Exponent

Perspectives on the technology transforming financial services

Issue 02
Transforming the enterprise into the ecosystem
Transformation is now the imperative of the entire enterprise—and financial services institutions are leading the charge.

But they’re now entering a new phase in transformation—shifting from projects focused on refreshing technology, to constructing new business architectures.

While they still face pressure from born-on-digital competitors, shifting customer expectations, an ever-changing regulatory environment and innovating cyber-criminals, financial services institutions are (surprisingly) better positioned to be the market disrupters themselves. Why? Because of data.

Now operating in cloud environments, incumbent financial institutions are rebuilding their business architectures, becoming platforms for best-in-class applications to deliver greater value to customers, employees, regulators—and ultimately—shareholders, securely.

These leading financial services institutions are turning the enterprise into an ecosystem. With the vast data resources, built over years of market leadership, they are now the central hub for disruption across functions and business lines. Harnessing that data and owning the ecosystem around service delivery has the potential to lead to exponential outcomes.

In this, our second issue of Exponent, our subject matter experts explore what transformed business architecture looks like, sharing the experiences they’ve had with IBM® clients that have become incumbent-disruptors.

We hope you enjoy this second issue. If you have any feedback, or would like us to cover any specific topics in the future, please let me know.

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Transforming the enterprise into the ecosystem

The Exponent is a quarterly publication that provides expert perspectives and insights on the technologies driving innovation in banking, financial services, and insurance.

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Contents

07
Welcome to the "age of the incumbent" in banking and insurance
Nicholas Rogers

11
Digital transformation: How a three-phase process can fund itself
Gary Napolitano

15
Why cloud? Why now? Because your customers won’t wait.
Mark Sullivan

19
The real return on risk and compliance technologies
Grace Brasington

23
Putting theory into practice: How banks have made cognitive real
Don India

27
Fraudsters are innovating...are you?
Richard Hoehne

31
Banks break free from the branch: How cloud helps banks get closer to their customers
David Gilvin

35
Embracing the future with the new IBM insurance platform
Mark McLaughlin

39
Embracing innovation and an ecosystem mindset—the path forward for insurers
Mark McLaughlin

43
Parametric insurance: Breaking the mold of traditional insurance
Mark Carter
Welcome to the “age of the incumbent” in banking and insurance

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We, in the financial services industry, are leading the charge, ushering in “the age of the incumbent.” That notion might sound counter-intuitive, given the proliferation of start-up Fintechs, who seemingly threaten established institutions at every turn. But we at IBM® are not only very optimistic about incumbents, we believe the time is now for incumbents to aggressively drive disruptive innovation—to become the digital pioneers. A major reason for our strong belief in the “age of the incumbent” pertains to data, and much of the world’s most important data resides within the enterprise incumbents we serve. In fact, 80 percent of the world’s data resides behind firewalls, and we believe that data will be the basis of competitive advantage for years to come.

Data is at the center of everything businesses do these days—how companies apply innovation and technology to that data is what creates a new level of differentiation. The more data you have, the more you can mine it for insights on how to improve the client experience, address a risk, or profit from an opportunity. And having so much of that data locked up behind firewalls is the single most important advantage that positions incumbents to succeed, moving them from a defensive posture to going on offense.

The incumbents are also better positioned to address the complex regulatory landscape in financial services than...
their new start-up competitors. They have more experience, leading to deeper industry expertise, and are more informed on risk and compliance. In areas such as anti-money laundering (AML), know-your-customer (KYC), and the myriad of other potential risks and reporting requirements in the industry, incumbents have more data and experience with which to make more informed decisions about risks.

Good reasons for optimism, but…

Even as incumbents enjoy these advantages, banking and insurance executives are facing continued challenges. Digitally native competitors with lower or no fixed costs, constantly evolving digital technologies, and security and cyber-threats have all caused more than a few sleepless nights.

The answer to many of these challenges lies in better use of cloud and artificial intelligence (AI) technologies. Incumbents recognize that putting more of their workloads in the cloud, or connecting them securely to the cloud via hybrid cloud capabilities, offers them the means to unleash new possibilities with their data. Some organizations are already doing this in discrete areas of their business. But they need to do it more broadly, connecting all the value they have in their enterprise with the additional value that can be harnessed from the growing ecosystems beyond their walls.

For example, at IBM, we build solutions for things like AML, KYC and surveillance, leveraging Watson APIs, using the more than 50 underlying technologies that form our Watson Cloud Platform, to apply cognitive capabilities to the troves of data that our clients maintain for solving such issues. The ability to connect that core data with new capabilities creates new opportunities for incumbents—leading to efficiencies and lower costs, or new revenue streams.

An ecosystem for growth

Looking ahead, it is likely that, for businesses in the future, growth and new opportunities are going to be driven by ownership of, and contribution to, multiple cloud based platforms—using a vast ecosystem driven by the network effects of now ubiquitous, connected technology. The partnership between IBM and Watson is a good example of the benefits clients can gain by integrating platform capabilities.

Cloud and AI technologies help to remove barriers—reducing fixed costs, accelerating time to market, and mitigating distance. Cloud-based technologies are enabling organizations to move more quickly to new areas of opportunity.

Once perceived as competitors, fintechs and insurtechs will play a role in these platforms because they provide capabilities that established incumbents may choose not to develop in house. Incumbents may be better served to get certain capabilities from the ecosystem rather than building it themselves. How organizations put the different building blocks within an ecosystem together can create the differentiation that they bring to market.

Ecosystems will be important to the battle with bad actors in the future

We’ve all seen news stories about data breaches that have damaged the reputations of well-known companies and lost the trust of their clients. In this network-of-networks of the future, security is going to require an ecosystem of partnerships to succeed. The IBM Security X-Force Threat Intelligence community is a good example of how we’re helping to build this ecosystem, one where all participants will benefit from shared information interrogated and informed by a cognitive, or AI based, cloud platform.

IBM is making this real through our IBM QRadar Advisor with Watson capabilities. Connecting this type of platform capabilities into other platforms will be paramount to protecting enterprises from bad actors, who themselves are now using AI based bots to introduce threats.

Blockchain: the missing piece to the ecosystem puzzle

In the coming years, Blockchain as a technology and platform may have the biggest impact of all: one for which incumbents are well positioned to take advantage of with their industry and business process expertise. Blockchain, which is a transparent, frictionless, distributed ledger, is going to drive an entirely new level of efficiency in transactions that we’ve never seen before—and Blockchain demonstrates the importance of ecosystems moving forward, and one which is inherently secure.

It creates a higher level of trust that will enable new relationships to thrive and create new ways to do business. Blockchain is an example of the new opportunities created by new platforms and ecosystems. IBM clients are using this technology for things like private equity record keeping, post trade processing, and payments, and we believe this is just the beginning.

Incumbents have never been so well positioned to go on offense—using their own data with cloud and AI technology—to make better decisions, derive new insights, and partner in new ways. They are the new ecosystem champions, building the business architecture of the future. It is indeed the age of the incumbent.
Digital transformation: How a three-phase process can fund itself

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Digital transformation is on the agenda of virtually every bank and insurance company in the world. Organizations everywhere, it seems, are trying to transform into more agile, efficient and competitive versions of themselves, end-to-end. But a project of that scope inevitably presents the question: how do we pay for it? Innovation that drives revenue growth and competitive advantage costs money—a lot of money—and moreover, the big reinvention projects have no precedent, so making the business case for them can be a shot in the dark, at best. Fortunately, digital transformation, when it’s done methodically, within an existing environment, can yield enough in cost savings that it becomes a self-funding mechanism for the entire enterprise.

Where to begin?
There’s no one-size-fits-all program for transformation and no single “right” way to do it. But in my experience, one of the best ways to approach it is through a three-phase methodology:
1. optimize business processes and IT,
2. digitize those processes, and
3. apply cognitive capabilities to drive competitive advantage.

Not surprisingly, many organizations want to jump right into the cognitive phase, because it promises competitive differentiation in a business’s products and services. Every
company has digital transformation projects running, making the first two phases, optimizing and digitizing, just table stakes. Optimizing and digitizing will undoubtedly save you money, but it’s what you do with your new digitized business processes and IT that gives you competitive advantage. In the third phase, you can launch truly differentiated services to customers.

While it’s the optimize and digitize phases that deliver most of the cost savings, the three phases are best done in parallel because the systems and processes involved often overlap, as do the benefits.

1. Optimize
Optimizing business processes and IT begins with streamlining and consolidation, which sometimes means consolidating locations and IT environments. It entails simplification and building operational efficiency in applications, infrastructure and data to wring costs out of your current environment. It involves cutting costs with a purpose, strategically driving innovation and thus competitive capabilities. Optimization must be run with the goal of getting to the third phase: change your business with cognitive.

Some organizations start with what is called “vertical” transformation through the front, middle and back office in a specific line of business. Others focus on operational efficiency in the “horizontal” or foundational layers of business practices and technology, which produces a reusable process for organizations with shared services for multiple lines of business. Some begin by transforming an individual function within a line of business like a call center or an HR tool. Again, there’s no right way to do transformation. Companies select their transformation approach based on three factors: where you are in your transformation journey, what you overall business objectives are, and how ready for change your culture and workforce are.

The more vertical the transformation, the greater the benefit—, but the greater the undertaking too. The creation of internal centers of excellence (COEs) to develop and share expertise in technology have been seen to help efficiently manage this kind of extraordinary change at scale. A recent report on digital transformation from the Hackett Group mentions COEs as useful building blocks in an optimized operating model. The Hackett report said that “finance organizations with world class [enterprise performance management] EPM capabilities spend 36 percent less on the EPM process per $1 billion of revenue than [their] peers.” While that’s only one example of cost savings from optimization, it’s an important one: COEs create efficiency and speed to drive creative cost savings across multiple business lines. Moreover, they also support culture and workforce evolution through transformation, promoting change agents within the organization and ensuring adoption.

2. Digitize
The second phase is digitization, using technologies such as robotic process automation to reduce manual labor, making internal processes and customer services available through mobile applications and more. Cloud-based solutions can accelerate digitization, providing speed and agility along with lower costs. Using the cloud also produces variable cost benefits while switching from a capital expense to an operating expense model.

That shift to a cloud-based solution and change in accounting frees you to try new things, to fail quickly and cheaply, and to try something else. Working on a cloud-based environment means you no longer set up fix-cost environment to drive innovation. Cloud-based solutions give you speed and agility to build new applications, and since you are only paying for the capacity, you can run tests, make changes, or ditch them completely without writing off all the capital expense that would have otherwise been holding you back.

Further, most large organizations have data stored in different sites and in different formats, especially businesses that are now collecting data from social media to learn about customer preferences and behaviors. Once you digitize, you can open this data as well as your applications and infrastructure in order to facilitate the third phase in the process. While this more efficient data management will save money, it’s critical to digital transformation. Without control of your data, your digital transformation will fail—after all, your data is one of your greatest sources of competitive advantage.

3. Deploy cognitive capabilities
The third phase in digital transformation is adding cognitive capabilities to your newly optimized and digitized systems and processes. Cognitive capabilities enable you to look at your data in much greater depth and detail and perform deeper analysis to reveal new insights. You can drive more intimate knowledge of your customers and create better customer experiences using cognitive applications such as virtual agents, predictive and prescriptive analytics and artificial intelligence (AI). It truly is the cognitive phase that takes digital transformation beyond a cost-reduction exercise to produce true competitive advantage and potential revenue growth. It’s what really changes the culture of the firm.

Big organizations’ big data advantage
Now is the time of the incumbents, as IBM® CEO Ginni Rometty presented at a gathering of 100 CEOs last year’s “Big Bets” meeting. The technology available to leading banks and insurers gives them the tools to be the disrupters, not the disrupted. But large, traditional organizations sometimes face a transformation process that takes longer because of the size and complexity of their legacy environment. Yet bigger organizations also have an advantage in both the quality and quantity of their data. In the digital world, decades of history represent deep repositories of valuable customer and market information that can be explored with cloud-based, cognitive solutions.

The three-phase approach outlined above can help large institutions act and react with the speed and agility of a fintech. But it’s these institutions size and data that will give them the advantage, making it critical that transformation goes beyond just cost savings. All three phases, done in parallel, make digital transformation an undertaking well worth the effort—especially when it helps pay for itself.

See what we can do to help your digital transformation. Visit our Banking & Financial Markets or Insurance pages.

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1 Nilly Essaides, Sherry Liao, Gilles Bonelli, “Transforming Enterprise Performance Management in the Digital Age”, The Hackett Group, September 1, 2017
Financial Services Transformation
Why cloud? Why now? Because your customers won’t wait.

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In real estate, the three most important words are "location, location, location." In banking, the three most important words might be "speed, speed, speed."

In banking and in financial services generally, we’re seeing new technologies emerge every day, in both customer-facing and operational capabilities. And we’re seeing banks move processes and services to the cloud instead of running them from their own data centers. Migrating to the cloud can be an expensive process, but it’s the longer-term benefits that have massive impacts. Once on running with cloud solutions, banks have a vehicle for fast, efficient app development, making net new development much cheaper. The main reason banks are going to the cloud is to gain quickness, agility and nimbleness. Banks want immediate scalability. If a bank is operating a system in the cloud, it can integrate services more rapidly and can knit together a variety of unique services for the customer, whether it created those itself, procured them from a fintech, or got them from somewhere else. Regardless of the source, in the cloud, a bank can create unique experiences quickly, almost on the fly, and can bring those to their customers to meet a range of financial needs.
Digital is prevalent—and digital means cloud

Digital is truly everywhere—and it happens in the cloud, because that’s where it is most effective. This is due, in part, to the rise of the fintechs, which are driving innovation across every area of banking. These companies were nearly all born in the cloud and they operate with a nimbleness that enables them to serve customers very effectively. Banks are hungry for that nimbleness. But the banks are slowed down by regulatory and compliance requirements and also, in many cases, by monolithic back office systems. Often these legacy systems cobbled together over the years with bits and pieces of software that don’t always function together smoothly.

The good news is that, as banks transition out of that older, slower architecture and mindset into a faster-paced, customer service mindset, they have a great opportunity to create better customer experiences. The importance of the customer experience can’t be overstated. In fact, a report from the IBM Institute for Business Value found that 74 percent of the business leaders they surveyed cited “improved customer experience” as one of the most important outcomes of a successful cloud initiative. As I mentioned in an earlier blog, it’s great customer experiences that will determine the winners in today’s hyper-competitive banking environment.

Move aggressively—but proceed with caution

Yet, even as we’re seeing tremendous momentum in this move to the cloud and digital, sometimes the process moves two steps forward and one step back. There’s an urge to be as aggressive as possible in embracing new technology and engaging with emerging players in the industry. But then we hear news of a major data breach somewhere and there’s a retrenchment almost immediately. Banks will say: “Slow it down. Let’s harden our security policies and maybe not exit our data center just yet. We can’t risk compromising our data or our customers.” That’s pretty normal—and prudent—in this sort of major transition. Cloud security has advanced monumentally, but it’s inevitable that we’ll have these temporary setbacks from time to time.

It’s instructive here to look back at all the banking technologies that have been rolled out over the last few decades. In the past, banks had to force customers into using new technologies. Look at ATMs or computerized banking—these technologies were innovations to help cut costs. Initially, the public was skeptical. The thought of getting money from a machine or depositing a check by taking a picture of it sounded a little crazy when they launched. The tables have turned, however. Now, customers are the ones pushing banks to adopt new technologies. Customers are showing banks that they want to have digital interactions—demanding things like instant peer-to-peer payments and robo-advisors.

Speed, speed, speed

Again, success in today’s banking environment hinges on speed, speed, speed. And the banks know it. They’re moving to the cloud and exploring ways to integrate financial ecosystems that could never have been integrated before. It starts with specific lines of business but ultimately, I believe, this move to the cloud will transform banks, banking relationships, and the entire banking industry.

1 Bill Karpovich, Lynn Kesterson-Towner, Sanjay Rishi, “Beyond agility: How cloud is driving enterprise innovation”, IBM Institute for Business Value, April 2017
The real return on risk and compliance technologies

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When it comes to regulated industries, few are more highly regulated than banking and financial services. In recent years, we’ve seen a steady growth and change in the regulatory landscape. Risk culture, or an absence of it, was perceived as a major factor in creating an environment where unwise decisions went unchallenged and culminated in the 2008 financial crisis. Some institutions were hit with fines and penalties, leading to loss of clients and market share.

But a crucial shift is happening. The culture of risk is changing from one that begrudgingly reacts to burdensome regulation, to a proactive one, seeking to create new value for the bank and its customers. There’s no reason why revenue and profit goals have to conflict with sound compliance and risk management policies. Technology enables banks to have both.

Artificial intelligence (AI) and other technologies such as analytics for risk and compliance are not only helping banks comply with laws and regulations (and avoid those fines and penalties), but also helping to create a better risk culture, where employees across the organization make compliance their responsibility, better experiences for the customer and ultimately better business outcomes.
Coping with the cost of compliance
In the face of today’s regulatory environment, there’s a genuine fear among risk and compliance professionals of getting anything wrong. States in the U.S. are competing as to which can do the most for consumer protection and, of course, the Consumer Financial Protection Bureau (CFPB) is explicitly focused on consumer issues. Banks face concerns regarding regulatory change management, cyber security, conduct surveillance, anti-money laundering (AML), know your customer (KYC) requirements and more.

With that as a backdrop, regulators are scrutinizing institutional risk culture. They’re watching the tone set at the top by the CEO and board of directors and how that tone percolates throughout the organization. Organizations have to go beyond “checking the box” and follow the spirit of compliance so that the institutional culture drives good behavior even when nobody’s watching. Financial institutions are reviewing key processes to ensure that they are not only compliant, but looking at all their activities in the context of the client experience and how the needs of compliance and business can be aligned to achieve the objectives of client satisfaction as well as compliance.

At the same time, banks face significant cost pressures. They are competing with, and in some cases collaborating with, the fintechs of the world. So, they are operating in an uncertain and very fluid marketplace.

Luckily, banks can now find the economic value in compliance, finding the ROI in what was previously simply a cost of doing business.

From risk administration to true risk management
We truly believe that technology is the path forward. In June 2017, IBM® and Promontory introduced a portfolio of solutions for regulatory compliance and financial crimes akin to anything else on the market. Since then, we’ve begun applying AI capabilities to real business problems to help clients with the costly and time-consuming aspects of understanding regulatory requirements, uncovering financial crimes, and managing financial risk.

These new generation of technologies, enabled by AI, allows banks to move from being information gatherers to information analyzers, and from risk administration to true risk management. In effect, technology can help banks realize the business value of better compliance.

So how do these technologies make real impact? For example, in the client complaint process, regulators want to know that a financial institution is not just looking to resolve complaints quickly but really getting to the root cause of the complaint. Using natural language capabilities, we can review client complaints in the aggregate to identify emerging issues or themes. Then it’s possible to reduce complaints going forward and provide a more positive client experience. Using these technologies is good business where the needs of the customer are met and compliance objectives are also achieved.

When banks perform customer due diligence when onboarding a client, the information collected to comply with “know your customer” requirements (related to AML) can also be useful in meeting the customer’s banking needs. If I know my customer well, thanks to the technology of that client onboarding process, then I can do a better job of selling to that customer. This is where compliance and customer service go hand in hand.

Another place where technology comes into play is in employee conduct surveillance. There are regulatory mandates regarding market abuse for trading, and we are now able to analyze both voice and text conversations along with associated transactions and outlying data points in a surveillance platform. Using advanced natural language processing and deep learning, we can identify features in context that would be missed by traditional rules based systems. Algorithms trained specifically to identify concerning conduct in the ingested data, process the information through layers of a smarter decision tree—or what we call, the solution’s neural network. The algorithm refines itself as goes at each stage, leading to a hierarchical representation of all possible events associated to the risk in question, weighted by importance. Such techniques have allowed us to develop a holistic surveillance platform, letting us look at the full context of a situation and profile employee behavior over time in order to discover potential risks and emerging compliance issues.

Making the most of big banks’ advantage in big data
Cognitive capabilities and compliance also drive return on investment by uncovering useful insights within the enormous volumes of information that banks collect for regulators. Some say that large banks have an advantage in the sheer volume of their own data resources—far more than any fintech start-up. But big data is only a competitive advantage if you can use it. Right now, data volume in banking is growing at 70 percent a year.

Artificial intelligence technology enables banks to distill that information into something meaningful—like actionable information about their clients, leading to better experience. The answer lies in the data, so let’s derive some insight from it. That’s where the opportunity and the return lies—using digital tools to mine digital resources for real value. With the right technology, good compliance enables good business.
Putting theory into practice: How banks have made cognitive real

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When it comes to adopting technologies, financial institutions have long been the investment leaders, putting new solutions to practical use, starting more than fifty years ago with the advent of the IBM® mainframe. The mainframe quickly became a foundational technology for global financial institutions at a time when everything was done manually: core claims processing in Insurance organizations, payments and transfers in banking institutions, and trades on exchanges were all tracked by hand, on paper. With the first mainframes deployed, financial intuitions became transparent, efficient, simpler and more productive.

In the late 1990s and early 2000s, financial institutions revolutionized how clients thought about and trusted the internet. We helped banks go online, becoming always-on for their commercial and retail customers. Trades, payments, transfers, claim-filing could happen all over the world, at any time, online and on any device.

We’re living through another one of these massive technological shifts. Once again, financial institutions are taking technology from the theoretical to critical application with augmented intelligence—or cognitive systems.
Putting theory into practice: How banks have made cognitive real

Why is this evolution so important? As with the case of the mainframe and internet adoption, data, demand, and volume have become increasingly impossible to manage. As such, technology must create solutions to remove the manual efforts consuming talent and capital, as well as create new revenue opportunities in an increasingly complicated world. With petabytes of data now generated daily, we’ve gone well beyond the limits of human understanding or capacity and a new operating model is necessary. Once again, global financial institutions are leading in investment, finding real application to what once seemed too futuristic to be practical and secure. We’ve seen two areas where cognitive capabilities have proven critical: fraud detection and regulatory compliance.

There are over 40,000 regulatory changes annually. A mid-to-large-size financial institution is bound by no fewer than 100 regulations. Equally, they are bound by thousands of obligations. They employ hundreds of resources to complete three core tasks:

1. map the regulations to their obligations,
2. keep the documentation on those obligations current based on the ever-changing regulations, and
3. produce the appropriate records for the regulators to avoid penalties and proving their compliance.

On another front for banks, every day we hear about financial crimes occurring across the world: credit card fraud, fake bank accounts, stolen passwords, phishing scams, stolen retail data, IRS scams, the list goes on. Banks use legacy technologies to look for patterns that might indicate fraudulent activity. These technologies red-flag so many transactions that they still must employ hundreds, if not thousands, of employees to review these potentially fraudulent activities daily—99 percent of which are not truly fraudulent events. Banks are potentially spending more money on sifting through normal, legal transactions than they avoid in fraud or fines.

Cognitive addresses both of these extremely manual, complex, and expensive issues through simplifying the work and making financial institutions more productive in their efforts to stop fraud and maintain compliance.

When it comes to regulatory compliance, not only is cognitive helping to make sense of the 300 million pages of ever-changing regulation out there, but it’s also streamlining the documentation and record-keeping of compliance activity. When a regulator walks into a financial institution asking for all the compliance documentation, gone are the days when the compliance team scrambles for weeks to find all the information to hand over. Now, there is a central control point, where all change-management, obligations, and compliance risk documentation lives in a single repository. Nothing else is empowering compliance departments this way. In the instance of fraud detection and prevention, cognitive is focusing fraud teams’ efforts.

By simplifying what fraud teams are looking for, it means that they can target the small percent of real fraud. They can go after the bigger fish, so to speak, and shut down fraud that would have been otherwise overlooked. By cutting out the noise, these teams are seeing higher degrees of detection, meaning more prevention, and ultimately less loss.

And so, here we are, in the age of cognitive, introducing a greater understanding of murky, changing, and complex compliance and security landscapes. It’s just the beginning, but even with current technology, financial institutions have a clearer view of their own compliance, security, and communication.
Fraudsters are innovating... are you?

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Today’s headlines are filled with an increasing drumbeat of data breaches and cyberattacks: 143 million people’s personal information exposed. 21 million accounts targeted in cyberattacks. Hackers access 440 thousand bank customers’ information in data breach.

The amount of personal information available on the black market today is driving the increase in criminal schemes: account takeovers, card-not-present, bust-out, and other types of fraud and money laundering. With the amount of data available to the bad guys, combined with their advances in technology, we will begin to see more automated schemes as they begin using robotic and cognitive approaches—a scary prospect.

As a result, most banks are overspending on losses, fines, regulatory actions, inadequate IT, and human resources to fight fraud and respond to anti-money laundering regulation. The increasing rate of spend on fraud and AML is both unprecedented and unsustainable.

The direct costs alone are staggering, but the hidden costs associated with customer satisfaction and lost revenue are even more significant. With more digital customer interfaces, faster and easier payment methods, and more frictionless banking, we’re not only seeing a new high-bar for customer
Banking & Financial Market

Fraudsters are innovating... are you?

responsiveness, but also the introduction of infinitely more access points for the bad guys. Defending these new channels and capabilities—in the face of increasing customer expectations—is going to require innovation in new fraud and anti-money laundering capabilities.

Unfortunately for most banks, they are still trying to fight these emerging threats with aging systems and methods. While the incumbent counter-fraud and anti-money laundering systems being used today have made marginal improvements over the years, these point solutions and modeling paradigms were never intended to defend against the threats we face today. The result: banks face unacceptably high loss rates with unacceptably high false positive rates and low customer satisfaction—all continuing to trend in the wrong direction.

The answer to such an unprecedented challenge lies in deploying enterprise-grade cognitive solutions. This goes beyond marginal upgrades—we must rewrite the approach entirely, using analytics, robotics and augmented intelligence technologies, to address today’s threat landscape.

Rethinking the solution starts by employing an enterprise approach. Bad guys work across channels, and so must fraud and anti-money laundering solutions. The best defense banks have is to break down the silos that exist from today’s point solutions and aggregate everything: data, relationship networks, prevention and detection analytics, alert processing. By processing data across all channels and financial instruments, cognitive technology not only dramatically reduces operating costs by consolidating multiple point solutions to a single enterprise counter-fraud platform, but let’s banks see customer as an individual.

Instead of relying on unexplainable neural networks built from historical consortium data to model what “good” looks like, the bank takes a more direct approach using cognitive, high-speed profiling to spot fraud trends and money laundering schemes in an individual customer’s transaction stream as they materialize, using his or her own data. Anyone’s personal normal is not the same as a consortium’s normal. Why build fraud detection on someone else’s view of normal?

Cognitive technologies recommend rules and models using augmented intelligence to comb through billions of records, giving fraud and anti-money laundering analysts the tools to do their jobs more effectively. Cognitive finds things your analysts would never see and brings them to their attention in plain speak—not data science language—so they can evaluate and decide how to handle the issue. This empowers analysts and scheme designers to more rapidly spot issues that they would otherwise miss in the multitude of banking data—and recommends ways of neutralizing the threat as it is unfolding. This approach gives bank the agility to respond to new threats as they emerge—with no dependency on vendors using legacy modeling techniques. Better yet, banks have seen as much as a 40 percent reduction in processing time and expense for alerts generated in anti-money laundering and transaction monitoring.

Finally, these cognitive solutions dramatically improve the customer experience by reducing the impact of false positives, including transaction monitoring, fraud blocks, declines, and customer onboarding. Through a series of accelerators, every transaction can be assessed and augmented intelligence and robotics can help analysts make rapid and informed decision on the alerts they receive, mitigating the overwhelming false positive challenge created by today’s incumbent legacy point solutions.

We’re already seeing the positive results of these technologies. The Safer Payments solution from IBM® is protecting many cards and consumers, including the entire country of France. Safer Payments protects French card holders who are processing 4.7 billion transactions per year—in real time, allowing the banks to act on transactions before it is too late, and with a dramatic reduction in false positives. When Safer Payments came online, the credit card fraud rate in France fell for the first time in a decade. We are only at the beginning of this cognitive journey. However, the benefits are becoming more tangible every day. As anti-fraud and anti-money laundering experts work with and train cognitive technology, the tools banks will be able to keep up with—and eventually outpace those used by criminals.

Let us help you assess your threat landscape and bring the power of Watson and the innovation of IBM to the fight against fraud and money laundering. Read more on-line.
Banks break free from the branch: How cloud helps banks get closer to their customers

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In the last few years, we’ve seen a significant attitudinal change toward cloud-based capabilities in the financial services industry. In the field of marketing especially, we’ve seen companies pivot from the old, traditional way of understanding and interacting with their customers to new, more insightful methods. And cloud is the enabler. On the cloud, banks and other financial institutions can access data faster, put it in combinations and analyze it in ways and at speeds that were not physically possible or were cost prohibitive just a short time ago.

Marketing used to be mostly about first-party data, the data gathered directly from transactions with customers. The problem with that, of course, was that if you weren’t a customer, the bank would know very little about you. Even if you were a customer, it only knew about you in terms of your transactions and the specific products you bought. The data was all on premises and marketing consisted mostly of using old mechanisms to download the data, assemble a list and then, more often than not, send out a direct mail offer.
There’s been an erosion of the hard line between the interactions that people have with the bank, and the interactions they have with the rest of the world.

Marketing moves to the cloud

Now, large companies are putting their marketing capabilities on the cloud. By doing so, they can combine their own first-party information with third-party data and see their customers and prospects in ways that they never could before. Third-party data is the rich material that tells the bank about your behaviors, your attitudes and your interests. It provides more insight about the customer, better engagement and more relevance.

The new world of customer interactions is not one where the physical branch bank or company website is the only way to interact with customers. There’s been an erosion of the hard line between the interactions that people have with the bank, and the interactions they have with the rest of the world. The data is all out there and with a few clicks you can discover, for example, that you’ve got a potential customer who’s highly active on social media, who fits your target demographic, and who would benefit greatly from becoming a customer. People are now interacting with their banks via Facebook and LinkedIn, and via their mobile apps. By opening up all these channels, banks can interact with their clients where they actually are.

In a sense, the cloud represents a giant data conduit that works in real time when customers interact with any digital property. It could be on any number of websites, or a cable TV provider or even a kiosk at a sporting event.

Reaching out to customers where they are

Imagine that you’re at a football stadium watching a game and you use your credit card to buy a beer. At the point of sale, a cloud-based system can see that you’re at the game and see that you like craft beer. It could present you—right then and there—with a location-based offer, maybe urging you to use your Rewards card and get a discount on a brat to go with that beer.

Cloud breaks down the walls of organizations in terms of their ability to interact with customers on a second-by-second basis. It’s the difference between, for example, being able to track your usage of the credit card or Apple Pay at any place in the world at any point in time, versus having to wait for a transaction to clear on your account. Until recently, that was a daily process at best and not very easy to track. The only thing the bank could do was push out an offer perhaps long after you would have wanted it.

Presenting the offer when you want it

But with real-time information it’s possible to influence behavior in real time. The transaction at the football game is an example of “hand-raiser” behavior, which simply means that you expressed some level of interest in something. People raise their hands all the time, but companies ignore them because they don’t have the ability to capture the data and do anything with it in anything approaching real time.

When a customer raises his or her hand, businesses need to follow up quickly. That’s where cloud comes in. Cloud enables companies to serve their customers’ needs as soon as they express that need. And that’s why cloud represents such an enormous opportunity for the financial services industry.

See what IBM® can do to help you revamp your customer experience.
Embracing the future with the new IBM insurance platform

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Industry platforms have become more of an insurance discussion point as insurance decision makers, analysts, and consultants consider 2018 and new technology trends. The collaboration between IBM®, MetLife and Majesco to create the new IBM insurance platform was an impetus for that conversation (if you missed it, you can read it online). The IBM insurance platform is a milestone for insurers, who now can take advantage of a vertical industry platform that offers a complete end-to-end insurance environment as-a-service for both customers and distributors.

The implications for insurers, software providers, and other insurance ecosystem participants are significant. Benefits accrue to regulators, distributors, and most importantly, to the insureds who trust the industry to handle risk on their behalf. This new platform will transform how risk is managed. Let’s review why this new insurance approach is so groundbreaking—and who it benefits.

Redefining the front-and back-office experience

This new insurance platform is built on IBM Cloud and offered as-a-service, which transforms fixed-cost IT, application provisioning, and business operations into a more variable-cost, scalable solution. It provides product and data structures that are flexible enough to handle a
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Insurance

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wide range of insurer business strategies and solutions. Businesses can now move away from systems that involve large software license fees and inefficient IT development and application maintenance, and move to a more agile, cost-effective solution.

As more insurers move to a platform approach, economies of scale in back-office utility provision will emerge as well. Infrastructure investments in the platform in areas like security, regulatory compliance, and disaster recovery will accrue to all. These advantages in cost, flexibility, and security will become table stakes for insurers.

The IBM insurance platform also enables digitalization, helping the industry redefine itself with differentiated customer experiences and faster product speed-to-market. Insurers can now freely experiment with microproduct introduction, since the platform can tap into the industry-leading cognitive experience and tools IBM has invested in and developed over the last decade. This allows insurers to compose differentiated experiences to give end-insureds and distributors unmatched customer experience, support, and risk advice.

Broader platform effects on insurance markets

For insurance ISVs, platform economics has important implications. An industry platform in a given line of business and geography can attract insurers quickly. With the network effects provided by an industry platform, first mover advantage becomes crucial. ISVs who can attract charter customer investments and ally with cloud and cognitive partners will quickly gain traction over ISV options that involve up-front licensing fees and on-premise implementation. Platforms will have a consolidation effect on the ISV space, and ISVs will quickly move to claim platform status without having platform SaaS economics, cognitive integration, ecosystem capabilities, or cloud scalability and security. Such ISVs will rapidly fall behind without access to best-in-class tools for refined user experience differentiation and distinctiveness.

Platform benefits also extend to regulators, who will likely welcome these changes. A common platform, in particular one that is well-integrated with a blockchain framework, will offer unprecedented options for regulatory transparency and oversight. Role-based access to product definitions and underwriting decisions can greatly simplify insurance compliance while preserving the ability for insurance markets to innovate and develop new risk options. Taking the “nuts and bolts” of insurance operations to an efficient platform will level the playing field on costs, lower the barrier to entry for new models, and create more competition in the primary insurance market.

Policyholders can celebrate this disruptive new approach

For customers of insurance companies, this is great news. Insurers can now leverage industry platforms to invest in better customer experiences surrounding risk, and do so much more quickly and economically. The IBM Insurance Platform offers pre-integration of cognitive capabilities, improved mobility, and analytics tools tied directly to insurer operations. These tools can be used to provide great new apps, open insurance to third party ecosystem participation, and bring better advice and broader risk coverage to the policyholder.

As other industries develop vertical platform approaches, insurers will also be able to access permission-based, secure, risk-relevant information from other industries. IoT technology, instant and P2P payment transactions, and wearable devices all offer opportunities to develop new insurance products that link directly to risk-life policies that scale according to exercise habits, or auto policies that reward drivers who are careful in inclement weather. Insurance customers will then benefit from personalized risk assistance. They will have access to products that match their insurance needs much more closely, and will avoid risks in the first place instead of arguing about benefits after a loss.

Embracing change in the industry

This industry platform approach will fundamentally change the insurance marketplace. It will make entirely new models possible for risk assumption and management, a level of innovation not yet seen in the industry. Disruption in the insurance marketplace, whatever your views are on the winners and losers, has arrived. This change can be resisted, at the risk of falling behind, or embraced, positioning and empowering committed insurers to become industry leaders.
Embracing innovation and an ecosystem mindset—the path forward for insurers

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Insurers have grappled of late with potential disruption, as a flood of insurtech investment creates what appear to be new competitors at every turn. But all is not as it seems. As insurers gear up to face insurtech innovation, a study of both incumbent and aspirant leaders points to models for cooperation that are not apparent from the insurtech hype and insurance trade press.

Emergence of insurance/insurtech ecosystems
Clearly there is cause for concern amongst insurance leaders. Investment in insurtechs between 2014 and 2016 topped USD 5 billion, with investment growing by several multiples in that timeframe. By 2016, more than 30 percent of insurance customers globally were using insurtechs exclusively or in combination with incumbent firms to fulfill their insurance needs.

And insurers are listening. The latest IBM® Institute of Business Value (IBV) study looks across interviews with hundreds of C-suite execs from traditional insurance companies, insurtech leaders and venture capitalists across the world. Three out of four insurance C-suite executives believe insurtechs are disrupting the insurance industry.
Insurance

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But this may not be a threat, but an opportunity. 81 percent of outperforming insurance businesses surveyed have either invested in or are already working with insurtech businesses.

Insurtechs are, by and large, innovating traditional insurance business models instead of trying to upend them. More than half of insurtechs self-describe as evolutionary, not revolutionary, to the existing insurance value chain. Insurtechs have looked to reinvent portions of the insurance value chain in claims management, policy administration, underwriting, and policyholder and distributor assistance. Many are looking at distribution and channel optimization, but fewer than 15 percent are engaged in peer-to-peer, on-demand insurance, blockchain policy development—the models that truly look to replace the insurance value chain.

Adopting the ecosystem mindset for accelerating relevance

McKinsey in surveying the ecosystem landscape reports that ecosystems will account for 30 percent of global revenues by 2025. Insurers have increasingly told IBM that they want to generate non-premium revenue by providing value-added, ecosystem-based services around base insurance products. They are focused on metrics that matter: wallet share, return on information, interaction frequency. And they are building relationships with insurtechs that facilitate that exchange—insurtech investment and access in trade for insurer relevance and immediacy.

In this world, the winners, insurers and insurtechs both, will focus on interoperability and sharing of information via value networks that reduce risk for insureds. These firms may have differences in culture, practice, and investment model, but by leveraging their respective strengths, they can prosper jointly and win the battle for the insurance customer. IBM’s Insurance Platform addresses these needs via an interoperable API framework accessible to insurers and insurtechs. Ecosystems can meld core insurance efficiency and flexibility with the ability to quickly compose new customer experiences that take advantage of insurer, insurtech, and IBM cognitive and analytics tools to provide unique value.

But wait, there’s more

For more insight on how insurers, insurtechs, and venture capital can work together in our brave new ecosystem world, check out the IBM Institute of Business Value study on InsurTech—“Friend or Foe? InsurTech and the Global Insurance Industry”.

More than half of insurtechs self-describe as evolutionary, not revolutionary, to the existing insurance value chain.
Because extreme weather events are now seemingly more common than ever before, insurance claims are seeing record increases, and the demand for disaster insurance is reaching unprecedented levels. Insurance companies are being challenged to offer new ways to respond to these disasters, both to expedite relief for their clients and to develop cost-friendly and profitable products, all while reducing operating costs. Parametric insurance, also known as index insurance, is an innovative product that functions differently than the traditional model of insurance coverage. It’s initiated by and paid to the policyholder based upon a set of specific parameters, along with a predetermined sum that foregoes the traditional claims process.

Expedited real-world applications
Parametric insurance, in its current form, is often related to weather and other natural occurrences. Parametric insurance can be used in place of traditional insurance policies in scenarios such as earthquakes, storms, and floods. Hurricane wind speed and strength metrics that could trigger activation of a parametric insurance policy. Parametric insurance is measured by an agreed upon independent third-party metric, that with an evidenced presumed loss is the trigger which determines the payout.
The owner of a farm could purchase a parametric insurance policy for air pollution, outlining a specific threshold of the air quality index scale, a commonly used and accepted metric of air pollution, that would stunt crop output. When the air quality index reaches a certain level, a farmer’s crop yield would decrease, triggering the parametric insurance policy. Measurable, objective metrics such as soil moisture, biotic or abiotic data, and other distinct environmental variables will prepare an insurance company to underwrite and offer financial protection against these disasters.

The relationship between environmental factors and a parametric insurance contract positions the IBM® Weather Company insurance solutions to deliver predictions, real-time alerts, and help insurers and businesses plan for a seasonal event. After an incident, The Weather Company acts as a third-party ledger and system of record confirming the event with precise data analytics. Future predictions for parametric contracts are made easy by using historical data API’s with history on demand data.

A progressing blockchain application
 Parametric insurance coverage is typically used for difficult-to-insure risks. For a coverage-type event, all clauses in the parametric contract can be encoded using smart contract language, allowing Blockchain to keep track of all claims. Insurer payouts and account adjustments are automatically performed based on event trigger confirmation by the trusted source. For a contract event, parametric contracts are not related to actual loss, but to actual event occurrences or certain index thresholds. The smart contract, combined with event triggers from off chain data sources (trusted & secure information) can be used to partially or fully to automate the operation of these policies (e.g. CAT swaps setup). Off-chain data sources (such as IoT device events) capture data on usage related to shared automobiles, homes, commercial spaces, etc. and offer on-demand utilization related policies. This gives rise to a whole new class of on-demand insurance products. Creating a no-touch, frictionless procedure can eliminate human error in the claims process and could potentially save insurers millions every year and produce a better customer experience. Blockchain and parametric insurance have limitless possibilities. Take the recent IBM and Maersk demo cross border supply chain solution on Blockchain Hyperledger as a starting point. In the future, if parametric weather data was integrated into the perishable product and the transportation life cycle, the entire supply chain readiness would take this to the next level of business readiness.

Disruption in the insurance industry
 Recently, we’ve been hearing about disruption in the insurance industry. The fundamental potential for disruption in the insurance industry is displayed in the vulnerability of both mature and emerging markets. Many risks are under-insured, leaving ample room for digital competitors and new business models. In some cases, old processes, limited customer connections, and complex products hinder some insurers and pave the way for precise differentiation by new entrants. Parametric insurance is another example of how this is happening. In 2018, expect to see an increase in parametric solutions as business evolves, untested value propositions, and new sources of revenue. Be on the lookout for my next blog examining “Why parametric contracts on blockchain makes sense”.

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Please send feedback and editorial input to:
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