accenture

Strategy | Digital | Technology | Operations

The Connected Home

New Opportunities for Property & Casualty Insurers

High performance. Delivered.

The Internet of Things (IoT)—the network of intelligent machines and devices which can sense and interact with each other over the Internet—has, quite literally, hit home. Devices that automate, monitor and control individual homes are proliferating. These include a wide range of sensors, switches, web cams and thermostats, turning homes into digitized environments, known generally as "connected homes." In many homes, wireless control panels already enable a range of functions—including HVAC, lighting and security—and can be managed from inside or outside the home.

By 2016, the global connected home market is expected to reach $235 billion, with the largest revenue-generating segments including home security ($110 billion), smart utilities ($33 billion) and home entertainment ($68 billion).[1]

While this market is already large, it is in its early stages of growth. For example, the market for smart locks—which use smartphones as a key, enabling electronic monitoring of who goes in or out of a house as well as electronic "forwarding" of access—is just $261 million today but is expected to grow to $3.6 billion by 2019.[2] And connectivity is popping up everywhere, from smart refrigerators that can monitor food consumption to smart carpets that can provide notification of unauthorized entry.

The Wall Street Journal cited three factors—the popularity of the smartphone, which can serve as a control center for connected devices; the increasing affordability of broadband and cloud services; and the growing maturity of the Internet of Things, with new chips and standards allowing devices to talk to each other—as major contributors to the rapid growth of connected home offerings.[3]

For insurers, the IoT can provide value in the form of new insurance models and products—based on deeper insight into the customer's needs—and a higher level of customer satisfaction derived from dynamic risk monitoring and improved claims handling. The IoT also creates opportunities for insurers to lower costs and improve operational efficiency.

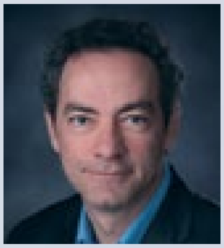
The property and casualty insurance business has already explored the benefits of connectivity in the auto insurance sector, using wireless devices in vehicles to monitor driver behaviors including distance travelled, time spent driving, acceleration, braking and turns. Through such devices, insurers can do a better job of assessing and pricing risk.

The same is true for the connected home. Insurers can leverage data from connected home devices to assess and mitigate risk, increase pricing sophistication, and offer new products, all of which help drive operational efficiency and top-line growth.

About the Authors

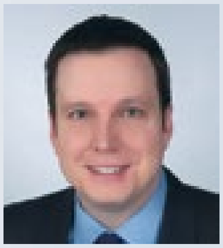
Cindy De Armond is a managing director in Accenture's Property and Casualty practice, and leads the Policy Business Service in North America. Contact her at cindy.k.dearmond@accenture.com.

"The connected home provides vast quantities of data, helping transform insurers' underwriting and risk avoidance models and creating numerous new revenue opportunities for carriers able to offer real value to the customer."



Paul Lalancette is a managing director in Accenture's Digital IoT Business Group and serves as global connected home practice lead. Contact him at paul.lalancette@accenture.com.

"The connected home is a rapidly accelerating global phenomenon and it's essential to learn and understand how market participants are entering across a complex ecosystem."



John V. Mulhall is a managing director in Accenture's Insurance Strategy practice, and leads the Product and Underwriting Strategy practice globally. Contact him at john.v.mulhall@accenture.com.

"The property and casualty insurers that get the right connected home offerings to market will establish an important competitive advantage in the Personal Lines market."

The Connected Home—A Complex Ecosystem

Insurers seeking to deliver value in the connected home market are confronting a complex ecosystem with multiple participants, including utility companies, home security providers, telecoms companies, and Internet giants such as Google, all seeking to establish positions (Figure 1).

The key to success is in finding the right market entry point as well as the right value proposition for customers. Insurers to date have started exploring customer benefits related to peace of mind and connected control (through digital applications), home security solutions—either under a white label product, or in partnership with a home security provider—as well as opportunities in the eHealth and connected car space.

The connected home represents a significant opportunity for insurers in a number of areas, including:

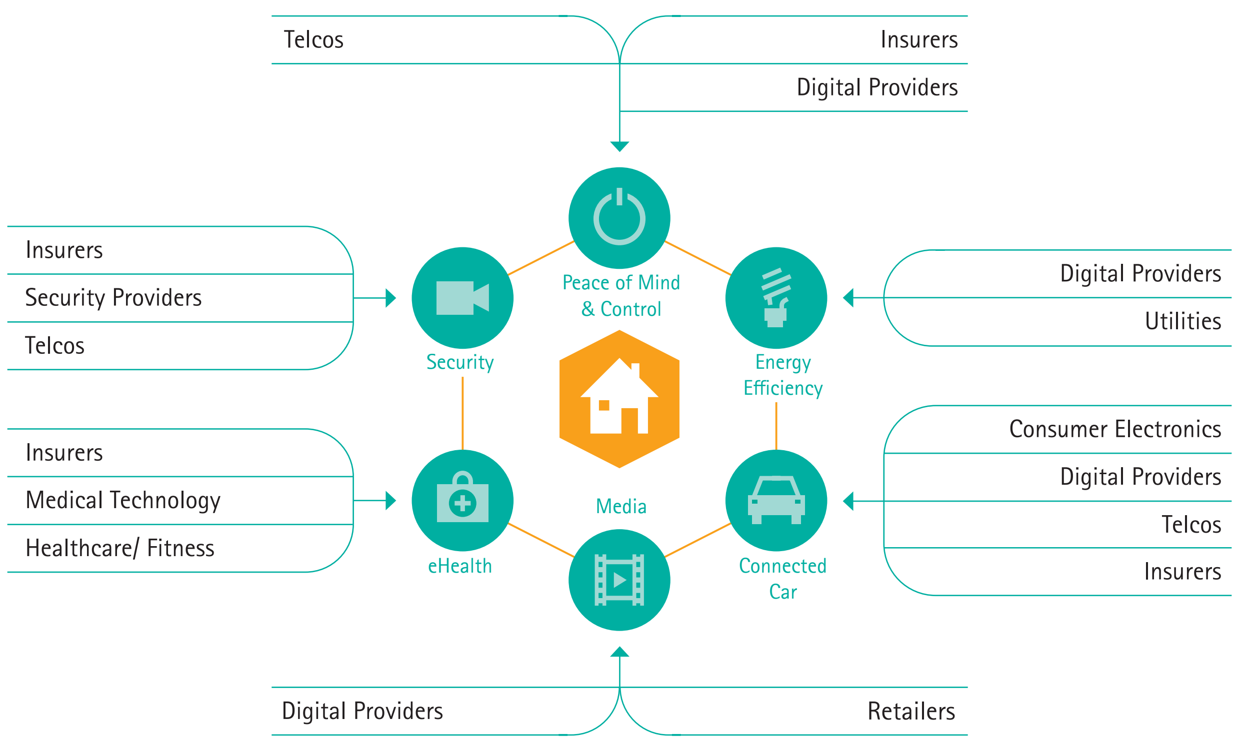
- Better risk management and risk mitigation, through claims avoidance and better claims handling;
- Better underwriting, based on increased data flows and a keener understanding of risk factors and behavioral elements;
- New product offerings, including value-added services delivered in partnership with other providers; and
- Closer customer relationships, as a result of more frequent and personalized interactions.

Other potential benefits include creation of a stronger supply chain, with a better ability for insurers to offer discounts to customers (based in part on a better understanding and capture of home contents) and connections to a reliable replacement and repair network.

Achieving these improvements, however, will not be easy. Connected home technology is evolving rapidly, as are marketplace dynamics.

Insurers that ultimately gain a competitive advantage through offerings related to the connected home will need to do more than find the right partners, however. These insurers will also need to tackle challenges presented by large inflows of new data; by customer indifference to or lack of understanding of new offerings; by regulatory and privacy concerns; and by the "need for speed" in getting new and desirable products to market quickly and efficiently. These challenges will largely be dictated by the strategies carriers choose to enter the connected home market.

Figure 1. The connected home ecosystem



The Connected Home Value Proposition for Insurers

Carriers are still in the early stages of exploring the connected home market and, in most cases, need to decide what strategy to take and where and how to enter this market. They may consider partnering with companies that already have applicable technologies, or coming to market with their own version of technology under a white label.

Take the case of a fairly basic connected home offering: safety and security. New wireless and machine-to-machine (M2M) capabilities allow for remote monitoring of the home and remote activation of home alarm systems, locks, indoor/outdoor lighting, smoke alarms, water leak detection devices and even doorbells.

At the entry level, the property and casualty insurer can partner with the security provider by offering policy discounts to customers who install and maintain such systems, or by offering discounts on the system installation itself.

At a more sophisticated level, the insurer—either in partnership with a security provider, or on its own initiative—can offer a data recorder that can be installed in the home to track temperature, humidity, wind speed and mechanical vibrations as they affect the house. At least one insurer has already filed a patent for such a home sensor system.

The customer can benefit, not only from lowered premiums resulting from better risk monitoring and quicker action in case of an adverse event, but from increased security and peace of mind. The insurer, in turn, gains a better ability to price the policy and an opportunity to mitigate risk and reduce claims losses. With the average claim for a residential fire at more than $35,000, the opportunity for claims reduction can be significant.

Within the connected home environment, property and casualty insurers can explore many ways to avoid and/or limit losses including:

- Using connections to in-home video cameras to perform digital inventories of the home's contents, expediting claims filings and making it easier to remediate losses.
- Continuous monitoring through connected smoke alarm detectors and water leakage devices to enable quicker response.
- Working through utility companies, analyzing energy consumption data and usage activity patterns to increase the sophistication of pricing liability and/or dwelling coverage.
- Encouraging beneficial customer behavior pattern changes (such as locking the door, engaging the alarm, turning off the stove) through monitoring of in-home sensors.
- Increasing the effectiveness of fire monitoring and response systems.
- Automated inspection as part of regular preventive maintenance.
- Identifying causes of loss, particularly as they pertain to wind and/or flood damage.

The customer can benefit, not only from lowered premiums resulting from better risk monitoring and quicker action in case of an adverse event, but from increased security and peace of mind.

Expanding Beyond Insurance

While there is significant value potential for insurers in the connected home concept, there is also considerable value outside insurance product and pricing innovation. Insurers seeking to build customer relationships and establish a lasting competitive advantage through differentiation should also be thinking about new service offerings.

These might include:

- Home content monitoring and replacement. Automated devices can track the age, maintenance records and general condition of major appliances and systems such as HVAC. Customers can receive automated reminders and/or recommendations on maintenance, along with suggestions on replacement purchases.
- Weather notifications. Customers can receive notifications and updates on severe weather conditions via their preferred channel. In addition, they can be given the option to have certain valuable items (such as cars) protected or placed in storage during high-risk events. Insurers themselves can make bulk purchases of replacement items ranging from carpeting to televisions to help customers deal with replacement issues in the aftermath of major catastrophes.
- Health monitoring. Through wearable devices, motion detectors and other innovations, insurers can monitor physiological statistics and offer recommendations related to lifestyle improvement, safety and behavior changes.
- Concierge services. Insurers can offer new concierge-type services in areas ranging from scheduling appointments to booking entertainment events.

The Connected Home Universe

Within the connected home, insurers are focused primarily on eight different product areas, each with its own potential for improving underwriting precision and limiting losses while strengthening customer relationships:

- Security—Increasingly sophisticated alarm systems not only detect intrusions and call contact centers or law enforcement authorities; they can trigger photographs or video footage (which may be viewed remotely by customers on their smart phones, allowing them to determine whether there is real cause for alarm) and enhancing the likelihood of apprehension and loss recovery.
- Energy Management—New systems controlling individual homes can reduce utilities' aggregate peak load requirements and can help customers reduce their own energy costs by automatically managing demand to take advantage of peak load pricing.
- Lighting—Lighting can not only be controlled from outside the house, it can also be set through apps to manage home and travel schedules.
- Water—Alarms can now contact homeowners about water leaks from tanks or appliances, and can shut off the water supply if necessary.
- Thermostats—Smart thermostats have moved beyond mere programming; they can now track residents' activities and routines and control temperatures in response.
- Weather—Sensors now track temperature, wind speed, humidity and vibration.
- Appliances—Refrigerators can alert homeowners to power outages, while washers and dryers can start or stop automatically and send notifications if problems arise.
- Smoke and Fire—New detectors not only distinguish steam from smoke but have the ability to shut off stoves and other appliances that may be causing the problem.

Considerations for the Future

Many major carriers are exploring the connected home concept and determining where and how to invest. Some of the major areas for consideration include:

Data

Insurers need to think about which data points are of most value and which have the highest predictive potential. They should be planning how this data will be obtained, organized, stored and accessed, and whether the current organizational capabilities are up to the task of leveraging these new data sources. Another concern is whether this new data will overwhelm existing business intelligence solutions and if new analytics will be required.

Data governance and ownership are often points of contention, as are the analysis and modeling of the data. The IT team and the operators of the insurance business have to determine whether new tools and methods will be needed.

The application of new data to claims processes and the integration of raw data into core policy and claims systems are other key areas for attention. In some cases, business and/or operating model changes may be needed to support the new inflows of data.

Product Integration

Once data issues are addressed, insurers need to consider their connected home product strategy. Insurers can simply roll out connected home offerings as a distinct service from the product coverage, as a way to improve customer experience and intimacy. As carriers gain more insights into the risks from the connected home data, they can integrate the connected home product into the pricing and coverages they provide, particularly for higher risk segments of the market. The insurers that have the best data from connected home offerings will have a significant first mover advantage to reaching true product integration.

Security and Privacy

Insurers must first measure customers' willingness to disclose personal data as provided by sensors, video cameras, motion detectors and other devices. With data collected from multiple sources, insurers need to determine whether current safeguards are sufficient to protect customers' privacy. Audio and video capture capabilities pose specific privacy concerns.

That said, Accenture's own research shows that most customers would be willing to share personal information with their insurer in return for benefits such as lower premiums or quicker claims settlement.[4] Our global survey of insurance customers found that 78 percent of respondents would be willing to share such information. Among home insurance customers surveyed:

- 59 percent would share energy consumption information;
- 55 percent would share smoke or carbon monoxide detector information;
- 32 to 38 percent would share light-sensor information; security video camera footage; motion detector information; and thermostat/humidity monitoring information.

Of course, while customers' willingness to share information may seem like good news to property and casualty insurers, the insurers must be able to provide value in return. If insurers promise improved service, they should be able to deliver faster settlement and greater transparency, while using channels that customers prefer, such as mobile and social media.

Loss Mitigation

As the use of in-home systems and devices becomes more widespread, insurers should set optimal targets for reductions in the number and size of losses. The new data delivered by such systems and devices will not translate automatically into specific, targeted loss mitigation programs. One possibility is to explore how to leverage current commercial lines loss mitigation programs as connected home data makes it more practical and efficient to offer lower-premium (and lower-exposure) homeowner products.[5]

Getting Insurers into the Game

One approach for home insurers to attract and retain customers interested in the benefits of the connected home is to offer their own connected home products. Accenture, for example, has developed a connected home platform that insurers can offer on a white label basis under their own brand. The platform connects the devices of most relevance to homeowners and insurers, including cameras, window and door sensors, motion detectors, thermostats, sirens, and smoke and CO detectors.

Unlike other commercially available products, however, the Accenture platform is designed to be integrated into the insurer's CRM systems to monitor usage and trigger discounts as appropriate. It also incorporates loyalty, couponing and other monetization features.

78%

of customers would be willing to share personal information with their insurer in return for benefits such as lower premiums or quicker claims settlement.

Taking the Next Steps

Insurers contemplating a move into the connected home market—or an expansion of current initiatives—have to think on multiple planes at once. They need to define, for instance, how customers currently engage with their products and services; to track how innovators in the connected home market are enhancing the customer experience; and to analyze the regulatory implications of collecting and using vast quantities of data from new sources.

The path to success usually involves five key steps (Figure 2).

1. Envision and Define. The insurer should start with a vision of where it wants to be in the connected home value chain. Does it want to focus upon providing discounts in return for information? Or does it see more value in providing actual devices and services to the customer?

   The key to this step is in determining what problem the carrier wants to solve, be it market differentiation, building the brand or reducing operating expenses. By starting with the end in mind, the insurer can identify the appropriate path forward. It may, for example, conduct an in-depth assessment of loss performance to see which types of losses may be avoidable with new technology.

2. Establish. Whether in partnership with others or through home-grown innovation labs, the insurer should experiment with concepts and technologies—including analytics and modeling as well as the actual in-home devices themselves—to test the value proposition of the chosen approach.

   Using the information gained during the Envision and Define phase, insurers can identify the technologies and/or devices that are most relevant to their stated objective. This may require extensive research into the data produced by each device. Brainstorming and use case creation can be employed to map out practical applications for connected home technology within the insurance sphere.

3. Partner. An initial ecosystem of partners will be needed to deliver the chosen approach. The technical reliability of devices is a major concern, but so is the network of incentives that makes the partnership work.

   In particular, insurers should assess the connected home ecosystem and determine where they are best positioned in light of their selected strategy. Should they partner with a connected home device maker to sell a white label product branded by the insurer? Or are they better suited to acquire a connected home startup company and help it grow and succeed? A traditional partnership with a mature home security or automation company may be sufficient to provide insights into the market opportunity, but the insurer should retain a high degree of flexibility and be ready to act quickly as other options present themselves.

4. Pilot. The insurer needs to test the mechanisms for adding value, whether through the triggering of discounts, the reduction of losses through active monitoring and alerts, or the expansion of existing customer relationships. Rapidly executed pilot programs can help assess the impact of the new program on marketing and distribution, product manufacturing, underwriting, policy and contract management, and claims management.

5. Refine and Extend. As new pilots and projects are developed, the insurers can extend pilot lessons into new projects while incorporating new technologies as they emerge.

Figure 2. Five key steps in setting a connected home strategy

Envision and Define	Start with a vision of how to enter the connected home value chain, by determining what problem needs to be solved
Establish	Experiment with concepts and technologies to test the value proposition of the chosen approach
Partner	Assess the connected home ecosystem to determine which partnerships to pursue
Pilot	Test the approach through a pilot program and evaluate the impact the new program has on other areas of the company
Refine and Extend	Extend pilot lessons into new projects and consider new technologies as they emerge

Conclusion

The connected home represents an enormous opportunity for insurers. To convert that opportunity into profitable growth, however, property and casualty insurers should invest carefully in concepts and partnerships that provide real value for customers while offering real potential gains for themselves and their partner organizations. Establishing the right approach will require both rigorous research and careful self-analysis on the insurer's part.

About Accenture

Accenture is a global management consulting, technology services and outsourcing company, with more than 319,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US$30.0 billion for the fiscal year ended Aug. 31, 2014. Its home page is www.accenture.com.

Accenture Digital, comprised of Accenture Analytics, Accenture Interactive and Accenture Mobility, offers a comprehensive portfolio of business and technology services across digital marketing, mobility and analytics. From developing digital strategies to implementing digital technologies and running digital processes on their behalf, Accenture Digital helps clients leverage connected and mobile devices; extract insights from data using analytics; and enrich end-customer experiences and interactions, delivering tangible results from the virtual world and driving growth. Learn more about Accenture Digital at www.accenture.com/digital.

Footnotes

1 "The Role of Mobile in the Home of the Future," Vision of Smart Home Report, published by GSMA, September 2011. http://www.gsma.com/connectedliving/wp-content/uploads/2012/03/vision20of20smart20home20report.pdf

2 Wolf, Michael, "Here Come the Bluetooth Smart Locks: August & Danalock To Help Fuel $3.6 Billion Market", Forbes.com, October 14, 2012. http://www.forbes.com/sites/michaelwolf/2014/10/14/here-come-the-bluetooth-smart-locks-august-danalock-to-help-fuel-3-6-billion-market/

3 Mizroch, Amir, "In the Battle for the Connected Home, Stakeholders are Lining Up," Wsj.com, August 14, 2015. http://blogs.wsj.com/digits/2014/08/15/in-the-battle-for-the-connected-home-stakeholders-are-lining-up/

4 Accenture 2013 Consumer-Driven Innovation Survey

5 Accenture 2014 Claims Customer Survey. http://www.accenture.com/us-en/Pages/insight-insurance-claims-customer-satisfaction-survey-service.aspx

12480109