

The DIY Smart Security Opportunity

Zonoff Whitepaper

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Executive Summary

For several years, the home security market has undergone a significant evolution. Many converging technologies have expanded and disrupted the home security business model, creating a new opportunity in its place. Traditional home security companies have expanded by adding new home monitoring and control services to their offerings, transitioning security into “Smart Security.” New entrants also eschewed professional installation and monitoring. Instead, they offered do-it-yourself (DIY) home security with Smart Home capabilities—disrupting the market with “DIY Smart Security.”

The new DIY Smart Security players are capturing consumers yet unserved by professional home security providers as well as existing home security customers who see the traditional model as antiquated or simply more than they require. Emerging DIY Smart Security solutions are being offered with mobile applications controlling various types of devices. Three primary offering profiles include: single point products; simple kits with multiple devices; and All-In-One devices. Any offering may entail options for professional or self-installation and self-monitoring or professional monitoring services with modest monthly fees.

NextMarket Insights defines “Smart Security” as newer home security offerings based on Smart Home technology and modern cloud-centric monitoring which comes in one of three forms:

1. Completely DIY (self-installed, self-monitored)
2. DIY self-installed home security with professional monitoring
3. Professionally installed and monitored solution that integrates Smart Home and cloud technologies as a core part of its architecture

A Legacy Market Under Stress

The home security market has had a long and storied history. Its inception can be traced back to the conclusion of the First World War. Crime spiked, causing American homeowners to seek ways to protect themselves and their property. The demand led to the development and innovation of alarm systems and home security products that ruled the market for many decades. As home security entered the 21st Century, however, legacy systems began to show their age.

Stagnant market

In the US, consumer demand for home security stubbornly plateaued between 20 to 25 percent of the homeowner market. Confined to a higher-income market segment, traditional home security became a mature, highly profitable but non-expanding business, subject to contraction during economic downturns.

Dated technology and processes

Hard-wired sensors, industrial-quality keypads and telephone return paths characterized the traditional home security networks. Installation required specialized electrical and wiring skills, and although operations were tied to professional monitoring, both end users and local law enforcement commonly complained of false alarms.

Narrow business model

Traditional home security relied upon long-term contracts, which were set up mostly to recoup the high cost of installations. This business model pushed aside many consumer segments, including middle-income earners, younger and relatively mobile homeowners and renters.

Into this long static market came wireless, increased computing power and Internet technologies that have transformed so many industries over the past 15 years. In the first wave, home security companies expanded into the emerging Smart Home market. In the second, simplified product designs conducive to DIY implementations led to market disruption that revealed the needs of under-served market segments.¹

The Smart Revolution

Having hit a plateau, the home security industry was looking to sell more services to existing customers. Home automation or Smart Home services emerged as a natural extension to their current offerings and presented the opportunity for new and meaningful revenue growth.

There was a precedent for this. Home security and Home Automation were already aligned in the high-end Custom Electronic Design and Installation Association (CEDIA) market. Transforming the broader home security industry, which served mass market with standard solutions, required a catalyst. Creating one of the biggest impacts, according to NextMarket Insights analyst Michael Wolf, has been the “maturation and mass commercialization of Smart Home and Internet of Things technology.”²

Both long-time market leader ADT and new rivals such as Comcast and AT&T began leveraging low-cost sensors, mobile devices with application frameworks and cloud computing to add Smart Security services to their portfolios.

A case in point: ADT Pulse. The slogan for this offering captures the shift: “It’s Not Just Security. It’s Peace of Mind.” ADT uses the new technologies not only to enhance its legacy 24/7 burglary, fire and carbon monoxide monitoring services, but also to offer additional solutions for lighting, thermostat adjustment and real-time video that keeps an eye on the front door, baby’s room or any other area of the monitored home.

The DIY Trend

New security models build on the tried-and-true American do-it-yourself mentality. In the context of home security, DIY has two primary considerations: installation and monitoring. In both cases, DIY can reduce costs and expand the market.

First, consider installation. The traditional home security model will continue to roll trucks and use certified technicians to initiate service. Some consumers may even opt for “white-glove service” despite being presented with Smart Security technology designed for simplified set-ups. But DIY installations are increasingly viable.

Several drivers include:

- Universal Plug-and-play (UPNP)-type technologies. The interoperability of many standard CE devices outside the home has shifted consumer expectations of what is possible.
- Simplified product and system design. Wireless communications, stick-on-the-wall sensors, low-power consumption and powerful batteries have all obviated the need for electrical and telecom wiring.

- Software applications. As apps have proliferated across multiple categories, consumers have become comfortable with managing various aspects of their lives using smartphones. There is no reason why home security must remain an island.
- Cost reductions. Expensive truck rolls and complicated set-ups incur expenses and necessitate long-term contracts. DIY solutions lead to the opposite result, opening up the market to consumers who are more price-sensitive and averse to annual commitments.

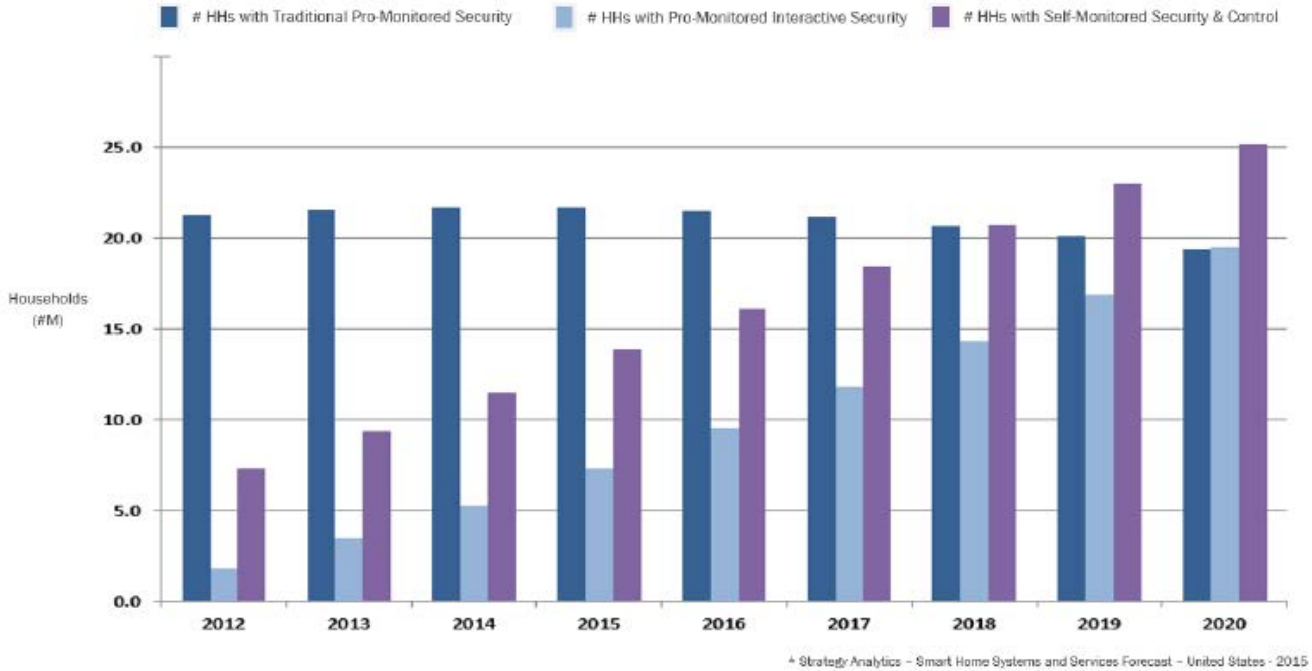
The move toward DIY monitoring has similar drivers. While some of the lowest-cost products eschew professional monitoring altogether, providing only an alarm in the event of a break-in, some type of monitoring remains a key element to most security offerings. In the case of self-monitoring the idea is that a lifestyle management feature, like remote video monitoring, becomes a core security feature itself. With nearly three-fourths of the adult US population carrying smartphones, consumers are available nearly around the clock to receive texts, alerts and videos. Eliminating professional security monitoring fees and adding possible incentives from third parties, such as home insurance companies, also makes it an attractive option.

DIY Forecasts

Both DIY Smart Security customers generally and DIY Smart Security customers who have subscribed to professional monitoring services are projected to grow at a quick clip. “Total DIY security users will grow at an annual rate of 71.5 percent from 2014 to 2020,” writes NextMarket Insights analyst Michael Wolf, “and professionally monitored DIY subscribers will grow 53.4 percent in the same period.”³

When considering the trends of all types of monitored solutions, both traditional and smart, a similar story of DIY growth appears. According to Strategy Analytics, traditional professionally monitored solutions have served approximately the same number of customers, in the low 20–25 million-range, for the past five years. (See Figure 1, 2012-2015.) The market research firm predicts that this legacy approach will begin to decline in 2017 and fall below 20 million customers by 2020.

US HHs with Security Systems



Conversely, the two non-traditional security options – “pro-monitored with interactive security” and “self-monitored security & control” – are already on the rise, and are expected to overtake the legacy approach by the end of this period. “Pro-monitored with interactive security” (Smart Security) is expected to overtake traditional security by 2019; while “self-monitored security & control” (DIY Smart Security) will surpass traditional security in 2020.

DIY Opportunity and Solutions

For companies interested in offering DIY Smart Security, the first step is to determine a proper business case. (As discussed in the paper [“Consumer IoT Monetization Strategies: How to Generate Revenue From Your Smart Home Brands”](#) published by Zonoff in 2016.) Companies with a good monetization strategy will discover compelling opportunities. First, there are customers who have been over-served by the home security incumbents and are ready for a change. Simultaneously, the industry has traditionally neglected to provide a viable home security option for low-to-middle income households who are equally interested in monitoring and protecting their property. Also, the mobile and renter-friendly generation is under-served and they are willing to pack and carry DIY Smart Security devices wherever they live.

Business Insider forecasts a massive growth in the number of Smart Home security device shipments. That amount could explode from

41 million devices worldwide in 2014 to 709 million in 2019. These shipments will likely consist of three kinds of offerings:

Point solutions

These are single devices, controlled by a dedicated app and aimed at a single task. NestCam (formerly known as Dropcam), a Wi-Fi video streaming camera purchased by Google, is one example. Consumers can purchase this indoor security camera by itself, or also subscribe to a service providing a 10- or 30-day video history.

Bundled or kit solutions

A multifaceted approach, bundled sets of hardware include devices like a base station, keypad, video monitoring, motion detectors and smoke detector. They are controlled and monitored through a single universal application by a company such as SimpliSafe. SimpliSafe also offers professional alarm monitoring as a no-contract monthly service. The design-savvy Scout system is another example of a kit with optional monitoring that targets new segments, such as apartment dwellers or new homeowners.

All-In-One solution

This approach integrates advanced video surveillance with an alarm and a host of wireless protocols that enable a wide range of peripheral devices through a single application interface. As with most DIY solutions, professional monitoring is an option. The LG Smart Security Solution, a stylish inverted conical device introduced at CES 2016, is one such example. By partnering with ADT's Security as a Service offering, Canopy, LG Smart Security can serve as both the center of an intruder detection system and the hub of a Smart Home infrastructure.

All-In-One Advantages & Requirements

All-In-One Smart Security devices hold considerable promise in the emerging DIY market. Although the integration of advanced video and multiple radio technologies comes with top-shelf positioning, it has great potential to cover a wide spectrum of customers, from first-time Home Security users and renters to higher-end market segments that are attracted to high-quality, branded monitoring and home automation integration.

At a time when safety and security remain crucial entry points to Smart Home deployments, All-in-One devices easily bridge between Smart Security and Smart Home capabilities. A recent survey published by the consumer electronics industry magazine *TWICE* reveals that 59 percent of shoppers said that an Internet-connected security device was their entry point to Smart Home.

What's required for the All-In-One approach to succeed? A winning device begins with a solid platform. These platforms must be able to handle both interoperability and for add-on devices across multiple integrated radio frequency (RF) communications protocols, as discussed more fully in a Zonoff paper titled ["The Interoperability Myth."](#) This device also needs a well-designed user interface (UI) and application. Cloud computing and storage, as a parallel platform, enables additional features, strengthens the platform and increases its resilience.

By aiming to deliver high value to a broad market, an All-In-One device includes not only the RF transmitters, but also an embedded camera and/or sensor. Not all DIY Smart Security solutions take this route, but given today's form factors and declining digital camera costs, video is an easy choice to serve the full-spectrum market. A device ecosystem added to an All-In-One device could include additional cameras, locks, smart doorbells, lighting fixtures and other peripherals.

Enabling self-installation calls for careful consideration of the total user experience (UX). That should extend from business model and brand to buying experience to user interaction and customer communications, as discussed more fully in, ["Delivering the Smart Home Customer Experience: Keys to Creating an End-to-End Experience Your Customers Will Love,"](#) a paper published by Zonoff. An attractive design and well-presented UI are necessary, but insufficient for delivering an exceptional UX, which should encompass the full customer life-cycle.

Just Do it Yourself

Home security is a mature but recently evolving industry. The technology has become both "smarter" and more conducive to DIY installation. By embracing the DIY option, companies interested in joining this fast-growing market can sidestep what were once major barriers to entry: wired equipment and sensors, a mobile workforce of installers and technicians and their prohibitive related expenses.

Before engaging consumers, DIY Smart Security offerings need a clear monetization strategy. Fortunately, security is a well-established consumer value. Among deployment options, consider the strength of an All-In-One DIY Smart Security platform, which would enable you to easily engage the widest possible mix of demographics under-served or over-served by those legacy solutions. Make your installation, set-up and overall user-experience so effortless that few will need assistance. Build a secure, multi-protocol hub, integrating as much functionality as possible, and place it within a vetted ecosystem of Smart Security and Smart Home peripherals. Pair it with a powerful

but user-friendly application that leverages the ubiquitous smartphone and encourages self-monitoring and/or professional monitoring as an added option.

Obstacles have fallen. Market disruption has created big opportunities. With the right strategy, partners and some courage, there is great potential for a company to deliver the ideal DIY Smart Security solution to the masses.

About Zonoff, Inc.

Zonoff empowers the world's leading brands to deliver smart, seamless living to the mass market through its Consumer Internet of Things software and services platform. Zonoff offers a proven, enterprise-scale Consumer IoT Platform with the interoperability, flexibility and reliability needed to successfully support mass-market Smart Home offerings. Zonoff's end-to-end, white-label solution includes the world-class Z1 Software Suite, an exceptional user interface framework, proven hardware reference designs, robust data analytics, a comprehensive device ecosystem and subscription-based services. Zonoff's Consumer IoT technology and services platform has been successfully adopted by leading brands in multiple vertical markets.

For more information, visit www.Zonoff.com.