

## Smart Home: Bridging the Islands

*Why telecom operators are best positioned to unlock untapped potential in Smart Home*



The Smart Home is becoming a significant market for multiple industry and ecosystem players – from home appliance manufacturers to software players to telecommunication service providers, utilities and insurance companies. The world’s largest internet players, such as Microsoft, Google, Apple and Amazon, are also investing significantly in Smart Home – but have they really cracked customer requirements? Arthur D. Little considers cross-industry cooperation, platform integration and customer-centric business models and services key success factors for a successful take up of the Smart Home market.

### Smart Home service providers have not successfully overcome critical business challenges yet - Smart Home solutions come with major limitations

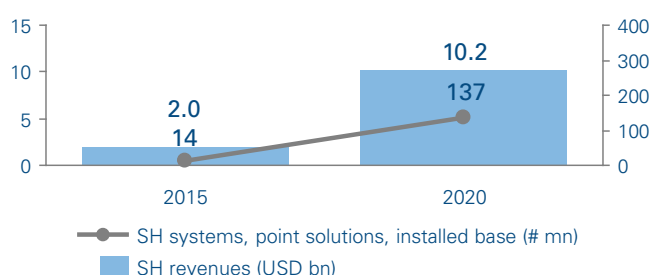
Today’s Smart Home ecosystem can count on some use cases which have increasingly been adopted during the last years, such as home automation (e.g. motorized blinds, garage doors, etc.), security and energy management. Though, Smart Home service providers have not successfully overcome critical business challenges. Existing Smart Home solutions come with major limitations that have prevented the market from truly taking off until today:

- **Limited customer value**
  - Product development often technology driven, not customer-/ use case centric
  - Single point solutions limited to very simple use cases
  - Limited eco-system size due to lacking interworking and the support of standards
- **Lacking services and solutions focus** of Smart Home providers, traditionally often coming from “product” business – the mind shift towards integrating “traditional” and “smart” product propositions has not taken place
- **Difficulty in developing sustainable business models** which can e.g. be complex due to the involvement of several partners, may call for a rethinking of revenue sources and -flows (e.g. data monetization) or require new capabilities

- **Inappropriate or lacking partnerships** with e.g. platform players, sales partners or customer service providers, not successfully enabling Smart Home solutions
- **An operating model not sufficiently supporting the new business** – a (digital) transformation of the whole company to support the “smart” business has often not been realized

Notwithstanding with all above mentioned issues, the general market environment and ongoing developments constitute a favorable basis for Smart Home market growth. Homes have become more and more connected – be it through classical fixed broadband (DSL, cable) or mobile infrastructure. Customers have increasingly adopted on-demand streaming of video and music, as well as the possibility to use “apps” across several devices. In addition, the demand for increased security, comfort and well-being, as well as energy efficiency, has risen over the last years.

### Smart Home revenues & systems EU 28+2



## The Smart Home market is finally evolving – we forecast European market revenues to increase from USD 2.0 bn to USD 10.2 bn by 2020

Until 2020, we expect a shift from point solutions – which enable single use cases such as an app indicating whether a window is open or closed – towards integrated “multi-point solutions” and “whole home systems”. Truly integrated Smart Home solutions will increase customer value and ultimately drive the overall market potential. We predict that the European Smart Home market value will increase from USD 2.0 bn in 2015 to USD 10.2 bn by 2020. In the same period, the number of installed systems will increase from 14 mn to 137 mn.

Driven by regulations on EU and national level and a perceptible customer value (e.g. energy savings), Smart Home solutions related to “energy management and climate control” account for more than one-third of total revenues today. These are followed by the segments “security and access control”, and “lighting and window control”.

Today, most Smart Home offerings are still very “vertically” oriented – e.g. utilities providing remotely manageable power switches or heating control. Others, such as appliance manufacturers, are desperately seeking meaningful use cases that the customer will be willing to pay for (e.g. a camera-connected fridge). Customers, however, demand for bundled solutions offered by single providers, which allow them to combine several integrated use cases under one management tool.

### The real value lies in providing integrated solutions for the whole house out of one hand

The real value of the Smart Home therefore lies in the ability to integrate use cases for the whole home, enable individualized use cases based on data analytics (i.e. customer insight and usage behavior) and provide solutions out of one hand.

To meet customers’ demand for bundled solutions, we see a development of Smart Home solution- and platform approaches towards increased ecosystem openness (technology, partners, and platforms) and Smart Home components and services aggregation over time.

A significant number of market players already exist who increasingly adopt a multi-use case and services oriented approach. For example, Somfy’s solution developed from home automation towards window control and appliances management. Panasonic and Allianz teamed up for Smart Home insurance services, and leading US telcos such as AT&T and Comcast have launched more horizontal platforms.

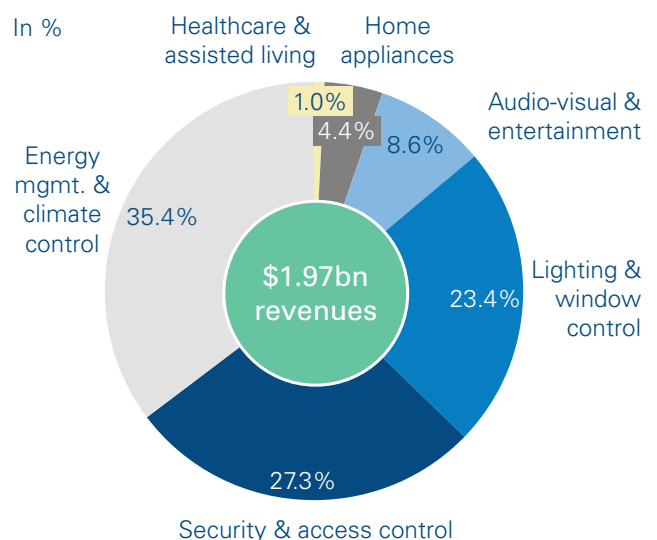
## Smart Home solutions and platform approaches are still limited – horizontally integrated platforms are not yet established

However, most smart-home solutions and platform approaches are still limited – e.g. AT&T’s solution lacks openness towards third-party hardware manufacturers, as AT&T only opened up the door to its platform to Samsung, LG, and Qualcomm some months ago. Moreover, customer use cases are still very much focused on the security aspect and sold as retrofit solutions (e.g. smart plugs and sensors which can be put into operation by the homeowner). This logic will now be imported to Europe through Telefonica, using the AT&T Digital Life platform.

Truly horizontally integrated aggregator platforms have not yet been established – especially European telcos have not been significantly successful in positioning themselves as a service provider as of now.

Big Internet players such as Apple (with its HomeKit solution) and Google (with Project Brillo) will try to tackle the sweet spot by trying to position themselves as the platform of choice for various apps and services. Moreover, Smart Home aggregators are emerging that focus on maximum ecosystem openness and aim at integrating multiple Smart Home components via their platforms (e.g. mediola and yetu). However, it remains to be seen how successful these “platform-only” approaches will be, as the installation and maintenance aspect of Smart Home solutions are generally undervalued. In addition, the sales aspect of services and appliances (e.g. door openers, locks, windows, ventilation) is greatly neglected as most product manufacturers are not able to use existing sales channels due to lack of knowledge of electronics or “smart products”. Instead, customers are asked to buy “retrofit” appliances that have to be added to the home or invest in expensive new- and in-built solutions.

### Smart Home revenues / vertical EU 28+2 (2015)



As a result, the Smart Home is a highly attractive opportunity for service providers like telcos, as they can sell solutions, provide (and manage) services and have the capability to install and maintain the installations.

### Call for action for telcos

So what should telcos do to differentiate themselves in the ecosystem and adopt market-leading positions?

### Services & solutions – not hardware!

Telcos need to re-define their strategy from a product-oriented sales approach towards a solution business –business models around Smart Home strategies need to incorporate partners (e.g. insurance companies, security companies, medical institutes) that are part of managed solutions. End-customer hardware and subscription revenues only account for a fraction of the total Smart Home value. Add-on services that build on customer insights and data analytics will be the main value drivers. Thus, business models should not center on the end customer as the main target for monetization – e.g. allowing for subsidizing the solution through other ecosystem players (such as insurance companies and utilities).

### Be open!

One complication in the Smart Home environment is the multitude of different technologies (e.g. protocols, operating systems, cloud versus on-premise platforms). Arthur D. Little predicts that this heterogeneous environment will prevail or even extend (e.g. Google launching an additional protocol “Weave”) for the foreseeable future. Hence, telcos need to enable their services to work with numerous standards and

protocols and allow fast and flexible compliance testing. In addition, telcos need to understand and ensure that Smart Home services require both local management capabilities (i.e. when internet connection is unavailable) and “cloud-based” management platforms to enable quick service integration and seamless service availability (e.g. outside of the home).

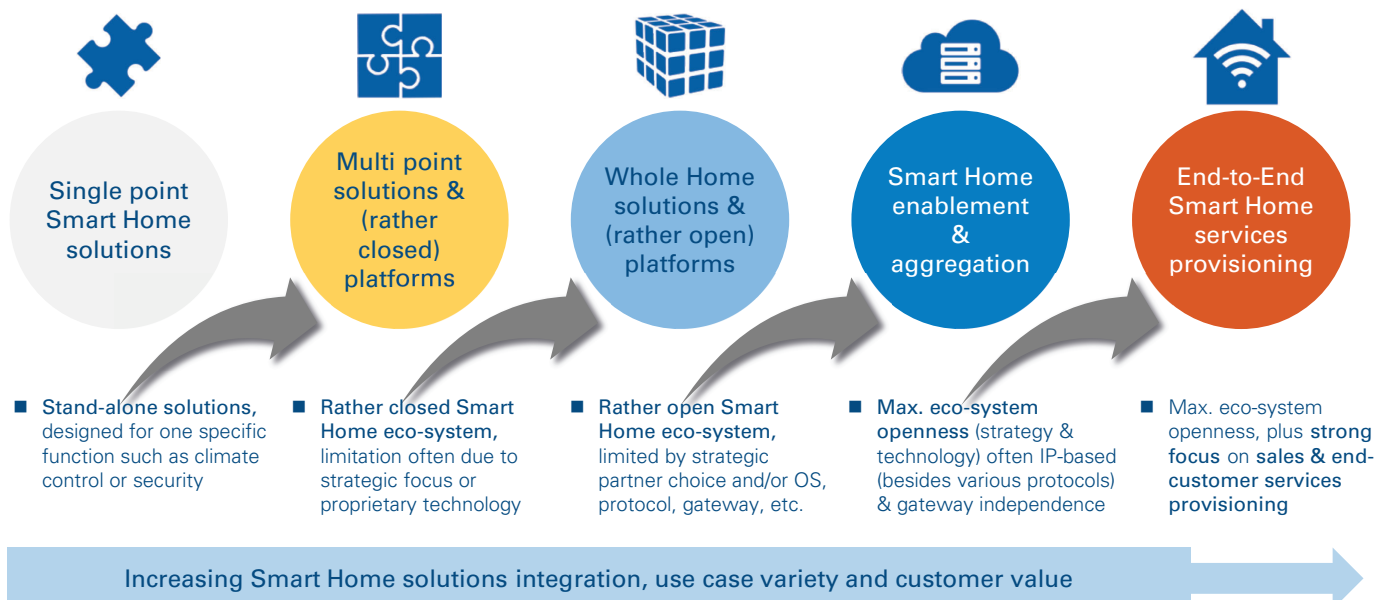
### Aggregate!

Telcos need to understand the supplier ecosystem in the Smart Home area. Most original equipment manufacturers, such as window and door makers, are rather local companies with limited Smart Home knowledge and capabilities that search for easy access to the market. Most telco operators’ Smart Home offerings are only focused on the retrofit, end-customer mass market, leaving original equipment manufacturers out of the equation. Providing factory-fitted connectivity capabilities would largely extend telcos’ potential value share, not only comprising the classical do-it-yourself market, but also new- and in-built solutions.

### Cooperate!

Within the Internet of Things context, we see telcos cooperating to offer common services to their multinational customers (e.g. Global M2M Association, Bridge Alliance, M2M World Alliance). This basic paradigm should also be considered in the Smart Home environment. Cooperation would simplify the integration of original equipment manufacturers (windows, doors, blinds, locks, etc.) in the given footprint and allow for end-to-end services provisioning. Ultimately, this will require a common platform architecture that is used by all telco partners to extend

### Smart Home solution- & platform approaches



the common services scope without jeopardizing local revenue pools.

## Enable!

Telcos need to strengthen their capabilities to provide meaningful insights to customers and to other ecosystem partners. Beyond horizontal (partner) enabling capabilities, there is a strong need for Smart Home end-customer services and support that equipment manufacturers, for example, are not able to provide. Telcos should secure this spot by offering installation and customer services to enable a "one-face-to-the-customer" experience.

## Extend!

Telcos can eventually extend their Smart Home business from (singular) homeowner sales towards housing associations and even full building- and office automation. In addition, operators can move from common use cases towards sensitive services, such as security management and advanced business models based on multiple partnerships. In this context, telcos might need to buy or build up own capabilities.

## Conclusion

Telecom operators can significantly benefit from the increasing "smartization" of residential homes, as well as of office- and industrial buildings. However, the market is still in its infancy, and Smart Home offers are primarily "single-point solutions" that lack interworking and support of standards. This limits use-case variety and ultimate customer value extensively.

In order to benefit from the increasing Smart Home market value in the next years, telcos need to position themselves as smart "enablers" that integrate various use cases, aggregate partners, and provide services and data to allow powerful, cross-vertical use cases and increase end-customers' well-being.

Telcos should actively engage in an open ecosystem play when stepping into this services space in order to offer powerful platform and overarching sales and services capabilities, as well as to enable fast aggregation of existing and future Smart Home solutions.

In order to position themselves on a multinational scale, telcos need to team up and form conglomerates that have the ability to provide services and solutions across multiple regions.

Arthur D. Little has gained significant experience within the Smart Home context through working for telcos, as well as for hardware manufacturers and utilities in this field.

## Contacts

### Karim Taga

Austria  
taga.karim@adlittle.com



### Ansgar Schlautmann

Germany  
schlautmann.ansgar@adlittle.com



### Didier Levy

France  
levy.didier@adlittle.com



## Authors

Ansgar Schlautmann, Karen Schelb

## Arthur D. Little

Arthur D. Little has been at the forefront of innovation since 1886. We are an acknowledged thought leader in linking strategy, innovation and transformation in technology-intensive and converging industries. We navigate our clients through changing business ecosystems to uncover new growth opportunities. We enable our clients in building innovation capabilities and transforming their organization.

Our consultants have strong practical industry experience combined with excellent knowledge of key trends and dynamics. Arthur D. Little is present in the most important business centers around the world. We are proud to serve most of the Fortune 1000 companies, in addition to other leading firms and public sector organizations.

For further information, please visit [www.adlittle.com](http://www.adlittle.com)

Copyright © Arthur D. Little 2015. All rights reserved.