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Allstate, Advisor Pro, and the High Stakes of Interpreting Ambiguous Data

As the senior vice president of strategic distribution at Allstate, a major legacy insurance company, Don Sands was leading an initiative to develop and integrate an AI-powered conversation guide, called Advisor Pro®, into its agents' point-of-sale (POS) systems. Advisor Pro was developed in response to new artificial intelligence (AI) capabilities that had emerged since the previous POS system was implemented, in the early 2000s. The previous system captured customer information by leading agents through a series of basic questions—for example: How old are you? What's your driving history? What kind of car do you have? The goal was to collect just enough data to answer two questions: Should I write this policy and, if so, what should I charge? Agents would read through the questions, fill out the information (or update their record if the requestor was already a customer), and provide a quote.

In contrast Advisor Pro used AI capabilities to power a "dynamic scripting" system that guided agents as they fielded inbound phone calls from potential customers. The goal was to streamline and simplify the process while helping agents understand the customers' needs more quickly. The system pre-filled the script with any basic data it might already have had about the customer, thus eliminating much of the tedium of agent-customer interactions and allowing agents to focus on more meaningful questions. The goal was to help agents give advice based on—and tailored to—customers' specific needs. After testing a prototype version of Advisor Pro in two states, Arizona and Virginia, Sands's team began testing a more refined version of the tool in nine states. The results would be measured against a control group of 13 states using the old system.

By the fall of 2019, the first batch of data from the test had begun to come in, showing mixed results. Fully implementing Advisor Pro nationwide would be expensive and—given the results to date—somewhat risky. Sands faced a decision: Should he continue tweaking and rolling out the tool nationwide, or should he abandon it?

Disruption in the Insurance Industry

Allstate, founded in 1931 in Chicago, was the fifth-largest writer of property/casualty insurance in the United States in 2019, writing $35 billion in direct premiums.[1] Its roughly 10,000 sales agents were independent contractors, meaning that Allstate couldn't dictate the manner or means by which they ran their business; their compensation depended on the outcomes they delivered. Although agencies were able to make their own decisions about the processes they used with consumers, Allstate had proven systems it could recommend, and it could ease the way for agencies to use them if they chose to. "When we find a process or tool that our data shows helps sales professionals become even more effective, I want to integrate that tool right into the technology and make it easy for our agencies to adopt," Sands said.[2]

One serious challenge that legacy carriers like Allstate faced was the recent disruption created by the "fintech" sector—i.e., companies that applied emerging technologies and AI capabilities to financial services. Specifically, they faced challenges from the "insurtech" sector, a subset of fintech that applied AI to the insurance business. For example, one insurtech startup used AI to scrape public records and fill in details about a home's construction once potential customers entered their address, thus streamlining and simplifying the process of applying for homeowners insurance.[3] A 2019 *Business Insider* report estimated that the insurance industry could benefit substantially from more effective use of AI, which could "drive costs savings of $390 billion across insurers' front, middle, and back offices by 2030" by making customer service more efficient, personalizing policies, and streamlining the claims process.[4]

Insurtechs aggressively promoted their speed and convenience over deep relationship-building between an insurance agent and the customer. The startup Lemonade, for example, which sold home and renter insurance solely through its apps and website, advertised that it was "insurance built for the 21st century" and promised "instant everything." Quotes and claims initially were handled by two bots, "Maya" and "Jim," who handed off the process to human agents only as needed. "[The quote process] couldn't be easier, or faster," read Lemonade's website, and its goal was

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1 "Top 10 Writers of Property/Casualty Insurance by Direct Premiums Written, 2019," Insurance Information Institute, http://www.iii.org/fact-statistic/facts-statistics-insurance-company-rankings.

2 All quotes in this case from Don Sands, Allstate's SVP Strategic Distribution, come from a personal interview with the case authors, June 5, 2020.

3 Omri Barzilay, "Hippo Insurance Launches a Mission to Redesign the Home Insurance Market," *Forbes*, April 26, 2017, http://www.forbes.com/sites/omribarzilay/2017/04/26/hippo-insurance-launches-on-a-mission-to-redesign-the-home-insurance-market.

4 Lea Nonninger, "The AI in Insurance Report: How Forward-Thinking Insurers Are Using AI to Slash Costs and Boost Customer Satisfaction as Disruption Looms," *Business Insider*, June 6, 2019, http://www.businessinsider.com/the-ai-in-insurance-report-2019-6.

"for the majority of simple property claims to be paid almost instantly."[5] Even other legacy carriers were emphasizing speed over agent-customer relationships. The long-running ad campaigns of legacy carrier Geico, for example, touted its quick turnaround and cost savings compared with that of competitors: "15 minutes can save you 15 percent or more on car insurance."[6]

Allstate, by contrast, had built its reputation on meaningful agent-customer relationships. Its advertising—for example, the "Mayhem" series, which featured an actor portraying the human embodiment of a variety of damage-causing hazards, from an inept car valet to a windstorm—underscored the idea that life is unpredictable. When disaster strikes unexpectedly, customers want to feel protected—and Allstate can provide an expert to help them assess their risk factors and choose the right kind of coverage. Its deep relationships with customers had also provided Allstate with a wealth of data and insights on customers' behavior and needs. Its ability to leverage and scale the learnings from this information gave Allstate versatility that its smaller competitors couldn't match. The company was committed to using a rigorous, evidence-based approach to provide customers with the level of service they desired—whether that meant expert advice on insurance coverage or a quick way to sign up for basic coverage.

Advisor Pro

Advisor Pro would allow Allstate to strike a productive balance between rapid responsiveness and giving customers informed, customized advice for their specific needs. Allstate wanted to fully embed the relationship-building process in the technology, making it easy for agents to become trusted advisers, with prompts that helped them serve customers' needs and answer their questions. "We wanted to move away from the old system, with very little process that we could support our agencies with, to one with very clearly defined processes," Sands said.

Advisor Pro used dynamic scripting technology, meaning that the answers customers gave helped make suggestions for products and coverages sound less formulaic and stilted. The idea was that, by getting to know something about customers and their situations, agents could recommend other insurance products that might help serve customers' needs. More broadly, customers would understand the value of insurance and their relationship with an agent and thus base their decision on something more than just the speed of the process or the price of the policy. If the new tool worked well, agents would quote more lines of insurance per household; the "close rate" would increase—i.e., more people would buy the insurance, and overall sales would increase.

The Rollout

Switching agents over to Advisor Pro would be a complicated, time-consuming, and expensive process—in part because insurance in the United States was regulated at the state rather than the federal level, so the tool had to be tailored to 50 regulatory regimes. Some states were extremely

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5 Lemonade, "Claims," accessed July 10, 2020, http://www.lemonade.com/faq#claims.

6 Eleanor Semeraro, "2018 Advertising Review: Top Brands by Spend, Impressions and More," *TV[R]EV*, January 10, 2019, https://tvrev.com/2018-advertising-review-top-brands-spend-impressions.

rigorous in their oversight of insurance carriers; others were fairly loose. This meant that rolling out a new tool nationwide could take from 6 to 18 months. New processes and technology were typically rolled out to Allstate agents in bundles of states—from 3 to 10 at a time, and new releases appeared each month or up to three months.

In recent years, Allstate had made serious investments in developing strong in-house analytics knowledge, training thousands of its managers on how to use analytics to make better decisions and be more effective business leaders. Because of this data-driven culture and because Advisor Pro used evolving technology that needed to be refined—and also because of the potentially enormous costs involved in a full rollout—Sands decided the best approach would be to rigorously test and tweak Advisor Pro on a very limited basis before deciding how to move forward. By late 2018, his team had a tool that was advanced enough for testing. About 20 agents in Arizona and Virginia volunteered to be part of the test. Over the course of 6 to 8 months, they used this Advisor Pro prototype while analysts on the development team fine-tuned and updated the tool. "We started our development with a very agile approach," Sands said. "You start small and get some quick feedback, and then you iterate on it and make it better and better."

In May 2019, Sands faced a decision: One option was to take the tool the Advisor Pro team had developed from the initial tests in Arizona and Virginia, perfect it over the next 12 to 18 months, then scale it up once it was functioning at 100 percent. A second option was immediately to roll out the tool, which Sands felt was about 80 percent complete, while tweaking and improving it on the fly. "Do I optimize it and get a great product—and then I have to optimize it only once?" Sands said. "On the other hand, if I think that this is a better product than the old tool, I want to get it out sooner, even if it's not perfect." He could roll out Advisor Pro nationwide and then "optimize it along the way." The enhancements would be incorporated after the nationwide rollout. Sands said that "some real tradeoffs" existed between quality and time.

In the end, Sands took a third path by creating a quasi-experiment that allowed for immediate, ongoing assessment of the results instead of an after-the-fact analysis of Advisor Pro's effect on sales. He began the rollout with a group of nine states—Arizona and Virginia plus Arkansas, Colorado, Kansas, Missouri, Oklahoma, Tennessee, and Utah. Another group of 13 states—in which agents still used the old sales tool—was selected as a control group. The experiment aimed to give Sands precise data by which to measure Advisor Pro's effectiveness: the test group's sales versus the control group's sales. He could then use these data, along with other insights gleaned from the limited rollout, to enhance and improve Advisor Pro before he rolled it out nationwide. Since the improvements could be incorporated before agents in most states began using the tool, this path had the potential benefit of efficiency and related time and costs savings.

The field test was complicated, however, because the insurance industry was inherently volatile, with multiple factors—including rate changes, product enhancements, and marketing campaigns by Allstate—affecting the sales volume. A change in sales in a state where Allstate recently had increased premiums, for example, might have nothing to do with Advisor Pro. The sales process was, according to Sands, the fourth or fifth most important factor that influenced sales. Thus, isolating its precise role in the results would be difficult. Allstate's analytics team tried to address

this problem in the way it constructed an appropriate control group to compare to the nine-state test group:

First, the analytics team determined when agents in each of the 50 states would get the Advisor Pro implementation. Technology constraints limited the rollout to approximately 5 to 10 states every two months. Factors such as complexity and sales volume determined the priority given to states in the schedule. The 20 states sequenced to receive Advisor Pro last were identified as potential control-group participants. This ensured they would remain in the control group for as long as possible, thus maximizing the test's duration.

Of the 20 candidate states, Allstate selected 13 with seasonal sales volume and growth rates that were historically similar to those of the 9 states in the treatment group.

By creating a control group that used the old sales tool for many months—and otherwise looked highly similar to the test group—Allstate hoped to get a reliable test of Advisor Pro's effectiveness.

Early Results and Decision Point

The stakes and potential costs of an all-in investment on Advisor Pro were high, both in terms of the implementation of the tool and its effect on sales volume. Sands imagined a nightmare scenario of rolling out the technology nationwide and then seeing a drop—rather than an increase—in agencies' policy sales. Even a 2 percent drop nationwide would dwarf what his team had spent thus far in developing the tool. Sands knew that rigorous evidence of Advisor Pro's effectiveness was the key to knowing whether to invest fully. He expected that the pilot's results would help him determine whether Advisor Pro was ready for broader release to Allstate's agencies or whether it needed further adjustment before that happened. "This was not a set-it-and-forget-it situation," Sands said. Although the test would give Sands solid data with which to compare results, it could not provide definitive answers to key questions, such as how he should tweak and improve Advisor Pro or whether Allstate's big-picture strategy of building a relationship of trust between agents and customers was wise. The answers to those questions could be informed by data—but they would remain, to some degree, a judgment call.

By the fall of 2019, results from the experiment were starting to come in. Although the data showed some distinctly positive trends in the data, the overall sales volume had declined, and agents using the new tool reported that it was glitchy. With this evidence in hand, Sands considered what to do next. Should he move forward with the plan of rolling out Advisor Pro in stages and tweaking it based on the accumulating data? Or was the decline in sales an indicator of a price too high to pay?