well as the ability to perform root-cause analyses for quick corrective action. This is done via a workbench that combines analytics with an execution engine. This application won the first prize at the 2015 SAP HANA innovation awards.

Elevating CRM to new heights. Our CRM models all of our customer relationships (both dealer-enabled and direct). The system is built to handle a franchising model spread across 13 cities, comprising processes that involve organizing, contracting and executing an end-to-end painting service. The system effectively manages loyalty and rating systems, net promoter scores and customer satisfaction, driving customer centricity. We’ve recently launched a new service model, called PaintTotal, under which the dealers offer services using their own set of resources. The entire process is backed by a data architecture that funnels information to all sets of users.
Achieving omnichannel consistency.

In our relentless focus on enhancing satisfaction, we embarked on an initiative to provide a seamless experience to customers, dealers and influencers across physical, digital and human channels. When we began this journey, our data architecture wasn’t able to fully support the required changes.

To overcome this, we mapped the customer journey across channels and built a data architecture and IT platform powered by SAP enterprise application software, such as Hybris Commerce, Hybris Billing and Hybris Marketing. This is combined with Adobe’s Experience Management platform to provide a strong IT architecture that covers both the experience and transactional requirements of the company. This helped us facilitate seamless journeys across physical, digital and human channels. Powered by insights from data gathered at each touchpoint, the solution enables us to generate unique offers to each customer’s needs. A consistent view enabled by the IT architecture empowers the call center, stores and consultants, etc. to provide a delightful customer experience.

Applying precision customer segmentation by blending behavioral and data science.

Armed with our foundational data architecture that connects all systems, we’ve embarked on mapping the customer journey across our human, digital and physical channels to create specific behavioral categories. Supplemented by in-depth interviews and research, this led us to segment customers based on their demonstrated choices and behaviors.

Our largest segment is a tech-savvy persona who conducts a lot of online research and becomes loyal to our brand only after interacting and transacting with us. Another customer type is a wealthy person living in a tier-two city who tends to display his accomplishments by painting his home in a dazzling display of colors. This customer prefers to deal with consultants and requires human interactions.
Connecting Digital with Human Expertise

By gaining a better understanding of the home paint buyer, we learned that our customers needed a better visual view of our products and services. Armed with this insight, we launched our 8,000-to-12,000-square-foot Asian Paints home stores in partnership with dealers. These stores employ 3-D visualization and virtual reality technologies to provide customers with more intuitive visual walkthroughs, enabling them to explore a bouquet of colors and textures and make their choices along the way, creating their own unique cache of choices. Subsequently, consultants step in to complete the decision-making process.

To facilitate this, we created a color consultant app that allows consultants to take pictures of customers’ home walls and apply color and texture. The app renders them instantly, providing a view of what they would look like if painted in different colors and finishes. The application is powered by our CRM systems and other front-end applications, such as our Paint Total app and Visualizer app.

To further engage customers, we employ a curated chat-like engine, using robotic process automation technologies, to empower dealers to recommend contractors to execute jobs. This also allows us to track the entire transaction to ensure customer satisfaction.

None of this would matter if we couldn’t provide white-glove service to our customers. Our call center handles around 100,000 customer interactions every day. Calls are recorded and analyzed to better understand niche requirements. Customers’ need for Vastu consulting (an Indian equivalent of Feng Shui, the Chinese philosophy of arranging personal surroundings in harmony and balance with the natural world) is a niche requirement that we’ve added to our menu of services and embedded into our mobile app after listening to many customer calls over the past two years. This has enabled us to better understand and standardize the process.

No digital makeover is complete without a website component designed to educate, encourage and entertain our customers in their home improvement quest. To that end, we’ve launched websites such as www.beautifulhomes.com to create curated customer experiences. These are geared toward storytelling and are not linked with sales. Our next step will be to discover ways to monetize these sites.
Selectively Applying Best Practices

We applied a few best practices to guide and inform our business and digital transformation journey. These include:

- **Marrying IT and business strategy:** At Asian Paints, IT strategy begins in the boardroom. IT leaders are an integral part of our organization’s operating council, and thus are engaged with the corporate strategy from the get-go.

- **Early adoption of emerging IT:** Transformative vision needs early onboarding of IT tools. Given our propensity for continual reinvention, we understood that early (and in some cases pioneering) adoption of IT is critical to success. Early adoption of an API-driven architecture worked very well for us. While the front-end kept changing rapidly, the back-end system remained supportive. We were an early adopter of HANA software and pushed its usage to the core. This was a pioneering adoption in India’s manufacturing sector. We also evaluate emerging technologies on an annual basis and plot them across the business areas to determine possible opportunities and selectively execute them.

- **Applying design thinking to create more intuitive applications.** On the people side, we’ve adopted the design thinking methodology. We started with a boot camp at Stanford University, and after becoming certified coaches, we trained others and institutionalized the practice. The design thinking methodology allows us to stay focused on customer empathy, and reimagine solutions based on our deeply observed points of view. This has been the key success factor driving successful adoption of our various transformational applications.

  We now use this approach for most of our app development. For example, in the past, when we pushed information to our frontline workforce’s mobile device, the apps weren’t well used. Using the design thinking methodology, however, our IT teams spent time shadowing the frontline workforce, meticulously understanding how they interact with customers and at dealer counters. We noticed marked regional differences in user requirements. For example, in some markets, our regional managers prefer to first view collections, whereas in other metro markets, selling a premium product was the main goal.

  In some cases, this involved listening to customer audio clips since these conversations occurred in vernacular languages for which voice-to-text application was difficult. We had collated clips, classified them and made them downloadable on an app to enable our employees to listen to interactions. This provided many insights, which are incorporated as features in future releases.

- **Empowering dealers, minimizing disruption.** In the process of change, we strive to minimize disruption for our dealers and make them a partner in the entire evolution. We consider them a key stakeholder and focus on equipping them with the right technology tools they need to keep pace with a continuously reinventing Asian Paints.
Harish Lade is Vice President of Information Technology and Systems atAsian Paints Ltd. In his 21 years at the company, he has led a variety of transformational initiatives in diverse areas, such as next-generation consumer engagement platforms, advanced supply chain planning systems, manufacturing execution systems, robotics, advanced and predictive analytics, and external and internal collaboration platforms. He is currently leading the IT team into the next wave of digital transformation at Asian Paints that will accelerate the company’s vision of becoming a forerunner in inspiring home décor. Harish holds a post-graduate diploma in computer-aided management from Indian Institute of Kolkata, India, and a B.E. in electronics engineering from National Institute of Technology, India. He can be reached at https://www.linkedin.com/in/harish-lade-6abb8031/.
When it comes to capitalizing on digital opportunities, senior business and IT leaders must do a better job of foreseeing and overcoming key disablement factors that conspire to undermine their best efforts. In my previous Cognizanti column, I noted that most legacy business executives I visit understand that the profitable use of digital technology is crucial to business viability and success. But on closer inspection, I get the sense that while they see the “why,” they often struggle with the precise “what” – as in exactly which applications of digital will result in real, tangible, material economic contribution.

Increasingly, most senior executives with whom I meet realize that the journey to a more digitally enhanced business will not be a one- or two-year program. It seems they have a gut feeling that it will be an iterative journey, one similar in scope to what it has taken to transform their national business into a global enterprise.

I recently conducted targeted interviews with five executives who several years ago seemed to be progressing effectively toward digitally enhancing or changing their businesses. All, it turns out, had endured very similar experiences, from which the following six lessons emerged (spoiler alert: not all have succeeded).

They Greatly Underestimated the Time, Persistence and Struggle Involved

Four of the five executives I interviewed had quit in frustration or been fired. The one who faced the earliest, most daunting challenge had made the most significant lasting contribution. He was onto the next plateau of digital change: expanding the innovation beyond the initial case, accommodating business model change and achieving a recognized, positive material economic impact.

All the executives mentioned that they had misjudged the recognizable material outcome of their efforts by a factor of 200% or more. They, the pundits, consultants and vendors had all failed to set, communicate and resell the timeframe, difficulties and necessary course corrections involved in their initiatives.

As preliminary timeframes were exceeded, originally supportive senior executives asked increasingly difficult, often unanswer-
able questions, such as how long it would take to deliver a material contribution. As costs increased and measurable, acknowledged results were pushed out, supporters abandoned the initiative in fear that digital was a slippery slope. According to a distribution industry CIO, a member of the executive committee said the road to digital reminded him of driving from the Midwest to Disney World with his twin 6-year-old daughters in the backseat, who constantly asked, “Are we there yet? If it’s much further, can we go home?” Two CIOs said they were denounced as incompetent by a CEO board member.

The one successful digital pioneer, a CIO, had strong board-level support from a former CIO and digital veteran. He said he’d had to deploy many tactics he’d learned in the Marines Corp. and as a CIO: Establish critical support at the outset; set and communicate realistic expectations; ensure a broad team comes together and stays deeply committed; expect and power through setbacks; hold the naysayers at bay; and be there to push forward as milestones are achieved.

They Didn’t Adequately Anticipate, Focus on and Mitigate the ‘Digital Disablement’ Factors

Most executives who pursue a more digitally enhanced business identify and then act on what they believe to be the enablement factors of skills, sourcing, resources and process. All five of the executives I interviewed, however, said they hadn’t adequately addressed what one described as the “digital disablement factors.”

One oft-cited factor was corporate culture and behavioral resistance. Both the dimensions and domains of company and customer culture proved an overwhelming obstacle toward making adequate progress and buy-in. A persistent and passive-aggressive chorus hurled challenges such as: “Won’t this change the nature of our business?” “Won’t this cause our channel partners to abandon us?” “What makes you think our classic customers will want this?” “I know this is important to you IT folks, but I can’t spare people this year.”

Other digital disablement factors that should have been addressed more aggressively were accounting conventions, human resource policy and practice, incentives and a lack of slack. Three of the digital pioneers were shocked to find that the accounting system under-reported their initiative’s revenue contribution while dramatically enhancing tabulated costs. To make matters worse, a continuous battle also raged with the company’s economic value-added (EVA) mob, who shot down any innovation initiative if it lacked immediate and major returns.

One of the pioneers, a chief digital officer, advised: “Own the measures, or the measures of others will dominate you.”

Their Readiness Assessment Should Have Equaled or Exceeded Risk Assessment

All of the executives did some form of risk assessment on their ventures. Unfortunately, these assessments were largely based on IT and not digital experience. With the classic IT approach, waterfall methodologies are employed, and the use of the applications is mandated as a condition of employment or to do business with the enterprise. Most digital applications and services, on the other hand, are delivered with Agile methodologies to an audience that can choose whether to use the capabilities provided. All five pioneers felt an iterative approach to enhancing risk assessment was needed.

However, the greater exposure proved to be a lack of a highly detailed readiness assessment of the exact what, how, who, when and where – not to mention the economics of the initiative. The distribution industry digital pioneer described how his company launched in the wrong place to an unprepared market,
without a cohesive team with the right skills. The new, individually customized and expanded service was aimed at smaller customers with inadequate staff at the busiest time of year. Customers were thoroughly confused, and the distributor’s local reps had little interest in helping or training them. The company also never seemed to have time for adequate after-action reviews.

It Wasn’t About the Data, Analytics, Mobile or IoT

In my previous Cognizanti column, I noted that organizations large and small often chase the technology and not the outcome. All of the digital pioneers with whom I spoke said their projects generated great data, insights, mobile apps or clever IoT implementations.

Turning these new capabilities into business contribution and profit, however, was a struggle. The marketing executive vice-president at a pharmaceuticals business described how his company’s data analytics group had discovered a major business opportunity. However, when the CEO asked what had changed in the business, the room went silent; no one knew how to turn the new knowledge into actions. He kept saying, “OK, what the h… do we do now?” Three days later, the digital analytics group was terminated.

Digital Enhancement Is a Totally Different Three-Ring Circus, Requiring Different Clowns for Each Ring

All the executives with whom I spoke underestimated how different digital enhancement was from classic IT transformation projects. They all had proven, experienced IT teams and users but had not thought through the implications of the three major forms of digital enhancement, each of which demand totally different skills, talents, process, measures, incentives and culture:

- **Enhance the business** (efficiency, responsiveness, reach, flexibility, agility, urgency, process change).
- **Enhance the products** (intelligence, self-diagnostics and remediation, data, preventive maintenance, performance, customer experience, customer economics).
- **Change the business model** (revenue generation, required acquisitions, monetization, new markets, provocative change, broader credibility, branding change, realistic institutionalization at scale).

As an example of the final point, one pioneer led a brilliant but unsuccessful effort to more properly organize the business. With all that can be done with digital technologies, the CEO and board asked: “Why EMEA (Europe, Middle East, Africa)?” Those individual markets, products, channels, regulations and cultures have almost nothing in common, other than they can be reached from Heathrow.

Digital technologies should allow this company to organize globally by common markets, products, channels, regulations and cultures. So, they did. I’ll leave it to the reader to imagine what could go wrong – much of it had nothing to do with technology.

They Should Have Expected, Managed and ‘Opportunized’ Inevitable Setbacks, Challenges, Complications

None of the five digital pioneers could identify anything they tried that actually went where they wanted, in the timeframe they predicted, with the outcome desired. As mentioned above, they hadn’t properly set the expectations. The board and senior executive pundits made it worse by demanding compliance with the mantra of “first-mover advantage.” For legacy businesses in the land of “We don’t know what we don’t know,” blind faith to competitive advantage results in an unpredictable journey to digital enhancement.
The successful CIO pointed to early digital efforts that initially resulted in great customer satisfaction as a major outcome: Problem installations of the company’s product dropped from 30% to less than 3%. Under a corporately funded program, digitally equipped and connected specialists planned and then monitored the installations for the first 90 days.

However, after the original corporate funding dried up, revenues failed to appear as customers refused to pay for the added attention. No one predicted this, but the CIO had warned senior leaders that there would be major issues and adjustments.

Despite initial skepticism, the board and CEO realized the business model, revenue and pricing must change from product-based to service-based. Massive marketing investments, customer communication and adjustments to accounting procedures, as well as incentives, were required. Today, related service revenues exceed the old product revenues as customers increasingly chose the service option. The enterprise is moving toward managing its entire business in this manner. It “opportunized” what appeared to be a catastrophic setback.

Learning from Failure

The demand for digital enhancement is real. Digital enhancement requires more than teammates with the ideas, desire and passion to conceptualize a future business state brought to life with digital technologies and thinking. Happenators, as I described in an earlier Cognizanti article, who can tackle the exact what, how, who, when and where are also required. Together, they must design and execute an outcomes-driven approach. Frankly, I seldom meet organizations that have world-class talent in both arenas.

Organizations also can’t shy away from the disablement factors that undermine digital enablement. The chief digital officer of a media company cited a five-step approach:

- At the outset, identify the major and possible disablement factors.
- Rank the disablement factors and develop an offensive game plan for each.
- Monitor the status, relative exposure and progress against each disablement factor.
- Continuously identify disablement factors and review them thoroughly.
- If all else fails, go back to Step 2!

The digital game is afoot. Is your enterprise on the road to winning?
Footnotes


2 The focus of IT Odyssey is not on greenfield, born-digital enterprises but on large, existing, often mature businesses with legacy management, products, assets, culture, customers, markets and business models.


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