

Consumer IoT Monetization Strategies:

How to Generate Revenue
From Your Smart Home Brands

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Introduction

Entertainment and energy management have been early drivers of Consumer IoT adoption. Both use cases have primarily involved sales of individual connected devices, such as smart thermostats, and the free or very inexpensive ongoing use of discrete mobile apps and/or cloud-based user portals. Another driver has been home security and safety, more system-based solutions that deliver ongoing services.

The Smart Home will continue to grow incrementally, as consumers test the market, one app and device at a time. The vision, however, is a much greater one of having many devices acting in concert to revolutionize how we live. Going forward, Smart Home brands should do more than just sell devices. Financing the evolution from the current era of device purchases to the future vision of whole-home automation requires leaning into the more service-based models.

Once a separate industry, the home security and safety segment of the Consumer IoT industry is arguably the most sophisticated in the Smart Home market. Ranging from first-responder access to pet-cam digital video recording (DVR) applications, it differs from other early use cases by being more likely to include recurring fees for service and multiple devices connected through a central hub.

If you are looking to monetize your Smart Home brand, start – but don't end – with that industry. In this paper, we offer these suggestions:

- Consider home security; join its ecosystems, if applicable, and otherwise draw lessons from this service-based model
- Devise other services for home management, a category that orchestrates so many of today's point-solutions
- Partner with industries that have a financial interest in seeing Smart Home systems deployed and used

By framing your products and solutions within the context of these complementary strategies, you are more likely to position them as high-value services, sustainable over time.

"In some ways, the model taken by some home security providers who offer connected solutions is a good template for other offerings in the broader Consumer IoT market.... Because security is a well-defined value proposition in the market and delivers something consumers need, they are willing to invest in it. The implicit value and draw of home security as an entry in the IoT market has led cable providers such as Comcast to focus their early Smart Home offerings on home security."

- Michael Wolf, "Understanding Consumer IoT," NextMarkets Insights

Ongoing Costs

Before exploring these strategies, let's review the point that Smart Home brands should do more than just sell devices. Smart Home offerings may include an integration point, a device or ecosystem of devices and a universal user application. The business challenge is that even if you can recoup the initial costs of designing, manufacturing, marketing and selling those components, you still have significant, if sometimes hidden, operational expenses related to the following:

Smart Home/Home Security Opportunities:

- Partner with providers that already 'get' the Smart Home
- Help disruptive innovators distinguish their offerings
- Enhance video recording with unique features
- Be attentive to the global market

- **Product support and development.** Solutions billed as "smart" and interactive call for a high level of continuous product management.
- **Interoperability and compatibility testing.** Smart Home devices require initial standards compliance and compatibility as well as ongoing updates to ensure that they truly work with new devices and system enhancements.
- **Cloud infrastructure.** Hybrid Smart Home architectures with cloud-based applications incur ongoing hosting, testing and other data center charges.
- **Customer communication and support.** Emails may cost only a fraction of a penny, but they add up; these solutions also require higher-tier support.
- **Technology licenses.** Don't forget rights, licenses (for instance, Z-wave) and maintenance fees, all standard line items, especially in the software realm.
- **Back-office and analytics.** An online app/device store and an analytics engine that provides custom insights requires additional infrastructure.

To make the business work by selling devices alone, you can try seeking a high premium upfront, whether from consumers directly, or from third parties, such as homebuilders who bundle Smart Home deployments into a property's list price or as an optional upgrade. Or you can think beyond one-time device sales to more broad-based and sustainable services. The early Smart Home security model is one example.

Home Security and Safety

Home security is a mainstream consumer industry. Globally, the market is trending up. According to a Markets and Markets report, it will increase at a compound annual growth rate (CAGR) of almost nine percent between 2015 and 2020 (from \$31 billion to \$48 billion.)¹ The report attributes this anticipated global growth to rising rates of burglary, insurance policy incentives and smartphone proliferation.

The value of defending against intruders and connecting immediately with police or fire departments may be clear, but the industry is in flux. Technology has transformed what was once a telephone link between an alarm and a monitoring center into something much more flexible and sophisticated. In so doing, smarter home security embraced Smart Home strategies, creating new opportunities for Consumer IoT players. (See takeaways in boldface, below.)

Home security leader ADT says that its interactive Pulse platform is about security, as well as “home automation, climate and light control, and video.” Competitors also offer a progressive variety of services. Comcast calls its Xfinity Home “a total home security and automation solution.” AT&T Digital Life offers packages that include “smart security & automation.” Vivint offers security, cameras and energy/comfort solutions. All provide professional installation and monitoring along with security and automation packages. **Generating the greatest revenue potential, these companies and their device ecosystems are natural prospects for collaboration by companies with relevant technologies.**

Disruptive competitors, on the other hand, offer do-it-yourself (DIY) options and further reduce costs by enabling self-monitoring. Crowd-funded Canary, for instance, notifies homeowners of an event, giving them the option to call the police or sound an alarm. SimpliSafe provides no security cameras, and its basic service connects sensors to in-home alarms. But for a monthly fee, it will transmit alarm signals to a central monitoring service. Other models may apply in markets where homeowners feel relatively safer.² Research indicates a willingness among German, French and UK households to pay for an on-call service that would assess a fee only when an incident requires a guard to be dispatched. **Unique services in this arena could include on-demand monitoring; monitoring without annual contracts; monitoring for medical data or emergencies.**

Between the full-service and minimalist approaches are other models. The Alphabet-owned Nest (previously Google) began selling “Nest Aware” subscription plans tied to its WiFi-enabled web cameras and cloud-based storage. These types of video services, now offered by numerous companies, have a security angle, insofar as they can help police identify suspects. But they also provide consumers more immediate “peace of mind” benefits, enabling them to check in on pets, elderly relatives, children, childcare providers and others. **Enhancements could include advanced audio analytics (e.g. distinguishing a baby’s cry from broken glass); intrusion zones - to minimize false alarms; time-lapse video; and facial recognition.**

Is This the Year?

“The Smart Home is going mainstream fast – and the technology is addicting.

- Almost half (45 percent) of all Americans either own Smart Home technology or plan to invest in it in 2016.
- Of people who do not currently have Smart Home technology, more than one in four (27 percent) say they will incorporate it into their lives in 2016.
- Of people who either have Smart Home technology or plan to buy it in 2016, more than one in three (36 percent) don’t consider themselves early adopters of technology.”

- Results of the Coldwell Banker Real Estate Smart Home Marketplace Survey, Jan. 2016

Home Management

While few services beyond security have yet emerged that command monthly payments, expectations for a “smarter” near future remain high. Some 60 percent of Americans think that for a home to be considered smart, it needs at least three categories of smart products – and most said buying their first Smart Home product made them more likely to buy another one.³ The time is right to assess various home management strategies that go beyond a single device and its related application. Here is a run-down of a few candidates:

Hub-and-point solutions

To date, the retail-based strategy of combining Smart Home hub and compatible devices with a service plan has not fared especially well. The idea is to offer basic free and premium plans for a monthly fee. Internet-based retailers such as Amazon and Apple may have more success in using the sale of these devices to drive more product sales. One prerequisite is platforms that are flexible, interoperable, and stable. But whether offering premium plans or not, Smart Home brands should prepare to offer some level of handholding or customer support. (See sidebar on ways to make this model successful.)

Smart Home analytics

Either as a standalone or as a feature available in premium Smart Home plans, this service provides actionable information to consumers about home and lifestyle based upon their usage of Smart Home products. Displayed as a dashboard that aggregates data from otherwise disparate devices, this service could deliver insights on energy usage, reminders about updates, analysis of bills, and tips on products and services. Big data analytics, such as that enabled by Zonoff Insights, can also benefit companies, by improving their customer and product knowledge, helping to identify marketing and upsell opportunities and driving product development.

Replenishment

Like a business, a household has inventory to maintain: foods, toiletries, cleaning products, etc. Amazon has enabled its Prime consumers to replenish many of these items with the \$4.99 Amazon Dash Button, a small branded device that links a consumer’s Amazon account with the product in question. Smart Home brands may have an opportunity to build upon growing customer familiarity with and willingness to pay for tools that automate home inventory management. Integration of Amazon’s voice-controlled Echo device to the Prime customer shopping experience is another example of Smart Home expansion into the shopping arena.

Tips on Selling Hub and Point-Solutions

- Educate your customer
- Align in-house buyers
- Think product placement
- Give the premium tier value
- Pick the right technology
- Be prepared to provide support

Home services

Platforms that integrate with home services or home repair and warranty providers also generate referral fees. Activation could be automatic (triggered by events such as water detection) or could be homeowner directed. Zonoff's partnership with HomeAdvisor, a service matching homeowners with service professionals, is an example of this kind of integration, which solves the consumer problem of disaggregated providers of home services with various levels of reliability, availability and specialization.

Home-energy management

This tool would monitor energy consumption, even down to the appliance level. It could analyze data and recommend cost reductions, by changing behavior, automating certain on-site functions or recommending the replacement of inefficient appliances or devices. As smart meters proliferate (especially in the EU) and home energy generation grows via solar panels and other means, it could also facilitate "demand response" actions and the sale of excess electricity back into the grid. Monetization models include monthly service fees or taking a percentage of the energy savings.

Installation services

As noted in the home security discussion, some companies provide professional installation, while others offer a DIY approach. This would be a one-time revenue opportunity for any Smart Home brand or existing team of in-the-field technicians that wants to support non-DIY customers and/or deploy new devices that traditional installers (e.g. HVAC techs) may not support. A robust application could enable consumers to select products and services and to schedule, change or cancel appointments and track status.

Concierge services

As a corollary to installation, this service would enable the setup, support and repair of products and services, possibly overlapping with telco/cable operator support for in-home (WiFi) networking. Companies such as GeekSquad, Geekatoo and Knowhow currently fill this role. The business model is either a recurring monthly fee with all incidents covered or a per-incident model with a deductible charged for every incident. Such service plans would help provide "peace of mind" to consumers as Smart Home technology goes mainstream.

Industry Subsidies

Smart Home brands need consumers to buy and continue to use their products. They also need support for the ongoing expenses of running a Smart Home operation. (See p. 2.) Some of that financing could come from third parties, including companies in industries with a business interest in home-related concerns.

This strategy could overlap with a service-oriented model. As mentioned above, insurance policy incentives are helping to drive an anticipated nine percent CAGR in home security revenue, and big-data analytics could benefit consumers and manufacturers alike. Other sectors inclined to finance or subsidize the diffusion of Smart Home solutions are medical services, utilities, and government agencies. Their motivations include risk mitigation, cost reduction, and regulatory compliance or enforcement. Here are snapshots of three such industries:

Insurance

Property insurance companies already offer discounts for policyholders who state they have deployed home security systems. Smart Home systems that reduce the frequency or impact of damages from incidents, such as water pipe breaks, or accelerate the arrival of first responders in the event of a fire also win support. Giving insurers the capability to confirm such installations could boost partnerships. Health insurance companies are also looking to benefit from Consumer IoT technologies. Much of their attention is focused on the wearable space, such as fitness trackers, but the potential for new applications, especially among the elderly, is growing.

“When their customers install sensors and alerts that can mitigate damage as well as tools that can diagnose problems early, insurance providers can save potentially tens of thousands of dollars per claim.”

- Michael Wolf, “Understanding Consumer IoT,”
NextMarkets Insights

Medical services

Healthcare providers are focused on cost reduction and regulatory compliance. A hospital that reduces its readmission rate, for instance, can avoid sizable government penalties. A personal Smart Home kit that improved patient compliance with follow-up instructions could well be in their interest. The overlap of health monitoring and Smart Home technologies will drive additional collaboration, especially as the percentage of the elderly comfortable with computer and mobile technologies increases. Smart Home systems that enable the elderly to delay live-in facility care could save \$3,000 to \$6,000 per month, a cost shared by individuals, insurers and the government.

Energy

Both individuals and governments have an interest in energy reduction. In between are the utilities and energy providers. Power companies already encourage “demand response” behavior by consumers, which reduces the load during periods of peak use of the grid. It is in their interest to support Smart Home systems that further enable such reductions. One use case of particular interest going

forward will be the recharging of electric cars. In markets with both stringent carbon footprint policies and a high percentage of public housing, such as the UK, government agencies will be further interested in cost-effective ways to scale up energy efficiency.

Summary Recommendations

Smart Home brands have a monetization challenge. Even if they command huge premiums that far exceed the initial cost of goods sold, the nature of the business entails a raft of ongoing operational expenses, from interoperability and compatibility testing to upgrades to software licensing to cloud infrastructure and more. The remedy for most brands is to step outside the device box and think like a service provider. In particular, we recommend that you:

- Take home security and safety as a model. This reinvented industry now intersects with the Consumer IoT-driven Smart Home. Join any relevant full-service ecosystems and try helping these companies build better solutions and applications.
- Devise new ways to serve the home. Assess existing home management opportunities and create new combinations that benefit consumers. Possible ventures include analytics, vetted home repair, IT-on-demand and more.
- Look for industry subsidies. Running a Consumer IoT operation is not cheap. Businesses in allied industries may be willing to cut you a check or otherwise underwrite your offerings if you can help them deliver value to their stakeholders or generate other recurring benefits.

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.