

WHITE PAPER

Preventing Water Claims: Understanding the value of smart home technology

Data-driven insights benefit carriers and consumers.

MAY 2020



Executive Summary

Smart home technology offers the promise of significant benefits for the insurance industry and its customers and has the potential to unleash a wealth of new business opportunities. Carriers are hopeful the data generated by Internet of Things (IoT) devices can lead to a more accurate and comprehensive view of risk and improve loss costs. And yet, so far they have not seen much evidence to back up these expectations.

In search of evidence of the predictive and preventative value of incorporating smart home technology and IoT data into underwriting strategies, LexisNexis® Risk Solutions worked with Flo by Moen to study residential water damage claims, which are the most significant source of preventable homeowners insurance claims. The research compared the claims activity of 2,306 U.S. homes with a **Flo by Moen** Smart Water Shutoff leak detection and water monitoring system to similar claims activity for a cohort of U.S. homes of similar geography, price and size without a Flo by Moen Smart Water Shutoff.

Our results were very enlightening. They point to a strong correlation between the installation of Flo by Moen Smart Water Shutoffs with fewer and lower-severity claims. They also support the broader benefits of smart home technology and smart home insurance programs, for both carriers and consumers.

In short, carriers that embrace smart home technology and communicate the benefits of these devices to their customers have an opportunity to not only bolster their loss prevention strategies but to also create a competitive advantage through increased customer loyalty.

The Promise of Smart Home Technology

Smart home technology and Internet of Things (IoT) devices are delighting consumers who are looking for more convenient ways to control their environment, improve safety and security and prevent damage to their property and possessions. In fact, close to half of the respondents in our recent [LexisNexis® Risk Solutions Smart Home and IoT consumer research](#) own at least one of the nine devices we studied.¹ That number is primed to increase as both early and late majority adopters recognize the substantial benefits these devices can deliver.

At the same time, carriers are recognizing that smart devices and the data they generate could help them gain a more accurate and comprehensive view of customer risk and loss propensity while unlocking new business opportunities. We've found that the industry holds the following assumptions about smart home technology:



The underlying data can help carriers better understand the true nature of the risk they are underwriting and how that risk might change over time.



IoT devices can act as preventative solutions to high-severity property losses, leading to reduced risk, lower loss cost and lower premiums.



Smart home programs offer carriers another platform for building relationships with customers and increasing customer loyalty.

However, until now there has been little data to help the industry move beyond assumptions. With help from Flo by Moen, we set out to change that by conducting a study on the relationship between smart home technology and non-weather-related water damage claims.

¹ LexisNexis® Risk Solutions Smart Home and Internet of Things Consumer Research Report, 2020

About the Study

In October 2019, LexisNexis® Risk Solutions conducted a loss correlation study comparing the claims trends of 2,306 U.S. homes with a Flo by Moen Smart Water Shutoff device (“Flo homes”) pre and post installation against a control group of homes with no Flo by Moen Smart Water Shutoff. Water leak claims for Flo homes were evaluated two years prior to installation and one year post-installation. These results were measured against 1.3 million homes in a similar geography, and of similar size and value, over the same time period.



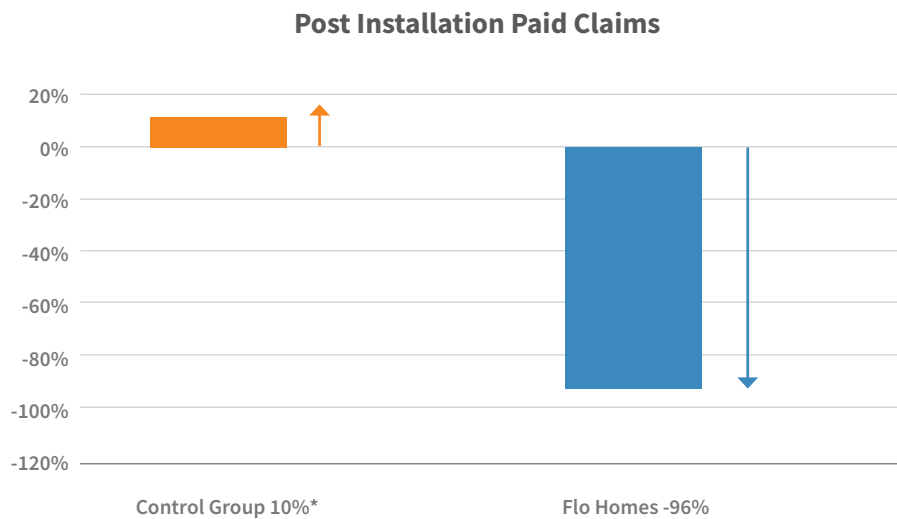
Smart home technology proof points

Our study comparing the water leak damage claims activity of homeowners with and without Flo by Moen Smart Water Shutoffs yielded two key findings that underscore the value of smart home technology in helping to reduce water leak claims made and the severity of those claims.

Finding #1

Homeowners filed significantly fewer claims after installing the Flo by Moen Smart Water Shutoffs

One year following installation of the Flo by Moen Smart Water Shutoff, the **homes in this study saw a 96% decrease in paid water leak claims** compared to two years prior to installation. Within this same period, control group home claims **increased 10%**.

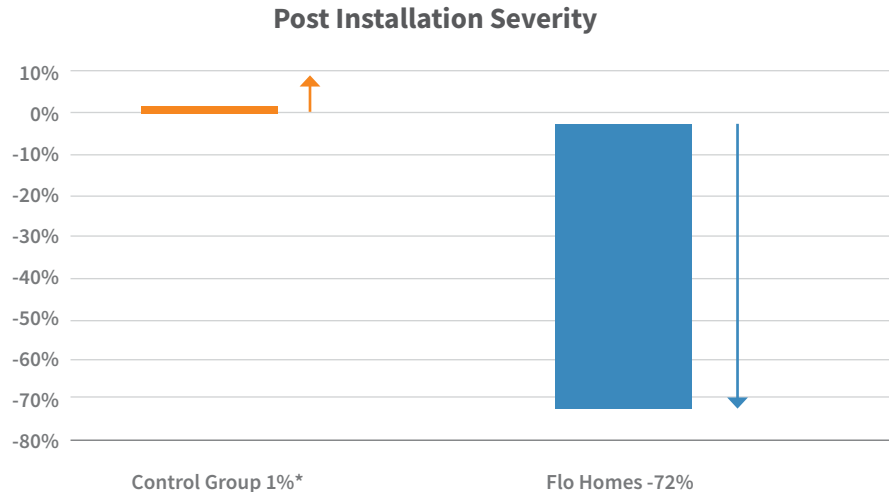


* There is no pre- or post-installation for control group homes, but data was analyzed for the same time frame.

Finding #2

Severity of claims filed by Flo by Moen homeowners decreased substantially

For control group homes, severity remained relatively constant over the pre- and post-installation periods, whereas for Flo homes, claim severity decreased 72% one year following installation of the Flo by Moen Smart Water Shutoff.



Why focus on water leaks?

Water leak damage represents one of the highest loss costs carriers face (loss cost being the average amount paid for insured losses per exposure). Additionally, water leak damage is considered the most preventable of the major loss cost perils. Last year alone, the insurance industry spent over \$2 billion on claims for non-weather-related damage.

Household water leaks also waste more than one trillion gallons of water annually nationwide.² Considering that the need for water conservation is increasingly important, especially in parts of the U.S. that are prone to drought or water shortages, this number is alarming.

Yet water leaks are commonly viewed as the most preventable of the large-loss perils.

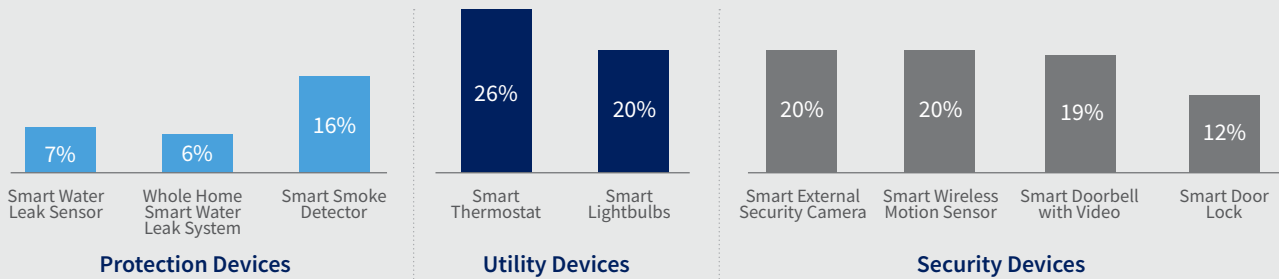




Water leaks are commonly viewed as the most preventable of the large-loss perils

Despite the high likelihood of serious damage from water leaks, when we asked consumers which, if any, smart home devices they own, few homeowners reported owning smart leak detection devices. Considerably more consumers own smart utility and/or security devices.³

Ownership of smart home devices



\$ 9,700⁴

The national average claim payment for non-weather-related water damage

² <https://www.epa.gov/watersense/fix-leak-week>

³ LexisNexis® Risk Solutions Smart Home and Internet of Things Consumer Research Report, 2020

⁴ Source - 2019 LexisNexis Home Trends Report

What this means for homeowners and carriers

Installing water leak detection and shutoff devices is good for consumers and carriers, and worth the investment

The data shows a strong correlation between installing leak detection devices with automatic shutoff capabilities and reducing water leak claim frequency and severity. Although there is still a lot to learn, for homeowners, these devices appear to be worth the investment. Preventing major losses like these keeps the homeowner out of the claims process, in turn saving them time and money, and offers the promise of future underwriting discounts on their insurance premium. For carriers, including water leak mitigation and shutoff devices as part of smart home strategies could drive adoption of these devices, leading not only to improved customer experience but also reduced loss costs.

Our previous smart home and IoT consumer research indicated that consumers who own one or more smart home device are willing to purchase additional devices if they are offered an insurance discount.⁴ Carriers that don't yet offer incentives for installing water leak detection and shutoff systems might consider doing so to expand smart home device adoption among this consumer group. Creating and communicating a compelling value proposition could drive device adoption, especially for and among devices that don't lead with a home security, energy management or entertainment benefit.

There appears to be a high-cost claim tipping point

Intuitively, it makes good sense that these devices will mitigate loss costs, and we've demonstrated that with post-installation claims trends. However, to understand what might compel a homeowner to purchase these devices, we took a closer look at pre-installation claims experience. As it turns out, homes with a Flo device had a pre-installation average severity of almost 3x the control group. So, it's becoming clear that there seems to be a tipping point where homeowners are willing to invest in stopping these events from happening again.

If carriers encourage more widespread adoption of these smart devices before homeowners reach this tipping point, they could help reduce the number and severity of claims. Although inline water shutoff devices, such as the Flo by Moen Smart Water Shutoff, cannot prevent all water leak claims the data so far supports the intuition that water shutoff systems are very effective. As adoption grows, we expect to gain a better understanding of claim frequency and other loss trends post-installation.



⁴ LexisNexis® Risk Solutions Smart Home and Internet of Things Consumer Research Report, 2020



Home water leak detection device capabilities vary. Some are reactive in nature, where they alert after the fact when water flows for long periods of time. Others can automatically shut off the water to help protect the home from water damage. Still others are proactive, where they monitor flow characteristics, pressure and temperature in real-time, and also check for microleaks anywhere in the water supply line that can lead to the formation of mold. Some additional features include allowing homeowners to track their water usage per individual fixture, set conservation goals and turn their water off remotely via the app. Most warn homeowners of a leak that might be occurring through a smartphone app. The Flo by Moen Smart Water Shutoff does all of these, but the right device for a home will depend on a homeowner's conscientiousness, budget and individual needs.



It's time to move beyond assumptions

Our research suggests that industry assumptions about the potential benefits of smart home technology have merit. By gleaning insights from data generated by smart home technology, carriers can gain a more complete understanding of the risk they are underwriting and how that risk might change over time. Further, our research indicates that IoT devices offer a way to mitigate and prevent high-severity losses, including those attributable to escape of water. Lastly, whether your strategy is focused on engagement or loss prevention, creating a compelling value proposition will be critical to executing a winning strategy, and will undoubtedly require strong data analytic skills.

If you're not already doing so, consider ways to educate your customers about the value of smart water leak systems and encourage their use, including offering incentives as part of a smart home insurance program. Note, too, that beyond the obvious benefits for insurance underwriting and loss control, promoting the use of water leak systems serves the broader societal purpose of managing water resources wisely.

Although installation of these devices is not yet widespread, as the data matures and adoption grows we'll learn more about their impact on loss frequency and severity. One thing appears certain—if water leak prevention is important to your company's loss prevention strategy, these systems can be a valuable asset in that strategy.



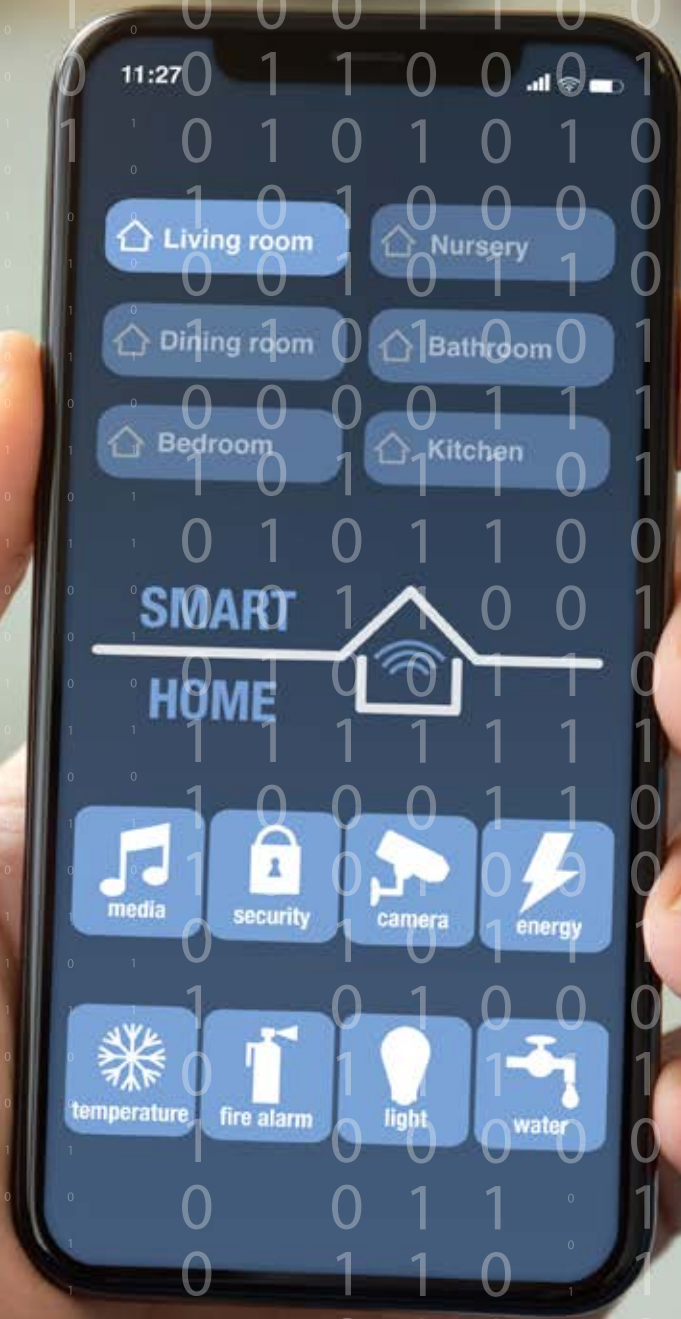
About the author



Dan Davis

Director, IoT and Emerging Markets, LexisNexis Risk Solutions

Dan Davis serves as Director, IoT and Emerging Markets, Insurance. Dan has been with LexisNexis Risk Solutions since 2016, where he leads the creation of the value proposition, strategy and positioning for the LexisNexis IoT platform across Life, Home and Commercial. His insurance experience includes leadership roles in claims, business development and strategic technology initiatives in the P&C market. Dan has also served LexisNexis through strategic partnership management in the emerging markets and software platform space. Dan has a bachelor's degree in Business from Louisiana State University.



LexisNexis Risk Solutions can help you build on the promise of smart home technology

As your trusted advisor, we can support your smart home insurance strategy by:

- Validating the presence of smart home loss mitigation devices in a household in real time
- Providing additional business intelligence to help you understand the end-to-end impact of smart home devices
- Walking you through the results of our recent survey about consumer attitudes toward participation in smart home insurance programs
- Explaining how those responses and other insights can inform your IoT strategy

Please contact us to learn more.

LexisNexis® Risk Solutions: call 800.458.9197 or email insurance.sales@lexisnexisrisk.com

Flo by Moen: call 844-663-8356 or email partners@meetflo.com



About LexisNexis Risk Solutions

LexisNexis® Risk Solutions harnesses the power of data and advanced analytics to provide insights that help businesses and governmental entities reduce risk and improve decisions to benefit people around the globe. We provide data and technology solutions for a wide range of industries including insurance, financial services, healthcare and government. Headquartered in metro Atlanta, Georgia, we have offices throughout the world and are part of RELX (LSE: REL/NYSE: RELX), a global provider of information-based analytics and decision tools for professional and business customers. For more information, please visit www.risk.lexisnexis.com and www.relx.com.

About Flo by Moen

Flo by Moen is the industry-leading Smart Home Water Security System with a suite of products that work together or independently to protect your home from water damage and leaks, 24/7. From the Smart Water Detector that monitors drain-side and weather-related issues, to the Smart Water Shutoff that monitors the vulnerabilities on the supply-side, Flo By Moen's products are designed to be customizable for all homes. Thus far, the Flo by Moen community has saved 23,395,795 million gallons of water and counting.