

TOP 10 DIGITAL TRANSFORMATION TRENDS FOR 2018

Predictions from 10 of the World's
Most Influential Digital Thinkers

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PROLOGUE: IN THE DIGITAL AGE, COMPETITIVE ADVANTAGE IS A FAST-MOVING TARGET

Back in the day, stability was the goal. Traditional barriers to entry allowed you to milk a competitive advantage for decades.

That is no longer the case. Today, the only sure thing about the future is that it will look even less like the past.

In this age of digital transformation, rapid advances in computing power, big data and cloud technology can evaporate competitive advantage in a flash. Think about it:

- More than 50% of the companies on the Fortune 500 have disappeared since the year 2000, according to [Accenture](#).
- **Approximately 40% of the companies on the Fortune 500 will disappear within the next ten years, according to [CNBC](#).**

Traditional companies tend to like stability. Which means they can get stuck in the conventional wisdom of building and maintaining a competitive advantage.

The age of digital transformation requires a new mindset.

Becoming relevant and remaining relevant means being able to quickly create new advantages to replace the ones that have gone away. The cycle never ends. It's an iterative loop that spins faster and faster all the time.

This creates a challenge for long-established organizations, because as Rita McGrath, author of [“The End of Competitive Advantage,”](#) said in a [recent interview with Appian](#): “At traditional companies, people under stress, tend to drop back to what they know. And, what they often know is ramping up efficiency in core operations, rather than exploring new





PROLOGUE: COMPETITIVE ADVANTAGE IS A FAST-MOVING TARGET IN THE DIGITAL AGE



territory...In the digital economy, you don't want to be a company staying at rest. You want to be continuously re-configuring."

Overcoming the stability challenge means being vigilant, and not getting distracted from the important work of staying on top of customer expectations.

The problem is, 84% of companies are failing at it, according to [Forbes](#).

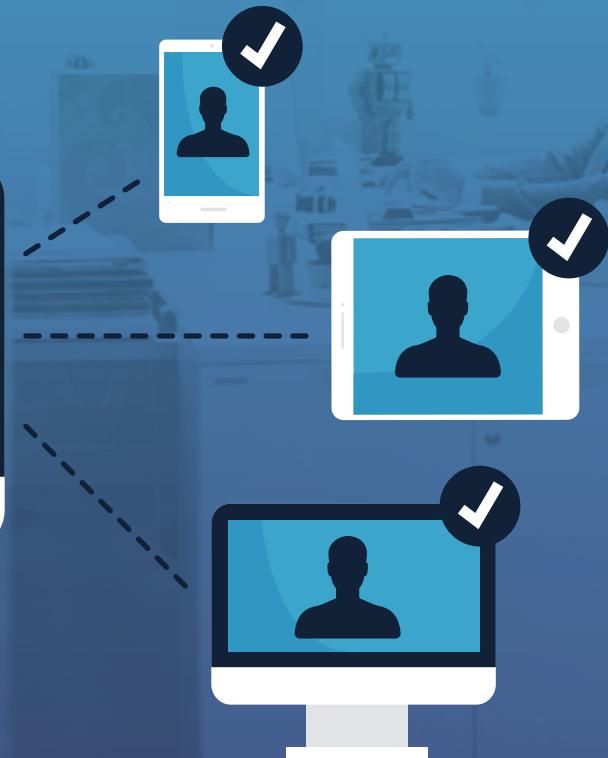
In a recent [Harvard Business Review article](#), MIT Research Scientist Marshall Van Alstyne said that back in 2007, the five major mobile-phone manufacturers—Nokia, Samsung, Motorola, Sony Ericsson, and LG—collectively controlled 90% of the industry's global profits. That year, Apple's iPhone burst onto the scene and began gobbling up market share.

The traditional market leaders were stable, profitable, and well entrenched. But by 2015, the iPhone had transformed expectations, was generating 92% of global profits alone. And all but one of the mobile-phone incumbents were booking any profit at all.

The biggest takeaway from Apple's success? Perhaps it's that instead of standing pat—or

trying to follow faster—it's much better to imagine where expectations are going to be, and try to get there first.

This eBook reveals the digital trends that every organization should have on their radar in 2018 and beyond.



The research shows that many companies have digital transformation projects planned or underway.

According to the [DevOps 2018 Digital Transformation Readiness Survey](#):

- 93% of organizations say that AI is a top area of focus for digital transformation.
- 76% are focusing on Internet of Things in their digital transformation journey.
- 58% are betting on natural language processing.
- 64% said they have a cross-functional team to oversee digital transformation across the enterprise.



“What we’re seeing is that in the last three years, digital transformation has just shot off the charts,” says George Westerman, MIT Sloan research scientist and author of [How to Be a Digital Master: Turning Technology into Transformation](#).

“Everybody’s talking about it now. Most of the conversations are about the customer experience, because that’s what people can see. But a better place to start is operations. Because if you’ve got a messy back office, it’s really hard to get a unified view of your customer,” says Westerman.

[See how Sprint surveyed 200,000 sites in 3 months to improve their network densification.](#)

“The best digital transformation efforts start with the back office first. And if you get that right, amazing things can start to happen, that just weren’t possible before.”

“Digital transformation should make you move faster, be more agile, get closer to your customers,” says Westerman. “It should give you wings so you can fly. Unfortunately, too many companies are talking about digital, and investing in digital. But they’re just thinking about being a fast caterpillar, not a butterfly.”

True believers marvel at the promise of digital transformation—how it enables us to gamify complex business processes, interact with digital assistants,

deposit checks with our mobile phones, video chat with service providers, and use autonomous drones to maintain our pipelines and transportation systems.

“I think digital transformation will become like e-commerce has become,” says Westerman. “It was kind of scary in the past. Companies invested wisely and unwisely. But now companies have gotten pretty good at it.

“And I think we’ll start to see digital transformation look like that across all industries,” says Westerman, “and not just the ones that led us in the past.”

2

CUSTOMER FOCUS IS EVERYTHING

When asked whether their technology stack can keep up with customer expectations in the next two years, 28% of companies believe they'll come up short. And 43% reported that their current application portfolio is unable to optimize customer experience, according to DevOps.



"If you think about the business models that are now possible," says Vijay Gurbuxani, Founding Director of the Center for Digital Transformation, University of California, Irvine, "staying relevant means always thinking about

whether your customers are deriving value from your offering.

It's thinking about the obstacles that keep customers from accessing my product or service. It's thinking about barriers to customers fully realizing value from your service."

"Beyond that, we have to reimagine the processes behind how we do what we do, and ask ourselves: What does digital make possible? You have to reimagine your business processes for a digital world," says Gurbuxani.

[See how Barclays increased customer satisfaction by 64%](#)

The trick is not to just focus on efficiency—which is where many companies stumble—but also on optimizing the customer experience, being empathic and building solutions that resonate with customers.

In other words, the focus should always be on creating value for the customer.

To paraphrase the late poet Maya Angelou: Customers will forget what you said. They'll forget what you did. But they'll never forget how you made them feel.

This is why 73% of customers say that valuing their time is the most important thing companies can do to provide them with good service.

But here's the thing. With the explosion of mobile, digital customers have numerous choices—and shrinking attention spans. They'll defect at the drop of a hat. A ticked off customer here. Another one there. After a while, it all adds up.

And the numbers? They're too big to ignore. In the U.S., businesses lose an estimated \$62 billion per year, because of poor customer service—up more than \$20 billion since 2013.

3

SKILLS GAP: QUALITY NOT QUANTITY

Approximately 82% of organizations struggle in some way to attract and retain the quality and quantity of software engineers they need to meet demand for innovation.



“The biggest gap I see is around creative thinking,” says Clay Richardson, Co-Founder & CEO of Digital FastForward, and former Forrester analyst. “My background is computer science. So, in IT, we were taught to approach problem solving in a very logical way—relational databases, Java development and so on.”

“Which is a great skill to have, if the problem is static.”

“But in the digital economy, we need creative problem-solving skills for problems that are more dynamic. We need to be able to compete against competitors that we didn’t see before... So the skill gap I’m talking about is the need for creative, more abstract problem-solving skills.”

A recent study by [Third Way](#) validates Richardson’s perspective. It reveals that there’s no shortage of workers with commodity technical skills.

On the other hand, competition for workers with specialized digital transformation skills will be fiercer than ever in 2018.

Organizations that come up short on talent could end up paying a 20% premium for workers with the digital transformation skills they need, according to [Forrester](#).

This is the appeal of modern [low-code platforms](#). They enable even non-developers to quickly create powerful enterprise apps. Which makes it easier to overcome skill gaps that can get in the way of your digital transformation initiatives.

[See how USF modernized and slashed student onboarding time from 2 weeks to 2 days.](#)

To help you cut through the low-code hype, the experts at [PCMag](#) recently rated the best low-code platforms, for multiplying the productivity of business users with zero coding experience.

Some platforms excelled at providing an intuitive experience for business users. Others focused on meeting the expectations of skilled developers. The best excelled at both.

For more information on the benefits of low code, check out this [video](#) to learn how Barclays leveraged low-code development to go from app concept to deployment in just 3 months.

4

FOR ARTIFICIAL INTELLIGENCE, THE ADOPTION CURVE GETS STEEPER



"I think in 2018, we're going to see the emergence and disappointment in Artificial Intelligence and Machine Learning," says Rita McGrath, innovation expert and author of "The End of Competitive Advantage."

"But, what AI and Machine learning can do better than humans is detect rich patterns that underlie massive amounts of data. I think the impact of these technologies is going to be very profound," says McGrath. "But right now, we're still in a heavy duty hype cycle."

But as we speak, AI is being mainstreamed into our lives through mobile devices, wearables, PCs, Smart Homes, and automobiles.

More important is the fact that digital leaders such as IBM, Google, and Apple are busy developing the next generation of AI-powered applications to replace human labor in dangerous, low-skilled, time-consuming jobs.

It's also worth noting that AI will be added to almost every new software product by 2020, according to [Gartner](#).

Early adopters are betting big on AI—investing in everything from face-scanning smartphones and customer service bots to intelligent assistants and self-driving cars.

According to [IDC](#):

- By 2019, 40% of digital transformation initiatives will use AI services.
- By 2021, 75% of commercial enterprise apps will use AI.
- Over 90% of consumers will interact with customer support bots.
- And over 50% of new industrial robots will leverage AI.

"We're going to see AI doing more than information retrieval," says Morgan Frank, Research Assistant, MIT Media Lab, which is a leader in research on automation and the future of work. "We're going to see AI become a bigger presence in our daily lives," says Frank. "I think Amazon's Echo is just the beginning of that."

So, what's the easiest, fastest way for traditional companies to leverage AI capabilities?

Focus on AI-powered cognitive services—computer vision, machine learning, natural language processing, speech recognition, and robotics.

Companies that take this approach will be able to score quick wins, generate value faster, and achieve long-term success four times more than organizations that don't, according to [Gartner](#).

DIGITAL LABOR MATURES WITH ROBOTIC PROCESS AUTOMATION

As many as a third of global enterprises are actively using bots within their IT and finance and accounting processes, with about a quarter adopting RPA within procurement and HR processes, according to [Deloitte](#).



“Think about it,” says Frank Casale, founder and CEO of the Institute of Robotic Process Automation. “After 50 years of software being used to help knowledge workers get their work done. Suddenly, we have software that replaces the

knowledge worker. This is digital labor. So, if you think of RPA, not as a technology play, or a software play, but as the notion that how work gets done has been reinvented,” says Casale, “that’s huge.”

“We’ve gone from offshore to onshore to ‘noshore—which is software,’ so, for those looking for a silver bullet from a cost saving standpoint, RPA is it. And for those looking for an on ramp to digital transformation, RPA puts more fuel behind that as well.” says Casale.

In the digital economy, the drive for efficiency and productivity means that anything that can be automated will be automated—especially high-volume, tedious, repetitive work.

In other words, traditional organizations that want to succeed at digital transformation will leverage RPA to:

- Boost productivity and free up workers to focus on creating customer value.
- Capitalize on the instant scalability of a digital workforce.
- Take advantage of fast-moving business opportunities.
- Streamline customer interactions.
- Improve customer engagement.
- Increase lifetime customer value.

“Here’s the challenge every skeptic has right now,” says Casale. “Skeptics tend to be risk averse. But your biggest risk is the one you’re not thinking of. The one where you sit back while your competition

is doing RPA. Or your board or shareholders are wondering why you haven’t made any significant changes, or moved the needle, while others in the industry are.”

RPA adoption is growing super fast. It’s poised to become a \$5 billion market globally by 2020, with a growth rate of over 60 percent, according to [Deloitte](#).

And this growth will happen across many industries, but especially in banking, financial services and insurance.

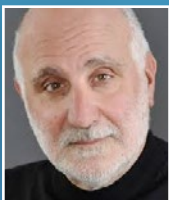
Also, by 2020, 40% of very large global organizations will have adopted an RPA software tool—that’s up from less than 10% today ([Gartner](#)).

“So, is there risk in getting involved in RPA now?” asks Casale. “Sure. Is there greater risk in sitting it out and waiting? For many, this is the case.”

For a quick overview of the RPA trend, check out [Robotic Process Automation: A Quick Explainer video](#).

6 CLOUD FUELS RAPID TECH EXPERIMENTATION

Over 70% of organizations said that cloud computing was a significant part of their digital transformation effort.



“Companies know that they can’t spend three years deciding whether Artificial Intelligence or Robotic Process Automation makes sense or not, because of the rapid pace of technology change,” says Stephen

Andriole, Professor of Business Technology, Villanova University, and author of [*The Innovator’s Imperative: Rapid Technology Adoption for Digital Transformation*](#).

“Today, the technology is in the cloud,” said Andriole. “You can throw a few people at it. See if it sticks. If not, you can stop without incurring big costs, which was the problem back in the day.”

The traditional approach of phased technology adoption is under attack. The blistering pace of disruptive competition, the notion of: “Let’s take a year or two to see where a digital trend is going” is fast becoming, well, obsolete.

With the rise of digital transformation, organizations are pushing more of their core workloads to the cloud, causing cloud traffic to expand at a phenomenal rate.

Not only that, but many of the most cutting-edge capabilities—in particular suites of AI-based services from Amazon, Google, and Microsoft—are only available in the cloud, which makes moving to the cloud a necessity to drive innovation.

In 2017, IT buyers were on track to spend about 25% more on public cloud services compared to 2016, according to [IDC](#).

Over the next two years, public cloud spending will experience a 21.5% annual growth rate—nearly seven times the rate of overall IT spending, according to IDC.

Altogether, IDC estimates that spending on public cloud will surpass the \$203 billion mark by 2020.

“Even CFOs are thinking that technology adoption doesn’t have to be expensive,” says Andriole. “And many of these CFOs went through the cost nightmare with traditional Enterprise Resource Planning systems. These systems were incredibly

expensive, and took years to get right. But now it’s easier for a disruptive technology champion in a company to talk to C-Suite decision makers about doing a use case or prototype to get traction for a better approach.”

“...The question is do you have the courage to challenge your existing business model—because you believe it has an expiration date? They all do.”

[See how Punch Taverns used automation to increase its business capacity by 25%](#)

Andriole says that the nature of disruptive competition makes the traditional idea of elaborate requirements analysis and taking a year or two to figure things out—obsolete.

“If you wait two or three years,” says Andriole, “you’re a Blockbuster. Because with all the competitors out there that are coming to take away your business, you have to be an early adopter. You don’t have a choice.”

The good news is that with cloud, you don’t have to spend a fortune doing it.

7

CONTACT CENTERS SHARPEN FOCUS ON OMNI-CHANNEL EXPERIENCE

88% of companies said that “customer experience and expectations” were major drivers of growth in the contact center ([Deloitte](#)). That’s up from 71% in 2015.

The problem, says [IBM](#), is that only 36% of companies are currently able to track a customer journey across multiple channels in their contact center. And, only 17% can pinpoint trouble spots that add friction to contact center interactions.

[See how Goldman Sachs innovated customer experience in consumer lending.](#)

Improving customer experience is hard enough. But it’s even harder when you don’t have cross-channel visibility to customer interaction data.

A whopping [79.4% of organizations](#) have no big picture view of customer interactions across their contact center channels.

Another trend to consider. Social media is now the support channel of choice for customers under 35.

And, yet, [29.3% of businesses](#) have no social media channels in their contact center mix.

“I think this is where many companies fall prey to digital predators,” says Digital FastForward’s Richardson. “You have to focus on the customer experience, empathizing with the customer, and building solutions that meet customer expectations.”

“For many organizations, digital transformation is about creating something new” says Richardson, “moving to a new business model that allows them to better engage customers via a variety of channels. Or, having a platform that allows them to deliver new products and services in a digital way.”

8

AUTOMATION PIVOTS FROM EFFICIENCY TO CREATING CUSTOMER VALUE

Automation is transforming how we do business. And, traditional companies that don't embrace it will have a short expiration date.

The importance of automation goes beyond streamlining administrative and transactional tasks, to taking advantage of faster, better service delivery, and enhancing the customer experience. So says Jing Bing Zhang, Research Director, Worldwide Robotics and Asia Pacific Manufacturing Insights at IDC.

The challenge is to embrace automation in a way that creates value for your customers, and enables employees to spend more of their time on higher value activities.



"We interviewed execs from 1,050 companies worldwide, covering major markets in Asia Pacific, Europe and America," said Zhang, Research Director, Worldwide Robotics and Asia Pacific Manufacturing Insights at IDC.

"In the manufacturing sector," said Zhang, "the number one business priority was about improving product and service quality for customers. Another concern was the rising cost of labor. For healthcare, the top priority was improving overall patient experience," said Zhang. "For retail, it was providing better services to customers."

"So, service quality and time to service—how fast you deliver service to customers—are major drivers of automation, especially robotic technologies...But what we're also seeing is that in addition to quality and cost benefits, companies are also looking at the value that automation delivers to customers."

It really doesn't matter which industry you're in, companies are increasingly adopting intelligent technologies and digital workforces— RPA, AI, and digital process automation—to automate more and more of their business.

By 2018, 45% of the 200 leading global eCommerce companies will deploy robotic systems in their order fulfillment warehousing and delivery operations, according to [IDC](#).

In enterprise automation, we're moving from an efficiency first world, to one where creating value will be prioritized.

And something else is also true. Customer expectations are rising faster than ever. And leveraging automation to keep pace is essential to success.

To learn more about RPA, see this video: [Appian RPA: Automate Your Legacy System Tasks.](#)

By 2021, at least 50% of global GDP will be digitized, with growth driven by digitally-enhanced offerings, operations and relationships (IDC).

It's inevitable—especially in the digital economy. Information becomes increasingly important. How we think about it as a digital asset. What it's worth. How it affects productivity. How it drives innovation. How it changes over time.

There's also something else to consider says Marshall Van Alstyne, author of [*Platform Revolution: How networked markets are transforming the economy*](#).

Alstyne says that Network effects are also fueled by information, and that corporate valuations stem from information as well.



"Here's why that's important," says Van Alstyne. "Thirty years ago, the market capitalization of firms tended to be about 85% tangible assets, and about 15% intangible assets."

"But, that has completely flipped. Today, it's about 86% intangible assets and about 14% tangible assets. And this profound transformation is being driven by the availability and velocity of information," says Van Alstyne.

Platform businesses bring together producers and consumers, buyers and sellers, in high-value exchanges. Their main assets are information and interactions, which are also the source of the value platforms create—and their competitive advantage.

As the number of participants on each side grows, the value increases. It's a phenomenon Van Alstyne and others call "network effects."

In short, the business model for traditional companies is inverting.

In 2018 and beyond, business leaders should expect to go through a deep and profound change in the economy, according to Van Alstyne. This change will be every bit as transformative as what we experienced in the industrial era, as we shift from traditional business models driven by supply side economies of scale, to new models driven by demand side economies of scale.

"Google has 87% market share in mobile," says Van Alstyne, "90% in mobile search, and dominates in maps. Amazon dominates in retail. Facebook has two billion users, Uber has come from nowhere to dominate the transportation marketplace. Not to mention Alibaba, with an 80% share of eCommerce in China."

"It's staggering, the level of concentration and growth in these digital leaders," says Van Alstyne. "Seven of the top 10 companies in the world today are platform companies. And all of them are driven by network effects. All of them are based on value created by communities, not just by the companies themselves."

"Nearly half the firms that were on the Fortune 500 in 2000 no longer exist. But, platform companies such as Google, Amazon, and Alibaba will be here for the long haul."

"As a business leader," says Van Alstyne, "it's time to take a new perspective, adopt a new mindset—which is: 'How can I create value by orchestrating it outside the firm instead of inside the firm?'"

In highly-regulated environments, digital transformation is a powerful way to tame the compliance beast.



“AI and RPA represent an enormous opportunity for banks to do a better job of monitoring regulations, and ensuring compliance,” says Chris Skinner, author, commentator, and globally-recognized fintech expert.

“The problem, is that many banks are still using inefficient, paper-based, systems to track compliance.”

“From a technology perspective,” says Skinner, “I think there are three big messages to focus on in 2018. The first is that the banks are going to really get down to driving efficiency with artificial intelligence, because, right now many banks have one in three staff that are just there to check on the other two.

“Citigroup is a good example of this,” says Skinner. “They’ve got 40,000 people working in compliance.”

The second trend on Skinner’s radar is what he calls the rationalizing and cleaning out of legacy data platforms. For traditional banks, overcoming this challenge is going to be mandatory by 2020.

Skinner says that the wake up call and alarm bells are ringing on this right now.

[See how Sunsuper outpaced the competition with exceptional customer service.](#)

“The third trend I’m watching,” says Skinner, “is what I call open-sourcing of financial structures. This is where the front, middle and back office operations of financial institutions pivot to apps, APIs and analytics. Regulatory structures will drive this trend.”

On the compliance cost side, regulatory costs for financial institutions could more than double over the next five years, according to the [Financial News](#).

In 2016, compliance spending by banks reached almost \$100 billion, growing at a scary 15 to 25% annual rate.

The big question is: Can your organization re-configure itself to execute business processes faster, more accurately and with more scalability than ever before?

Skinner says that 2018 will be a pivotal year for banks to do this.

He expects to see more banking applications built through open-source application programming interfaces (APIs), and a digitized ecosystem of banks, third-party vendors, fintech firms and payment platforms.

“The regulators have finally woken up to the fact that technology is transforming banking,” says Skinner. “Now, they’re starting to legislate that banks start using open APIs, open-source structures, and partnering—which may revolutionize the industry.”

E EPILOGUE: TRADITIONAL COMPANIES BOUNCE BACK



“NASDAQ is talking about their blockchain investments,” says David Rogers, a digital big thinker and author of [“The Digital Transformation Playbook: Rethink Your Business for the Digital Age”](#). We’re seeing incumbent

brands look at machine learning, blockchain and other technologies to see how they can use them to disrupt themselves before somebody else does.”

“I’m not one of those cynics that says traditional companies are dinosaurs,” says Rogers. “Yes, digital transformation is a hard challenge to overcome. Some companies have failed at it. But there are great opportunities for traditional companies to transform. And we’ll see that factored into some stock market valuations in 2018.”

Traditional market leaders tend to stick with what got them to the top in the first place.

So, they’re naturally skeptical, avoid risk, shrug when confronted with unfamiliar trends such as artificial intelligence, machine learning, robotic process automation and the like.

The opposite is true of CVS.

This billion dollar pharmacy chain—which has been around since the 1960s—tests positive for digital transformation with self-checkout systems installed in over 400 locations.

McDonald’s and Wendy’s are also pivoting to digital labor, with self-service kiosks that allow customers to place orders on a touchscreen. At some Walmarts, customers can download an app and scan and pay for merchandise with their smartphone.

Seventy-two percent of C-suite execs say that innovative industry incumbents are leading disruption in their industry, according to a recent IBM survey. Even in industries with higher than average turmoil, like financial services, where startups have a relatively larger presence, innovative incumbents are credited with the lion’s share of change.

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Bottom line: Many traditional brands aren’t ready to roll over and assume the mortuary position for potential disruptors.

[See how MHRA converted 64 systems into a single unified view of the customer.](#)

For skeptics, Rogers cautions that the age of a business is a poor indicator of digital disruption risk.

“Cynics may choose to use it anyway,” says Rogers. “But longevity isn’t nearly as important to digital transformation as a willingness to adapt, think big, and take a long-term view.”

“We’re going to see companies come back,” says Rogers, “traditional companies that’ve been undervalued in the past. Cynics may view them as old and stodgy, but don’t count them out.

In 2018, incumbent brands will demonstrate that they can adapt and deliver new revenue streams, partner with digital players, and show that they’re not out of the digital transformation game.”

WHY APPIAN?

Appian delivers an enterprise low-code platform for digital transformation that enables organizations to revolutionize their customer experience, optimize their business operations, and master global risk and compliance.

Powered by industry-leading Business Process Management (BPM) and Case Management capabilities—and leverages the latest Robotic Process Automation and Artificial Intelligence capabilities—Appian's low-code approach radically accelerates the time it takes to build and deploy powerful, modern applications, on-premises or in the cloud.

