

Digital Operations

RPA Is Just the Start: How Insurers Can Develop a Successful Intelligent Process Automation Strategy

From property and casualty, through life and annuity, insurers of all stripes need to transcend task-based robotic process automation and holistically embrace more powerful intelligent process automation to improve their performance in today's growth-challenged marketplace.



Executive summary

Insurers looking for profitability in an environment of low interest rates, market overcapacity, intensified competition and growing regulations are increasingly looking to automation as the answer. For many, robotic process automation (RPA) has appeared to be the best bet for cutting costs quickly. Insurance is a data-driven industry, with high-volume, repetitive manual processes. So if a software robot can do a human's job faster and better, without ever getting tired or bored, then switching to bots would seem to be a no-brainer, right? Well, not exactly.

Some insurers that have seen RPA as a cost-cutting tool capable of fixing any process have been disappointed with their results. RPA turned out to be an automation hammer when their process actually needed a Phillips-head screwdriver. While RPA can be a great way to start the process automation journey, insurers that want to achieve scale and benefits require a strategy that analyzes end-to-end processes and determines how they can best be optimized using a wide array of new automation technologies.

Intelligent process automation (IPA) enhances software bots with cognitive technologies that mimic human perception and judgment. These include artificial intelligence (AI), machine learning (ML, a more advanced type of AI in which a computer improves its performance without being explicitly programmed to do so) and automated case management. These solutions can automate a wider range of activities and result in greater cost reductions than

bots alone. IPA also offers a wide range of other benefits, including improved efficiency, quality, compliance and customer experience.

But IPA isn't proving to be an easy transformation for the industry. In our experience, too many insurers see robotics as a silver bullet for reducing headcount and improving profits. While RPA can be a low-cost tool to achieve quick results, it is not a strategy.

Insurance companies that approach automation as part of a continuous improvement strategy central to their business objectives, rather than as a stand-alone cost-cutting IT initiative, have the opportunity to realize benefits that fuel long-term growth.

Insurers need to develop a holistic approach to automation that includes system modernization and process transformation, with operational executives working alongside their IT counterparts. Those making the difficult decisions of what to automate and which tools to use should work together to develop a deep understanding of both the processes being considered for automation and the tools capable of replacing or assisting employees.

Automation is not going to be easy for insurers and their employees. But companies that develop a holistic strategy which combines RPA with cognitive technologies can cut costs now and achieve benefits that position them for success in the years ahead.

IPA will allow insurers to automate not just mundane tasks or parts of a process, but end-to-end business operations.

Why Insurers Have to Get Automation Right

Automation is poised to transform an industry where many employees perform repetitive, mundane tasks using structured data. IPA is an approach that combines robotics with traditional workflow engines (either in a core platform or as a stand-alone) alongside advanced cognitive technologies like AI. For example, robotics could be used to eliminate some manual tasks in a traditional claims workflow while an AI engine flags some claims for potential fraud. A case management tool can then ensure that the potentially fraudulent claim is managed effectively to closure.

Automation will eliminate many jobs while those that remain will offer higher value to the customer. Agents freed from data entry and documentation tasks will be able to deliver hyper-personalized, higher-quality customer service, aided by sophisticated data profiles, recommendations and even empathy coaching, all generated in real time.

Both life and annuity (L&A) and property and casualty (P&C) insurers seeking the benefits of automation need to develop a holistic, customer-centric approach to IPA. Over the next few years, RPA and more advanced cognitive technologies will merge and integrate.

For example, if ML is added to a bot, the software will continually improve at performing a task. Guidewire's predictive analytics tool uses both RPA and ML to assess claims in real time, flagging unexpectedly large or suspicious submissions, fast-tracking small claims and managing workflow.¹ Amelia, IPSoft's virtual agent, is being used at insurers like MetLife and Credit Suisse to combine ML with natural language processing to make decisions based on real-time conversations and suggest ways she can improve her performance.²

IPA will allow insurers to automate not just mundane tasks or parts of a process, but end-to-end business operations. Companies that fail to effectively automate their processes will have difficulty achieving long-term growth.

Finding the Right IPA Capabilities

Comparing the many IPA tools available to insurers can be overwhelming. A good starting point is categorizing IPA technologies into three main capabilities, realizing that as tools advance, these abilities will be integrated. (We cite leading vendors to illustrate the types of tools available, but we are not evaluating or recommending any of these automation providers.)

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Ability to perceive:

- » Al can provide insurance carriers, auto salvage firms and recyclers with a damage estimation platform. Using advanced image analysis and predictive analytics tools, carriers can provide instant damage estimates and processing of claims based on uploaded accident photos, reducing cycle time and expenses by over 50% in our experience. Similarly, salvage firms can quickly assess incoming total loss vehicles and provide instant guaranteed salvage bids to carriers, greatly increasing throughput and profitability.
- » Recognizing and understanding human speech with voice recognition software, which has an error rate of 6%, about the same as the average person.³ Many insurers are offering Alexa skills to allow users to request quotes, check account balances or obtain other information.⁴
- » Mimicking human visual perception with computer vision or image recognition analysis. Mitchell helps insurance companies improve repair estimates by using computers to analyze photos of damaged vehicles.⁵

• Ability to decide:

- » At a large P&C insurer, we built multi-class classification algorithms to deduce the part of body, detailed part of body, cause of injury and nature of injury from loss descriptions. These fields are essential to register a worker compensation claim as mandated by U.S. states. We were able to achieve 80% accuracy, which enabled straight-through processing to a critical first notice of loss (FNOL).
- » Improving performance on a task without being explicitly programmed through ML. Shift Technology's fraud detection tool has grown increasingly powerful by analyzing more than 100 million P&C claims.

Ability to act:

- » Performing repetitive structured tasks like data entry with RPA or software bots created by leading vendors such as UiPath and Blue Prism. In total, over 200 insurance organizations have already launched RPA projects.⁶
- » Automating core insurance platforms, case management and workflow systems with out-of-the-box solutions from top vendors such as Guidewire or Duck Creek. Insurers can also use tools like Appian or Pegasystems to create customized applications around any business process. Some vendors have added AI to robotics to automate unstructured processes via ML pattern recognition algorithms.

Quick take

Conducting a Process Automation Checkup

Insurers can accelerate their automation initiatives and better quantify benefits by using the business capability models or reference architecture developed by the Association for Cooperative Operations Research and Development (ACORD) to define standard insurance industry activities. The models provide insurers with a baseline from which they can measure any deviations in their own processes.

Using the ACORD industry models promotes automation in three ways:

- **Out-of-the-box automation products** are often built on ACORD standards, which allows many insurers to use them with no or minimal customization.
- Data exchange with external stakeholders becomes easier if all platforms use ACORD standards.
- Data exchange within multiple internal systems also becomes easier if all platforms use ACORD standards.

For example, Swiss Re, the global reinsurance company, used ACORD electronic messaging standards to automate back-office accounting and claims processes. Swiss Re said it was able to reduce its average message turnaround time to one to three working days, boosting efficiency as much as 60%.⁷

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6 | RPA Is Just the Start. How Insurers Can Develop a Successful Intelligent Process Automation Strategy



Developing an Effective Automation Strategy

How should insurers analyze the capabilities of new technologies to determine the best way to improve their processes and realize benefits? We advise an integrated, customer-centric approach to IPA that includes the following steps:

- Analyze the process you want to improve holistically, from end to end. Senior executives making
 automation decisions need a deep understanding of the process from end to end. Take a customer-centric view of the process whenever possible, so that automation enhances the customer
 experience. Cognitive technologies are capable of integrating data with insights from behavioral sciences to anticipate and fulfill a customer's needs. For example, clients interested in self-service can be
 routed to an online portal, aided by a chatbot powered by ML and natural language processing, while
 other clients are sent to human agents coached by Al tools. Companies that look to automation solely
 to cut costs will miss opportunities to grow and retain customers through better service.
- Analyze how various types of automation can enhance your process. In addition to a deep understanding of the process, executives must also fully know the capabilities of the automation tools on the market. Any insurer considering robotics should evaluate whether it might be enhanced with more sophisticated cognitive tools such as AI or automated case management.
- Optimize your process as you automate it. Automating a poorly designed, fragmented process will lead to disappointing results. We have found that roughly one-third of processes being reviewed for automation require changes beforehand. This includes system changes, standardization and consolidation of processes, technology interventions and Lean strategies. Whenever possible, eliminate unnecessary work and/or actors. A simple change such as making an optional field on a form mandatory can allow a bot to process it.



- Integrate front- and back-office processes, putting customers at the center. A holistic approach to automation integrates the customer-facing part of a process with the back office. Automating a process may reduce costs or ease workloads, but it's important to consider the impact it will have on the customer.
- **Prioritize your processes in alignment with business priorities.** Is growth or cost reduction most important to your company? The top goal for many insurers tackling automation is cutting costs, largely by reducing employees. This minimizes many other automation benefits (see below) that can foster long-term growth.

Once business objectives are analyzed, an insurer can evaluate which processes are causing the most pain. For P&C insurers, it might be claims; for L&A companies, business intake might be the most important process to tackle first. Consultants or Al tools can help companies determine which processes offer the most potential for generating value through automation.

- Look beyond cost reduction. Yes, automation can result in dramatic cost savings by reducing headcount and accelerating cycle times. But it also offers a host of other important benefits that can improve profitability and position a company for long-term growth. These include: improving the customer experience with faster, more intuitive service; improving quality through reduction of operational errors and human biases; enabling sales through personalized marketing; and improving compliance reporting with greater data capture.
- Establish an automation center of excellence. An automation project should not be done ad hoc, but rather as part of an integrated strategy supported by both the business and IT functions. An automation center of excellence (CoE) will help ensure that automation is just one aspect of a mature continuous improvement strategy. This allows an insurer to take automation to scale instead of hitting a roadblock after automating a few processes.

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Avoiding Automation Snags

Some insurers that have moved quickly to automate have been disappointed with the results. Below are some common pitfalls to avoid that can prevent insurers from achieving the benefits they want.

- **Don't run an automation program in a silo.** Centralized control and robust governance of all automation programs will help ensure that maximum benefits are generated. Insurers should focus on a well-defined process to identify opportunities, quality development and reliable operations. These elements collectively are far more important than any particular tool. Developing an automation CoE is critical for coordinating projects, analyzing results and applying lessons learned.
- Don't assume FTE savings. While automation will make certain tasks more efficient, it is often difficult to eliminate full-time positions when employees devote only a portion of their time to the process being automated. Return on investment often comes from reducing the number of new hires or from enhanced services. It is critical to start with a concrete plan to realize efficiency gains by documenting how many people touch a process and how much of it can be automated.
- Don't focus on technology first and only later on people. Automation is an enormous transformational shift for insurance companies and their employees. Successfully realizing benefits requires end-to-end change management that includes leadership engagement, communications and training. Developing a change strategy at the start of any project will greatly increase the odds of success.
- Don't look to RPA as a silver bullet. No single automation tool can solve every problem. Bots should be viewed as part of a broader automation strategy that includes system modernization, process transformation and cognitive technologies such as Al.
- **Don't ignore scale.** Implementing hundreds of bots in various business lines can make it difficult to integrate automation across the organization. To effectively scale automation efforts requires a formal operating model with centralized control, strong governance and structured data.
- Don't discount the operational component. Just like any other IT system, bots and cognitive technologies need to be managed both technically and operationally. An impact analysis and change strategy can ensure these tools are maintained and updated as processes and applications evolve.



Using RPA for Quick Results

RPA can quickly add value for a company by performing repetitive, structured tasks governed by simple rules. A software bot can perform hundreds of sequenced actions day and night, with no errors or biases.

UK insurer Aviva reports the bots it uses for administration are 15 times as productive as humans.⁸ And a bot can cost an insurer as little as one-third the cost of an offshore FTE and one-fifth the price of an onshore FTE.⁹

Because many insurers are burdened with aging, duplicative legacy systems, RPA can be an ideal solution because it's deployed on top of computer systems and applications. A bot simply imitates human keystrokes and mouse clicks, with no need to replace or integrate complex IT infrastructure.

Roughly one-third of the insurance industry processes we assess for clients can easily be automated by robotics, offering a fast return on investment. For example, bots can dramatically reduce the time it takes to process a claim by inputting FNOLs, notifying loss adjusters and assigning the case to claims handlers. RPA can automate a wide range of insurance processes, but we have found that about 70-80% of RPA investments by insurers focus on making claim and policy processing more efficient.

New business/underwriting also contains many processes that can benefit from bots taking over human tasks, such as gathering and processing applicant data from internal and external sources to assess risk. An Oxford University study found that insurance underwriting is one of the most likely professions to be replaced by bots and Al.¹⁰



We are helping leading insurers deliver rapid ROI with robotics solutions. Examples include:

- A top 10 U.S. P&C insurer automated 28 processes spanning all lines of business, creating 61 bots. Results included a \$2 million savings run rate per year, 50% reduction in average handle time for its call center, 132 FTEs benefit delivered, a 50% increase in throughput and 99% accuracy in transaction data processed.
- A P&C company transformed a new business process that involved 18 FTEs using multiple systems to help underwriters approve new submissions and create quotes. A bot cut the number of employees needed for this process in half, improved accuracy and helped underwriters achieve 100% compliance with the required turnaround time.

While RPA can be a low-cost solution offering quick results, insurers must rein in unrealistic expectations. All too often, we have seen executives launch an RPA initiative with the goal of completely automating their back-office processes. But many processes are not good candidates for RPA. (See the Quick Take, "How to Build a Bot.") Even for those that are, our experience shows that 25-30% of the process will involve exceptions requiring human intervention.

Some insurers have been disappointed in headcount reductions achieved through RPA. The problem often lies with automating a fragmented process. If eight full-time employees devote only a portion of their time to a process, then automating it might not eliminate positions since the company cannot eliminate a fraction of an employee.

The typical lifecycle of a bot is 18 to 24 months, during which time it will require maintenance and possibly upgrades.

QUICK TAKE

How to Build a Bot

Insurers should follow a disciplined process to design and launch an RPA bot that includes the following steps:

 Discover: The business should analyze and prioritize processes to identify those that can gain the most value from software bots. It's important to focus on the business problem, with RPA as one aspect of a continuous improvement strategy that includes all types of automation. Automation should never be looked at purely as an IT initiative.

If an insurer can answer the following key questions with a yes, then the given process is a good candidate for RPA:

- » Is the process repetitive?
- » Is it highly structured (rules-based and standardized)?
- » Does it require no human judgment?
- » Are the underlying systems stable?
- » Does it involve many people?
- » Is it high touch?
- » Is it high volume?

Typically, it's advisable to first build the bot at a smaller scale or set of functions to help the insurer understand how automation works in its environment.

- **Diagnose:** Processes should then be assigned to one of three main categories:
 - » Those that can immediately be automated through robotics.
 - » Those that have RPA potential but require reengineering. We recommend assessing each process for redundancies and applying Lean methodology to identify opportunities for streamlining before automating.
 - » Those that should be left alone because human interaction is required.

The benefits from automation should be validated before moving into the design phase.

- Design: The processes chosen should be mapped out in minute detail down to the keystroke level, considering both business and technical requirements. It's particularly important to analyze exceptions and variations, understanding that every process cannot be fully documented. Processes should also be compared to standard industry models. Once the process is thoroughly documented, technical experts can design the bot.
- **Deploy:** An IT team determines hardware and software requirements, assembles the bot, trains it, identifies defects and fixes them. After the bot is validated, it can be deployed. Typically, it's advisable to first build the bot at a smaller scale or set of functions to help the insurer understand how automation works in its environment. Then the robotic process can be operationalized and scaled using a list of key performance indicators to measure impact. Bots that aren't functioning properly should be fixed and redeployed quickly.

The typical life of a bot is 18 to 24 months, during which time it will require maintenance and possibly upgrades.

An automated case management system can trigger a task that a bot executes quickly and consistently. The goal is to create an environment where business rules are automated while humans resolve the exceptions and add value for the customer.

Enhancing Robotics by Automating Key Platforms & Business Systems

Companies can amplify their RPA solutions by automating other aspects of their operations, such as their core insurance platforms, case management and workflow tools. Leading vendors such as Guidewire, Duck Creek and Oracle Insurance Policy Administration allow insurers to automate a bundle of industry-specific business processes. Key functions can be standardized across a company, including underwriting, claims processing, policy administration, sales management, customer service and predictive analytics.

Many of these solutions can be used right out of the box if insurers develop business capabilities in adherence with the ACORD reference architecture. Vendors such as Pegasystems and Appian create customized applications for nonstandard business processes.

With these solutions, an insurer can link the work performed by a software bot to any key operational system such as case management, which choreographs multiple processes by different actors. Most case management tools can also automate workflow, which manages the steps of a specific process. Automated software integrates tasks performed by both bots and humans, managing handoffs and tracking an end-to-end process in real time.

Right now, most insurers have department-focused case management systems, but automation provides tremendous opportunities to put customers at the center of business processes and enhance their experience. An automated case management system can trigger a task that a bot executes quickly and consistently. The goal is to create an environment where business rules are automated while humans resolve the exceptions and add value for the customer.

Cognitive Technologies: Al, ML, Chatbots and Computer Vision

While RPA mimics humans performing mundane tasks such as entering data or notifying policy holders, much of the work insurers do requires AI in which intelligent machines achieve a cognitive understanding of how humans work. As mentioned above, ML is a more advanced type of AI in which a computer gets better at a task over time, without being explicitly programmed. These cognitive technologies can help employees make better decisions, provide enhanced customer service, analyze claims for fraud, assess risk and scour data for predictive analytics.

Yet, insurers remain more skeptical of the benefits of Al. A 2018 Cognizant survey of companies in the United States and Europe found that only 29% of insurance executives said their company expected

major or significant benefits from AI in increased efficiency/lower costs, compared to more than half the executives in other industries.

Al powers chatbots, or cognitive agents, that mimic human conversation. In addition to always being on, chatbots mine customer data for hyper-personalized interactions and customized coverage. Chatbots use NLP and sentiment analysis to understand not just what customers want, but their moods. Advanced cognitive agents can even resolve problems, upsell customers and learn on the job. While chatbots are used for text exchanges, customers may soon be speaking with virtual assistants. Google is reportedly talking to a large insurance company about launching its computer-generated voice assistant, Duplex.¹¹



Al can also help human agents become more

empathetic. MetLife says software from Cogito that analyzes call center conversations has increased customer satisfaction while shortening calls. Agents are prompted to improve their responses based not just on what the caller is saying, but on their tone and pacing.¹²

We used AI to improve the FNOL process at a leading P&C insurer. After analyzing thousands of calls to identify the most commonly repeated activities, we built a chatbot to capture these processes automatically and provide recommendations for service representative dialogue. The solution reduced call costs and the average call length by about 20% and increased the voice-to-text transcription rate from 67% to 92%.

U.S. insurers Allstate and Farmers use image recognition software or computer vision to settle auto claims more quickly. Farmers used a huge database of windshield damage photos to train software to determine repair costs instead of requiring adjusters to look at the vehicles in person.¹³ Allstate reports it is paying claims in seven or eight hours, down from a week, by allowing drivers to upload pictures of their damaged vehicles.¹⁴

ML is making the science of predictive analytics more reliable. Progressive Insurance collected billions of miles of driving data by giving its drivers discounts for using its mobile app, Snapshot. With so much data, Progressive turned to ML algorithms to improve its predictive modeling.¹⁵

Our team combined big data, predictive analytics and ML to improve policy underwriting for a global reinsurance company that previously used a generic risk model for drivers. By integrating demographic, social and geospatial data on accidents with the reinsurer's own internal data, we were able to create a risk score for individual drivers that could be inserted back into the underwriting model. This improved underwriting efficiency, reduced total underwriting time, and increased case acceptance percentage and revenue.

As exciting as these technologies are, they won't work effectively without structured and accurate data. All too often, insurance company data is siloed in legacy IT systems where it can't be easily shared or integrated. It will take data governance to collect and archive data so it can be used effectively. Companies need to consider their desired future state, develop use cases and put a structure in place to collect the necessary data.

16 | RPA Is

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Customer Care Done Right with Real-Time Al

A U.S.-based global P&C carrier was plagued by high handling times at its call center. Since only 40 of roughly 8,000 calls per month were reviewed, however, the insurer lacked insight into how agents could improve performance. We worked with IBM's Al tool, Watson, to analyze caller sentiment in virtually real time, using language analytics that included diction, word choice and tone. The goal was to provide agents with guidance throughout their calls on how to respond with empathy, relevant questions and the information the caller needed.

Real-time recordings were translated into text, then Watson was taught how to recognize common call elements and the steps on the insurer's call checklist. A dashboard was created that showed agents how to proceed correctly through a call. With speech analytics applied to calls as they happen, the checklist is automatically updated to show which tasks have been performed and which remain.

Supervisors can now monitor all 8,000 monthly calls while slashing their review time as much as 40%. Agents have much deeper insights on their performance while obtaining real-time personality profiling and conversation cues. The results are expected to be shorter calls and improved customer satisfaction.

Start. How Insurers Can Develop a Successful Intelligent Process Automation Strategy

The Human Element

While IPA promises to improve many jobs by freeing workers from repetitive, tedious tasks, the result will be significantly fewer positions required for many processes. McKinsey predicts up to 25% of full-time positions in insurance will be consolidated or reduced over the next decade, with positions in operations and administrative support hardest hit.¹⁶ An industry facing such a huge shift in machine vs. manpower needs to devote significant resources to guiding employees through this transformation. Employees will need to learn how to work in a different way alongside bots and Al-powered technologies. How will humans intervene to handle exceptions to a newly automated process? How will bots and humans hand off tasks in a workflow?

Insurers must develop a comprehensive change management strategy that helps employees understand the need for automation and how it will impact their work. Prosci research finds that initiatives with excellent change management are six times more likely to be successful than those with poor change management.¹⁷ We recommend allocating at least 15% of any automation project budget to change management and training.

Both senior leaders sponsoring the change and middle managers need to communicate clearly with employees and listen to their concerns. When possible, employees involved in a process should help to optimize and automate it. Employees who see automation tools as problem solvers and understand how they work will be more receptive to the change.

While employees will need to be trained on specific technology and process changes for the tasks they currently perform, companies also should look to help their employees learn completely new skills.

Allstate, which eliminated 550 auto adjusters through automation, is investing \$40 million to train its remaining employees in new skills. "Artificial intelligence is going to rip through this economy like a tsunami," said Allstate Corp. Chief Executive Officer Tom Wilson in a Bloomberg interview.¹⁸

A Final Word

Executives who make decisions on automating their organizations must develop a deep understanding of both the capabilities of the available technologies and their end-to-end business processes. If an automation effort focuses on just one tool, such as RPA, benefits may prove disappointing. Instead, insurers should develop a comprehensive intelligent process automation strategy that considers how complete processes can be optimized with a variety of technologies. Expect AI to quickly become a standard feature for most tools as technologies converge.

Insurers should begin by aligning automation efforts with their business priorities. While automation will reduce costs, it has a host of other benefits that may be even more important for long-term growth. Consider how bots and cognitive technologies can work together to improve the customer experience, service quality, cycle times and compliance reporting. Focusing only on headcount reductions is shortsighted.

Insurers must realize these changes won't be easy for them or their people. Employees may resist change, even as their own jobs become more rewarding.

Developing an IPA CoE is critical for insurers looking to coordinate their efforts and apply learnings from one initiative to the next. Automation is not an IT project; it's a comprehensive business strategy that is absolutely critical for every insurer over the next few years.

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About Cognizant Insurance

Cognizant's Insurance Practice is one of the largest industry verticals that partners with insurers to evolve their business and technology landscape and enable end-to-end digital transformation. Thirty-three of the top 50 U.S. insurers and seven of the top 10 global insurers rely on us to help manage their technology portfolio across multiple business entities and geographies. We serve the entire range of lines of business within life, annuities, and property and casualty insurance. Our consulting-led approach, deep domain expertise and partner ecosystem enable clients to address the dual mandate of "optimizing the business" while "driving digital at scale." From large-scale core system transformation to adoption of cutting-edge technologies like artificial intelligence, analytics, blockchain, automation and machine learning, we partner with insurers to envision and build the digital insurer of the future. Our partnership includes helping insurers build their own technology platform with the capabilities they need or providing one for them, incorporating digital solutions to achieve immediate results. Learn more at http://www.cognizant.com/insurance.

About Cognizant

Cognizant (Nasdaq-100: CTSH) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. Our unique industry-based, consultative approach helps clients envision, build and run more innovative and efficient businesses. Headquartered in the U.S., Cognizant is ranked 195 on the Fortune 500 and is consistently listed among the most admired companies in the world. Learn how Cognizant helps clients lead with digital at www.cognizant.com or follow us @Cognizant.



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