# Novarica Research Quarterly Q2 | 2017

## Contents

Welcome to the *Novarica Research Quarterly!* Each issue provides a summary of recently published reports, including studies of insurers’ technology experiences, capabilities, and plans from our Research Council; business and technology trends; CIO best practices; vendor information in our Novarica Market Navigators; and recent webinars and presentations. All of the research summarized here is available for download by our advisory clients at [novarica.com](http://novarica.com). Research reports can also be purchased individually.

If you’d like to learn more or arrange a conversation to discuss any of these topics with our senior team, please contact us at inquiry@novarica.com or 617-342-8100.

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Artificial intelligence, disaggregation of value, and the ability of IT to create business value were some of the main topics of discussion among insurer CIOs and their teams at the 10th Annual Novarica Insurance Technology Research Council meeting. As technology drives fragmentation of value in both the insurance value chain and in insurance products themselves, insurer CIOs are striving to balance the challenges of yesterday with the needs of today and the opportunities of tomorrow.

Facing innovation pressures from without and within; growing demands for improved data, digital, and core capabilities; and the ongoing needs of cybersecurity, insurer CIOs are driving value for their companies and positioning them for the future.

**Key Points and Findings**

**Artificial intelligence is coming.** 10-20% of insurers are already using machine learning to improve rating algorithms.

**Driving innovation, leveraging InsureTechs, and meeting the needs of Millennials** are creating additional pressure on inflexible legacy environments and organizational practices.

**Security is moving to the front burner,** driven in part by NYS regulations that require a designated Chief Information Security Officer.

**Topics**

- **Innovation and transformation**, including lessons from InsureTech, formal innovation programs, and core systems transformation.
- **Product-specific challenges**, including how regulatory and market changes are driving strategy.
- **Compliance pressures on security and BCP/DR** as state regulators get more aggressive.
Enabling innovation is a high priority for insurers, as customer expectations continue to be set by other industries, and new entrants stand to disrupt existing business models. However, innovation initiatives are still at an early stage for most insurers.

This report examines the approaches that insurers are taking to drive innovation, how widespread these approaches are, and how insurers are judging the results.

**Topics**

- **Formal innovation programs**, including R&D labs and education and evangelism activities.
- **Venture investing**, either directly or in partnership with existing funds.
- **Culture** and the challenges of driving innovation in established companies.

**Key Points and Findings**

More than 40% of large insurers are expanding their innovation programs and venture-investing activities. Smaller insurers are less active, constrained by resources and—in many cases—culture.

**ROI metrics are not widely used.** Hard ROI is not the primary measure of success. Gains such as exposure to innovative technology and business processes for eventual operationalization seem to be the primary goals of most companies’ innovation programs and investments.

**P/C insurers tend to have better-developed innovation initiatives.** Greater competition, a faster-moving market, and a more obvious application of many new technologies are driving more aggressive experimentation in P/C than in life/annuity.
Novarica’s sixth annual best practices case study compendium includes more than 30 detailed examples of recent IT initiatives that delivered real business impact. Each case details business goals, project sponsor, team structure, project timeline, tools and technology used, challenges faced, success factors, and business results delivered.

The diverse group of winners shared the common characteristics of all impactful projects: clear articulation of target value and benefits, consistent executive support, effective multi-stakeholder communications during the project, and swift resolution of inevitable challenges.

### 2017 Winners
- **AF Group** for its core systems project (core)
- **American Family** for its self-service analytics initiative (data)
- **COUNTRY** for automating life underwriting (core)
- **EMC Insurance** for drone image recognition (data)
- **Grange** for its Amazon Alexa initiative (digital)
- **Homesite** for its sales portal (digital)
- **MetLife** for its enterprise analytics program (practice and infrastructure)
- **The Doctors Company** for its M&A integration framework (practice and infrastructure)

### Key Points and Findings

**Core** systems projects, whether they’re replacements or expansions, are creating real value in speed to issue, straight-through processing, and improved service levels.

**Data and analytics** initiatives are mostly focused on creating better and faster access to insight for knowledge workers, but emerging technologies and AI are starting to be used as well.

**Digital** initiatives are streamlining and improving communication and access to information for all stakeholders, primarily through effective usage of well-proven technologies.

**IT practices and infrastructure**, while challenging to secure funding for due to indirectly realized benefits, can be the key to unlocking value and enabling future innovation.

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**Executive Briefs & Reports**

### MEDTECH AND P/C INSURANCE CLAIMS

**APRIL 2017**

Advances in medical technology are poised to transform the health care industry, from diagnosis to care planning, treatment, and recuperation.

Each year brings new applications of digital tools and data analysis, such as AI-augmented diagnostics and wearable recovery monitors.

As traditional care-delivery processes are disrupted, workers’ compensation and other casualty carriers are grappling with the effects of this disruption on their industry—from changing cost structures and incentives to new opportunities for efficient care management.

Casualty carriers may want to consider these developments in their technology vision and strategy in order to reap the benefits of newly enabled efficiencies and remain competitive in a changing health care landscape.
IMPLEMENTING MACHINE LEARNING: USE CASES AND BEST PRACTICES
MAY 2017

Machine learning is a powerful tool for insurers looking to improve their capabilities with predictive analytics and data processing, and carriers are beginning to see benefits from pilot programs in rating and claims. But implementing machine learning successfully isn’t as simple as turning a business process over to AI; it requires a combination of data science expertise, an understanding of how machine learning can improve the process and the resources that execute it, and a willingness to think through business questions in new ways.

This report examines machine learning applications to identify general best practices for implementing machine learning in business functions.

Topics
- Defining machine learning from a business process perspective. Carriers should think about how machine learning will improve processes and who will benefit.
- Use cases for machine learning. Success stories of machine learning applied across the value chain, especially in claims and underwriting.
- Common implementation pitfalls and lessons learned.

Key Points and Findings
Machine learning won’t replace humans in the decision-making process. But it will become a vital tool for helping insurers make the best possible decisions with the best possible data.

Machine learning is moving from buzzword to production. Early adopters have already initiated pilots that are generating value.

Early adopters will see real value going forward. Machine learning algorithms improve over time, so early adopters will enjoy benefits not only in business process improvement, but also in the performance of their tools.

THE DIGITAL EVOLUTION OF P/C CLAIMS
MAY 2017

Digital transformation is gaining significant momentum in the insurance industry. Other industries have set a standard for customer experience, and today’s digitally-immersed consumers have grown accustomed to interacting with a company anytime, anywhere, and from any device. To supplement these expectations, this new digital land of opportunity enables insurers to leverage data from sources such as telematics, wearable devices, sensors, GPS, and weather.

Insureds are carrying their digital expectations to the claims experience. Claims is an especially crucial touchpoint through which insurers can demonstrate their value. Carriers can ensure a positive claims experience and gain internal efficiencies by enhancing the digital capabilities that underpin this interaction. This brief focuses on the impact of digital in insurance claims and provides CIOs and their business partners with insight on key elements of digital claims evolution.
Specialty insurance is a sector of the insurance industry defined both by specialization in risk analysis and product design and a value chain with highly specialized buyers, sellers, and intermediaries. The process efficiency and automated decision-making benefits of technology have had less obvious value to specialty insurers than to others. But new developments in technology, especially in analytics and IoT, are starting to shift specialty insurers’ mindsets.

Specialty insurers are starting to realize that product innovation is inhibited by legacy systems and practices and that digital communications can be used to enhance, rather than replace, high-value relationships.

New York State has taken the lead in implementing aggressive cybersecurity regulations, and other states seem likely to follow suit.

Under these new regulations, insurers will be required to have a formal CISO, to destroy nonpublic personal information, and to implement encryption-at-rest. They will also face heavy new burdens of documenting policies and performing assessments, among other things.

This brief is designed to familiarize insurers with some of the key issues and challenges that these new regulations present and provides some concluding thoughts on how best to prepare for their impact.
INDIVIDUAL LIFE
APRIL 2017

Individual life continues to be a competitive sector, with technology playing an ever larger role in insurers’ ability to attract, retain, and profitably serve clients. Individual life carriers are focusing on product differentiation, speed to market, reducing operational costs, and better management of underwriting risk.

This report provides an overview of individual life carriers’ business and technology issues, data about the marketplace, and more than 50 named examples of recent technology investments by insurers.

Topics
• Recent market and financial trends.
• Active insurer landscape.
• Technology issues, priorities, and examples by functional area.
• Top technology priorities for 2017 and beyond.

Key Points and Findings

Product innovation and speed to market are key to growing market share. Improved product modeling and management capabilities are key to revenue growth in a highly competitive market.

Carriers are improving customer experience with straight-through processing (e-apps, e-delivery, e-signature) but still have work to do, especially in post-issue service. Efforts to improve customer service are driving increased interest in document management/CCM solutions. Post-issue service capabilities lag comparable functionality in other lines of business.

Successful carriers are expanding use of business intelligence and analytics solutions to recognize and analyze market trends, product adoption, and producer performance. Some carriers are using wearables to gather health data from customers (with their permission) in exchange for discounts and rewards.
To compete in the future, personal lines carriers are developing new competitive and innovation strategies. They are investing in InsureTech companies to accelerate learning and to diversify R&D efforts, deepening their knowledge of the customer through analytics and improving self-service capabilities on mobile platforms. Core systems upgrades remain a high priority with regards to establishing a base platform for future capabilities. Technology is playing an increasingly large role in insurers’ ability to attract, retain, and serve clients, agents, and brokers profitably.

This report provides an overview of personal lines carriers’ business and technology issues, data about the marketplace, and 72 examples of recent technology investments by personal lines insurers.

**Topics**

- Recent market and financial trends.
- Active insurer landscape.
- Technology issues, priorities, and examples by functional area.
- Top technology priorities for 2017 and beyond.

**Key Points and Findings**

**Self-service and transactional capabilities matter.** Agent and customer portals continue to be viewed as key elements of acquiring and retaining customers.

**Predictive analytics continue to be used across the enterprise.** Analytics are being applied to many aspects of the insurance process beyond pricing and loss prediction.

**Effective and efficient core system workflows are vital to lean operations and rapid product launch.** Carriers that have completed these investments are accelerating expansion of their digital and data capabilities.
Individual annuity carriers are focusing on modernization of policy administration systems, as well as improvements to agent portal functionality, business intelligence, and risk management operations. Individual annuities remains a highly competitive category, with technology playing an ever-larger role in insurers’ ability to attract, retain, and profitably serve clients.

This report provides an overview of individual annuity carriers’ business and technology issues, data about the marketplace, and more than 50 examples of recent technology investments by individual annuity insurers.

Topics
• Recent market and financial trends.
• Active insurer landscape.
• Technology issues, priorities, and examples by functional area.
• Top technology priorities for 2017 and beyond.

Key Points and Findings
Self-service and transactional capabilities are required to manage expenses, but AI-related technologies are needed to build engagement and address projected increased producer workloads. With a push to lower fees, producers need to grow their client base to make up for lost income, but an increased compliance workload makes serving that base challenging.

Speed to market and product design are vital for sales growth. Business intelligence and core systems investments continue to be critical in improving time to market and product flexibility.

Carriers must be prepared for equity market shifts. Technology to support pricing, reserves, capital management, and statutory reserving are also key.

Regulatory changes will impact the annuities market in the near term. The DOL regulations will have implications for both distributors and carriers.
CIO Checklists

BUSINESS CONTINUITY PLANNING AND DISASTER RECOVERY
MAY 2017

- Prepare for the next event, not the last one.
- Plan for resiliency beyond core systems and data.
- Consider partner relationships, third-party providers, and external services.
- Question assumptions about ancillary resources.
- Expect challenges in setting up in an alternative data center and coming back from one.
- Remember that it’s also about people.
- Ensure rapid access to documentation.
- Plan early and practice frequently.

Insurer CIOs should take notice of the recent New York regulation requirement to file both a business continuity plan and a disaster recovery plan by June 16, 2017. This new regulation further drives the importance of well-designed and tested plans that cover both the ability to maintain critical servicing to customers and the recovery of systems. There are many technical and general design considerations based on overall business strategy that need to be understood when developing these plans.

This brief offers an understanding of a well-designed business continuity plan and disaster recovery plan along with a checklist of key considerations for the plans given the evolved and continuously changing IT environments of insurers.

MASTER DATA MANAGEMENT IN A BIG DATA WORLD
JUNE 2017

- Determine the senior level project sponsor and who pays.
- Establish organizational structure for data.
- Link Master Data Management (MDM) architecture to business goals and objectives.
- Create policies around data and how the data should be managed and controlled.
- Determine what system or process creates the official data of record.
- Supplement internal data with enriched data and external/internal big data.
- Deploy multi-year MDM programs in an incremental fashion.
- Consider a cloud-first strategy.

Data is a key enabler of the insurance industry’s evolution into a fully digitized provider of risk services focused on customer, not product. Once data is collected, the CIO becomes responsible for its storage, management, and use. This is highly complex in today’s world; the data is both structured and unstructured and is controlled by various legal and regulatory considerations as well as internal security and risk policies.

MDM is ultimately a program of work involving an assessment of business needs, a data-sourcing strategy, a data-cleansing strategy to address quality, an architecture and integration initiative, data documentation and classification, as well as an organizational evolution for data governance and ownership.

This report provides a checklist for CIOs and chief data officers on best practices in MDM for a big data world.
This report provides an overview of the stand-alone illustrations systems currently available to North American insurers. The report contains profiles for each of 10 vendor solutions, summarizing the vendor organization, technology used, differentiators, client base, lines of business supported, deployment options, implementation approaches, upgrades/enhancements, and key functionality.

Vendors included: CalcFocus, Ebix, EquiSoft, FIS, Insurance Technologies LLC, Intellect SEEC, iPipeline, Novinsoft, StoneRiver, and WELIS.
This report provides an overview of insurance GL/financials systems currently available to US insurers. The report contains profiles of each of six vendor solutions, summarizing the vendor organization, technology used, differentiators, client base, and key functionality. The information in this report was collected directly from the solution providers using a proprietary Novarica RFI or by collecting information from publicly available sources.

Vendors included: FIS, Microsoft, Oracle, SAP SE, StoneRiver, and Workday.

DISTRIBUTION/COMPENSATION MANAGEMENT SYSTEMS
JUNE 2017

This report provides an overview of the available stand-alone distribution and compensation management systems currently available to US insurers. The report contains profiles of each of 13 vendor solutions, summarizing the vendor organization, technology used, differentiators, client base, lines of business supported, deployment options, implementation approaches, upgrades/enhancements, and key functionality.

Vendors included: Aurea, Inc.; CallidusCloud; DXC Technology; Ebix Inc; FAST Technology; IBM; Infosys Limited; Majesco, Inc.; Outline Systems Inc; StoneRiver, Inc.; Vertafore; and VUE Software.
INSURANCE AND TECHNOLOGY IN 2017 AND BEYOND
APRIL 2017

In this 42-slide keynote presentation from the 10th Annual Insurance Technology Research Council Meeting, Novarica CEO Matthew Josefowicz reviews insurance technology trends.

BUSINESS AND TECHNOLOGY TRENDS GROUP INSURANCE AND VOLUNTARY BENEFITS
JUNE 2017

This webinar provides an overview of group benefits providers’ business and technology issues. Topics covered include recent market and financial trends with examples of active insurers and technology issues, priorities, and examples by functional area.
Popular Novarica Blog Posts

Novarica’s senior team blogs actively about new developments in the industry. Some of our most popular blog posts this quarter were:

**InsureTech Startups Through the Looking Glass: an “Outside-In” Approach to Customer Experience**

“InsureTechs are applying data analytics and machine learning techniques, along with simplified products and processes, to change the insurance purchasing experience. Meanwhile, incumbent insurers are also focusing on customer experience, but in many cases they are hindered by a cultural tendency to focus first on capabilities using an ‘inside-out’ approach. InsureTech startups provide interesting use cases in how to approach customer experience.”

**Lost-Income Coverage: an Insurance Product from a Real Customer Need**

“Too often insurance companies begin with the risk analysis before considering the consumer when selling a product. This leaves it to MGAs to establish programs that fill niches and are driven by specific demands. This is the opposite of almost all other industries, where consumer need is the driving force of product innovation. Insurers looking to build lasting customer relationships and find avenues for new growth need to think more like an MGA.”

**The Three Phases Insurers Need for Real Big Data Value**

‘More insurers are investing in big data and unstructured data environments, but many of these projects remain in the area of innovation,’ meaning that the intended ROI is not always clear. Even when insurers don’t have a specific goal or use case in mind, there’s a general understanding that the ability to process and analyze unstructured data will provide value over time. Like any large technology undertaking, it’s important to provide some key benefits sooner rather than later in order to convince the business to choose to fund the work.”

**Change is Hard... Ignorance is Not a Tenable Strategy**

“For every company, in every industry, meeting the challenges of changing markets and consumer preferences can be a tough row to hoe. The success of the present is based on the investments and decisions of the past. Making plans for the future can put those past successes, including customer goodwill and brand value, at risk. While startups and newer tech companies may be willing to take ‘big bets’ in part because the downside risk is seen as modest, mature companies face a different calculus.”

**Do Increasing Security Threats Have Your Head in the Clouds?**

[The] rise in data security risks is attributed to the adoption of cloud computing. I tend to disagree. What’s driving this rise in security risks is increased digitization of the insurers’ key business processes. As more connected devices perform more processes, the risk increases. Cloud computing vendors often provide better security than insurers themselves. This is because if they didn’t, they wouldn’t be in business.”

**Robots vs. Humans: Customer Service in the Age of AI**

“Most customers who call a contact center rather than using a mobile or web application are not looking for the kind of information that a computer can look up and read to them. Digital channels have already put this information in the customers’ hands. Customers who call are looking for help or explanations. What they’re really looking for is reassurance. Even ‘roboadvisors’ like Betterment are hiring human representatives to provide this.”

In addition, our weekly *News and Views* series, published each Friday, provides exclusive commentary on important news stories. Some of the topics our team has commented on this quarter include:

- Big data and IoT
- Artificial intelligence and machine learning
- Security regulations and plans
- InsureTech investment trends
- The future of driving
- Trends in L/H/A and P/C
Novarica helps more than 90 insurers make better decisions about technology projects and strategy through research, advisory services, and consulting.

We publish frequent, independent, in-depth research on trends, best practices, and vendors. Our research projects are directed by senior executive-level experts and leverage the knowledge of more than 300 insurer CIO members of our Research Council.

Our Strategy-as-a-Service advisory services provide on-demand phone and email consultations on any topic in insurance or technology. Our clients have told us it’s like having a team of experts down the hall for a flat annual fee that is a small fraction of the cost of a single employee.

Our consulting services include vendor selection, benchmarking, project assurance, and IT strategy development. They are based on our deep knowledgebase, extensive relationships, personal experience, and proven methodologies. Our clients get rapid, actionable insights and guidance delivered directly by our senior team.