Smart Home Telematics

New opportunities for forward-thinking insurance providers

Abstract

This whitepaper discusses both the challenges and opportunities the insurance industry faces in the context of Smart Home technology. It also describes the potential benefits of Smart Home Telematics programs and outlines a plan that forward-thinking insurance providers can consider.
Everything is Connected

...and that changes everything

The advent of the smartphone ushered in a period of constant personal connectivity, and we are still experiencing the change it has wrought – from how we communicate with each other to the way customers expect their service providers to engage with them. Moreover, the pace of this change is accelerating, and customer demands continue to increase, to the point where constant contact and immediate responses have become an expectation.

With the proliferation of Internet-of-Things (IoT) this connectivity is now spreading from the virtual front of instant messaging and notifications to the physical domain of connected devices. Soon these connected devices will be as taken for granted in the home as smartphones are in the pocket.

Connected cars, homes, and wearables are in varying stages of maturity, but will soon find their ways into everyday life for an ever-growing portion of society. The pattern is predictable, and adoption will progress in much the same way as the mobile phone: beginning as a luxury item, graduating to a fashion statement, then progressing to a taken-for-granted necessity.

This rapid embrace of technology changes customer expectations and the definition of connectivity. From on-demand communication (phone calls, text messages) to push notification influenced lifestyles (Facebook, Twitter), customers expect instantaneous feedback not only with their personal contacts, but also with their service providers.

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**Projected Growth of Connected Home Devices in North America**

- **2016**: 22 million households
- **2017**: 16.7% of total households
- **2018**: 27% Annual Growth Rate
- **2019**: 73
- **2020**: 55.0%
- **2021**: 73

*Smart Home systems have been deployed in 22 million North American homes. At the projected growth, over half of households (55%, or 73 million homes) will have adopted a Smart Home system by 2021.*

Source: Berg Insight 1
The Opportunity – and The Risk

The growth of consumer IoT is poised to change both the way people live and their demands of service providers. Acceptance of connected devices is growing fast, and with it service providers are facing a changing customer landscape in terms of the new abilities connected home technology provides as well as the changing customer expectations based on these abilities.

For incumbent service providers that deal with consumers, especially those that already have reach into the home, connectivity among people, and increasingly between people and devices, represents both an opportunity and a risk.

The opportunity stems from the ability to interface with customers in more ways than ever available before. In the past, a flyer or magazine twice a year was considered high-touch. Now, the ability to interface with customers on an as-needed basis, typically several times per week, is an expectation. Proactive service providers will take advantage of the opportunity and interact with their customers throughout the customer lifecycle – keeping them engaged from their first service interactions and providing them recurring value during the crucial months leading up to renewal.

The risk is characterized by a changing marketplace where technology enables quicker disruption and adjacent companies can swiftly gain power. Tech giants in particular are leveraging their brands to solidify mindshare, and move ever-closer to the core of people’s lives – in their living rooms and on virtually every screen they own, directly impacting every service they engage and threatening companies in all adjacent industries.

Most importantly, the opportunity and risk both represent a need for reinvention based on constant and rapid changes in consumer tastes and technology adoption.
The Connected (Smart) Home

*Connected Devices are disrupting every nook of the connected home.*

*Mckinsey*⁴

The Smart Home describes a vision where devices and sensors communicate with each other and to services that keep the customer connected to their home, from wherever they are. Automation - and automated learning - support advanced interactions that benefit consumers by making their busy lives more comfortable and providing them with contextualized and actionable insight.

The Smart Home market is fragmented. There is no single unifying ‘Smart Home’ application and no dominant device type or vendor. Rather, the Smart Home concept is emerging from a number of use cases, the primary being Home Automation and Security, Energy Management, and Media and Entertainment.

The Smart Home market is likely to remain like this for the short and medium term. A variety of devices with a wide set of standards will continue to be available from several manufacturers, and interoperability will continue to be an issue for customers. With trusted companies like Apple, Google and Samsung providing better and less expensive connected home devices to the market, adoption will increase, the notion of the connected home will become more widely accepted and expected, and platforms and programs that provide integration specifically targeted to relevant use cases will benefit.

*Offerings from large established manufacturers like Apple, Google and Samsung are offering significant direct (but not always properly integrated) control of the home.*
Discreet control of connected home devices is also gaining prominence, especially with the rise of the voice assistant (led by Amazon's Alexa and Google Home, followed by Apple Siri, Microsoft Cortana, and others). These virtual assistants cooperate with several ecosystems and may prove to be a significant integrating element, thanks to their ability to control devices across platforms, but as of yet are not targeted to specific use cases.

Home security, on the other hand, is taking a ‘circle the wagons’ approach that includes high monthly fees and services that rely on call centers and installers. Even self-installed do-it-yourself (DIY) systems usually involve similar monthly commitments, and rely on proprietary technologies that further lock in the customer to a closed ecosystem.

**Competitive service industries are now presented with an opportunity.** As homeowners adopt more and more devices, they can create more touchpoints for services to improve client retention, increase wallet share, and better the customer experience. The bridge to these advantages is a system that provides useful service to the customer and regular data-flow to the service provider.
Business Opportunities

...for forward-thinking insurance providers

Incumbent property insurance providers are most certainly at risk. Much like other incumbents in adjacent service-based industries, such as communication providers and utilities, insurance providers face increased competition stemming from commoditization, removal of barriers, fast moving disruptors including tech giants, and effective or at least partial deregulation. Historically low interest rates create additional economic pressures and provide further impetus to invest in business innovation that ensures profitability in an increasingly dynamic landscape.

And as stated above, customer expectations are changing as well. Frequent, personalized, and efficient customer service is becoming increasingly important.

Luckily, connected home technologies are well-positioned to address both emerging provider-facing and customer-facing needs. Optimal effectiveness will be achieved when value accrues to both parties.

Areas of mutual benefit include fairer rates thanks to higher visibility, quick (or even automated) responses to critical events in the home, overall increased insight and safety of insured assets, and better and more regular lines of communication between the provider and the customer.

The connected home approach is also entirely consistent with insurance companies’ claims of caring for customers and helping them live more comfortably. The connected home provides a significant and attainable opportunity to deliver on that promise.
Key Concept: Meet the customer where they are (and where they are going)

Success with Smart Home strategies will be highest if adoption is as easy as possible. Taking into account the customer’s motivations, plans and current adoption of Smart Home technologies will make a big difference to both interest levels and uptake.

1. Support devices the customer already owns
If the customer has already invested in Smart Home technologies, service providers will be well advised to support them in emerging programs. For example, if the customer has already purchased an Ecobee thermostat, one of the first to the market, they may be reluctant to replace it with one from Nest or Honeywell – even if it is provided for free.

2. Ensure Forward Compatibility
Customers who have purchased connected devices, either stand-alone or as part of a wider ecosystem, will be much more likely to engage in Smart Home programs that ensure future compatibility. Conversely, they may be reluctant to participate in programs they feel will restrict their choices or paint them into a corner.

3. Make sure the mobile app is integrated
Customers do not want yet another standalone app from their insurance provider to use alongside their other Smart Home apps. Rather, the best positioned Smart Home app will bring major connected devices together, meeting a presently unmet customer need.

2 in 3 consumers would change insurance companies to get homeowners policy discounts for using Smart Home devices. A similar number are willing to invest in smart home technology if it gets them better rates. (NTT Data ²)
The Power of Contextual and Actionable Insights

*The price of light is less than the cost of darkness.*
Arthur C. Nielsen

Insurance is a data-centric industry. The more data available, the more targeted services can become, and the more accurate rates are for the customer. Unlike claims data, Smart Home data does not automatically lend itself to actuarial tables. Smart Home data is only useful if it can be analyzed, contextualized, and made actionable, both for the service provider and the homeowner by transforming Smart Home Data into Smart Home Insights.

In a Smart Home environment, multiple sensors may transmit data almost continuously. The role of a useful platform will be to cut through the ‘noise’ and provide insights that are relevant and can be acted upon.

For homeowners, Smart Home Insights can provide the ability to react to relevant changing conditions in the home, either directly or automatically, to make their lives more comfortable and their homes safer. For service providers, Smart Home Insights enable improvement to existing service offerings, as well as the ability to deploy new programs through effective and measured pro-activity.

### Smart Home protection use cases

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<thead>
<tr>
<th>Use Case</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Smoke or fire alarm</td>
<td>30%</td>
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<tr>
<td>Gas/CO alerts</td>
<td>60%</td>
</tr>
<tr>
<td>Alerts for open windows/doors</td>
<td>60%</td>
</tr>
<tr>
<td>Alerts for water leak</td>
<td>30%</td>
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<tr>
<td>Ability to turn lights ON/OFF</td>
<td>0%</td>
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US Broadband Households who found the above use-cases “highly appealing” *(Source: Parks Associates)*
Key Considerations

Despite the current and forecasted adoption of connected home devices, there are huge untapped opportunities for innovation. Key considerations include:

1 Put the customer first
Make it easy for the customer by lowering barriers to adoption. Solutions need to be “plug-and-play,” allow for easy customer set-up, and provide a Smart Home that meets their particular needs.

2 Offer tangible value
Smart Home programs provide the opportunity for recurring interactions between the insurance provider and the customer. The impact is highest if the value the customer sees is not just a reduced rate but rather that insurance premiums are clearly consistent with relevant information, safety features, and desirable behaviors that align with risk reduction.

3 Play outside the box
Empowered with Smart Home Insights, insurance service providers have the opportunity to offer tremendous value outside of traditional home insurance models. By providing the customer with related and recurring value in form of tools, information, advice and more, the insurance company is better positioned to have a central and trusted role in the customer’s relationship with their home.

4 Acquire new customers
By integrating connections and alerts into a system that notifies the homeowners chosen contacts, the insurance company can demonstrate unique capabilities to members of their customer’s personal network. This provides highly efficient and effective customer acquisition opportunities that are largely untapped today.

Insurance providers are in a very unique position to help the customer in a still-confusing domain. As trusted service providers, they are perfectly positioned to help the customer gain control and insight of their home just as Smart Home technologies are emerging into mainstream adoption.

One-third of home insurance customers would be interested in sharing home telematics data in exchange for a ‘fairer rate’. This increases to 63% of customers between the ages of 25 and 34. As these technologies become more widely adopted, these numbers would be expected to increase further. (Source: Deloitte)
Smart Home Telematics

Smart Home Telematics is the integration of Smart Home devices and systems with a telematics based platform that ingests and harmonizes vast and existing amounts of data into usable form. Insights generated from this data can enable programs that benefit insurance companies and their customers with fairer rates, enhanced relationships, and several other sources of mutual benefit.

According to Deloitte, telematics based services are among the highest impact ‘killer applications’ of digital technology for the insurance industry:

![Nine killer applications for digital technology in general insurance](chart)

**Home telematics has not been possible until now.** The growing attention on connected devices from major technology brands (Amazon, Google, Samsung and others) is having several effects, not the least of which is that customers no longer consider these platforms the domain of the hobbyist, but rather an attainable option for their own homes.

Best of all, Smart Home Telematics enables the insurance provider to create mutual benefit with the customer, increasing the overall appeal of new programs.
Smart Home Telematics programs benefit insurance providers and their customers with fairer rates adjusted to responsible homeownership and safer living.

This approach represents a departure from current broad discounts based on the mere presence of a security system, or fire sprinklers that may or may not be operational when they are most needed.

For example, with a Smart Home Telematics system in place, customers with functional smoke/CO detectors, regularly tested leak detection, water shutoff equipment, and other related devices can be rewarded with lower rates. Insurance providers benefit from a lower number of actual claims, and lower severity of these claims. The insurance provider is no longer ‘in the dark’: relevant customer sensor data is continuously received as part of the Smart Home Telematics program, to ensure that safety equipment is operational and to alert or act proactively whenever possible.

In addition, a more detailed and nuanced understanding of customer needs can improve program targeting, and enhance the profitability of existing products and services.

How does IoT benefit home insurance?

The most important drivers for investing in IoT (Source: NTT Data²)

- Improve the relationship with customers: 87%
- Create additional value added services: 83%
- Attract potential customers: 83%
- Improve ability to personalize offerings: 81%
- Improve Brand: 80%

Consider automotive insurance. Rather than just relying on crude measures such as the type and year of the vehicle and age of driver, vehicular telematics take into account driving habits, location, and frequency of use to make it possible to offer lower rates for safer drivers. Similarly, rather than merely relying on the type of home and its general characteristics, Smart Home Telematics programs allow for a more refined and accurate risk measurement approach – rewarding and encouraging safer living.

*Automotive insurance is moving towards rewarding safer drivers with better rates through telematics, so why not do the same for safer homeowners?*
Of course, not all claims can be prevented. Smart Home Telematics can play a role in forensics as well. Knowing whether or not a system was armed or a garage door remained closed before a burglary, for example, can be important, at least in preventing future claims. Even if the insurance provider does not penalize the user, they can choose to offer a one-time exemption, adjust their messaging, help ensure safety measures are applied automatically for the homeowner, or employ other tactics to encourage better risk management.

A first mover advantage will be critical. Smart Home Telematics programs will garner sustainable competitive advantage and inoculate against customer attrition; replacing a valuable and useful home insight and control system increases switching costs.

Furthermore, the ability to gain adjacent market share is also enhanced, especially when alerts to delegates and personal contacts of the homeowner are built into Smart Home Telematics systems. Enhanced reach and reputational benefits stemming from these connections come at a significantly lower customer acquisition cost than traditional means.

### Mutual benefits of Smart Home Telematics programs

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<thead>
<tr>
<th>PROVIDER BENEFITS</th>
<th>HOMEOWNER BENEFITS</th>
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<tr>
<td>Reduced Payouts</td>
<td>Fairer Rates</td>
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<td>Greater Efficiencies</td>
<td>Home Insight and Control</td>
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<tr>
<td>Brand Loyalty</td>
<td>Less Disruption</td>
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<tr>
<td>Differentiation</td>
<td>Peace of Mind</td>
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<tr>
<td>Reduced Attrition</td>
<td>Valued Assistance</td>
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<tr>
<td>Thought Leadership</td>
<td>Pride of Ownership</td>
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Even more trust-centric opportunities

The insurance industry is built on trust, and once the Smart Home is added to the mix, that trust can lead to several additional opportunities for ancillary services. Customers select their insurance provider based on their perceived ability to deliver on a brand promise of an overall safer home, ongoing peace of mind and protection of their investment.

As such, the capacity to offer security systems, energy efficiency programs, and other related services is a natural extension of an insurance providers’ brand positioning and portfolio. In addition, the ability to match services between homeowners and relevant home maintenance and repair providers can be leveraged for additional revenue streams.

For example, targeted campaigns built on timely information and a more accurate understanding of consumer home behavior can suggest proactive maintenance and inspection, such as connecting homeowners with services for faulty furnaces or clogged ducts. Timely reactive services might be even more valued, like automatically shutting off the water supply and dispatching a plumber in the event of a water leak to perform a minor repair that avoids a major disturbance.

Components of a Smart Home Telematics System

A Smart Home Telematics platform collects, analyzes, and translates information from both data-pulling insight sensors and action-pushing control systems. The platform can then deliver appropriate and actionable insights to the right parties. For example, a customer can know when their energy consumption runs high, and a service provider can adjust when their customers take the right precautions.

In addition to providing the customer with home insight and control through a mobile app that carries the insurance provider’s brand, the app can become an engagement platform in which the customer is provided contextual advice and other curated information.
The power of data

Smart Home Telematics data is only useful if it can be contextualized, analyzed, and actioned, both from the homeowner’s perspective as well as the insurance provider’s. A useful system will sort through large data sets to pull insights and make recommendations for both the providers and their customers.

For example, an intelligent system can ‘learn’ the difference between a night shift worker’s needs in terms of their home management habits, and that of a family on-the-go.

Customers will receive suggestions, alerts, and rules that ‘just make sense’ given their lifestyle, and providers will be able to gather overall insights to better understand how their customers live, how they can better serve them, and what policies or guidance they can put in place to reduce claims and make their customers more comfortable.

Smart Home Telematics platform: water leak scenario
The property insurance industry faces intensifying pressure due to a dynamic landscape as well as changes in customer priorities and needs. That is, the threat of market disruption stems not only from increasing competition that includes new entrants as well as established global brands, but also from rising customer demands and shifting customer expectations in a digital and constantly-connected age.

Property insurance incumbents must look to strategies that defend their positions and provide opportunities to demonstrate value through meaningful touchpoints. With those at their disposal, providers can enhance their relevance, promote customer loyalty, and uncover new avenues for differentiation and the formation of sustainable competitive advantages.

One such strategy is to take advantage of the opportunity Smart Home Telematics provides by leveraging connected devices to create a branded Smart Home customer experience. Such a platform supplies customers with home insight, control, and disaster prevention while at the same time furnishing useful information to the insurance provider for greater insight to their customer’s habits and lifestyles. In essence, Smart Home Telematics can support a win-win paradigm in which both stakeholders stand to benefit from efficiencies thanks to lower incidences of claims and their severity.

Compared to traditional ‘soft’ interactions such as newsletters, magazines, or websites with information and suggestions, and ‘hard’ interactions based on claims and negotiations, Smart Home Telematics programs provide a new avenue to build trust and enhance customer relationships. Lead adopters of these programs will also differentiate themselves in increasingly competitive environments and reduce customer churn by effectively interacting with their customers on a daily basis.

These programs also open the door to additional growth by exposing efficient avenues for customer acquisition as well as supporting new business extensions and revenue generating opportunities. These range from home security offerings to home maintenance and repair service match-making, to other high-value low-cost business models that benefit the customer and the service provider alike.

**Empowered with Home Telematics, forward-thinking insurance providers can graduate from a largely transactional based paradigm centered around claims and renewals, to one that is much more customer centric, timely, and proactive.**

Smart Home Telematics programs help insurance companies reinforce their status with customers as trusted partners, and deliver on their promise of helping the customer live better through genuine insight and control of their home.
References


