



Baseline Assessment of Indian Smart Home Market

Webinar for Stakeholder Consultation
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Agenda



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Methodology



1

Literature review and development of primary research instruments.

- Literature review
- Designing of survey questionnaire for consumer, manufacturer, OEM, builder, architect, consultant, system integrator, service providers, etc.

2

Undertaking survey and interviews

- Survey of consumers, physical as well as online.
- Survey of other stakeholders
- One to one discussion with subject matter experts

Data analysis for insights and recording

of learningsAnalysis of

data

 Preparation of report to record the learnings of the study

☐ Through surveys and interviews project team approached over 500 stakeholders



Market size and segmentation



As per Ministry of Communication report, market for Smart Homes in India is estimated at US\$ 1 billion in 2019.

Product Categories

The smart home automation products can be classified in five broad categories based on end use applications



Safety and security

- Smart lock and other access related products
- Connected smoke detector
- Connected video surveillance
- Connected leak detector



Utility management

- Smart thermostat, Smart lighting
- Home energy monitoring and management systems
- · Smart blinds
- Other options for controlling energy load



Smart appliances

- Smart air conditioner
- Smart refrigerator
- · Smart washing machine
- Smart kitchen appliances
- Smart home cleaners and others



Wellness

- Smart watches, fitness bands and other vital health parameter monitoring systems
- Elderly and child activity and health monitoring system



Smart Infotainment

- Smart television
- Smart speakers and hubs
- Voice assistant and ChatBots



Drivers, constraints and opportunities



Drivers

- Safety and security
- Convenience and life style
- Enhancement of home Interior
- Energy savings
- Penetration of smart phones
- Availability of high speed internet at affordable rates
- · Changing work lifestyle
- Increase in disposable income

Constraints

- Data privacy and cyber security
- Product regulation and compliance law
- Interoperability
- Complexity of installation
- Limited system integrators
- Technology cost
- Ambiguity on Return on investment (RoI)
- Awareness
- Policy or mandate for builders for home automation

Opportunities

- Availability and penetration of smart and connected appliances
- Need for health safety monitoring for children and elderly parents
- Managing renewable energy and energy storage
- Energy saving by preventing idle running and optimization of operating parameter
- Push for common standards across globe
- Cost of technology may reduce due to economies of scale.



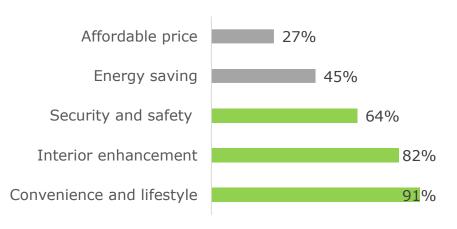
Survey outcome



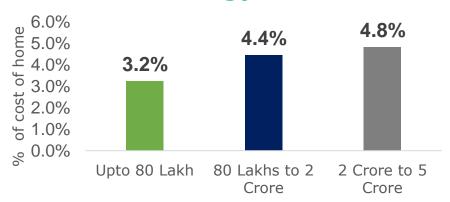
Product preference

- 1. Security and access control
- 2. Smart Lighting
- 3. Smart AV system
- 4. Smart appliance and energy saving devices

Key drivers



Cost of technology



Key barriers

- Data security and cyber security 67%
- Technology cost 60%
- Lack of standardization 50%
- Lack of reliable service 53%
- Limited functionality 34%
- Complexity of installation 32%



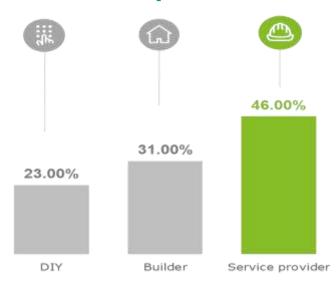
Survey outcome



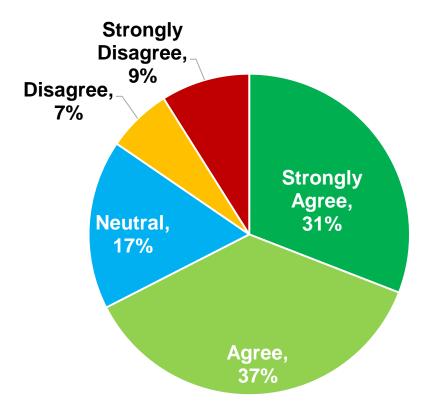
Point of sale and distribution channel

- 1. System integrator 53%
- Manufacturer 38%
- 3. Retailer 9%

Installation preference



Need of standardization

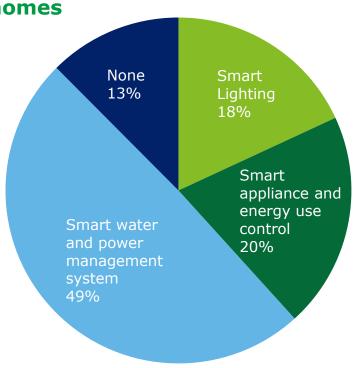




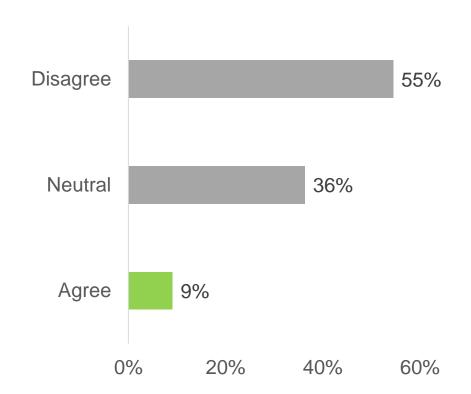
Survey outcome



Smart home devices that should come as standard fitment in new homes



Impact of existing green building codes and certification





Market growth and forecast



Indian smart home market is presently in nascent stage, as indicated by industry leaders and subject matter expert during survey and interviews. Due to this fact, there is a limited availability of historical data regarding total market value, past growth trends and future growth expectation.

Methodology

Identification of independent variables

 Review of reports to develop understanding about smart home market

Literature review

 Collection of historical data of independent variables and future projections.

Identification of

factors/parameters

that are related to

smart homes and may be used for forecasting

Assessment of identified variables

 Evaluation of identified variables to understand type of correlation (positive or negative) and strength of relationship (strong/weak)

Forecasting

- Developing multiple forecasting models for estimating smart home market size till 2030 using variables with strong correlation
- Linear regression is used for forecasting

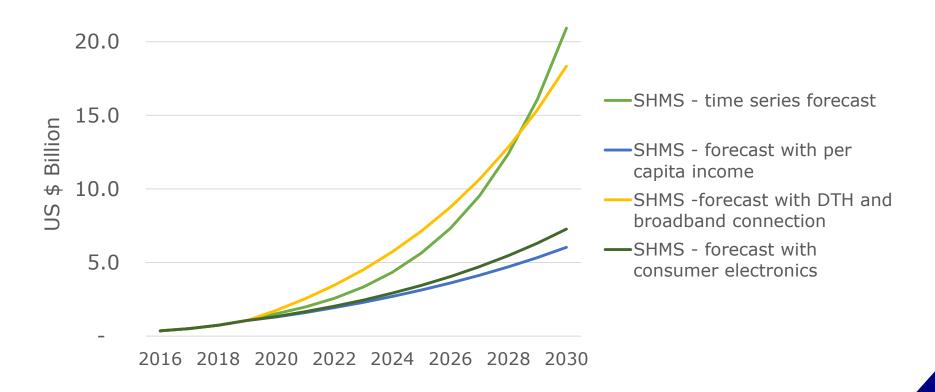


Market growth and forecast



Results – without policy intervention

Based on four forecasting models, the smart home market size is expected to be in range of US \$ 6 to 20 billion by the end of 2030.





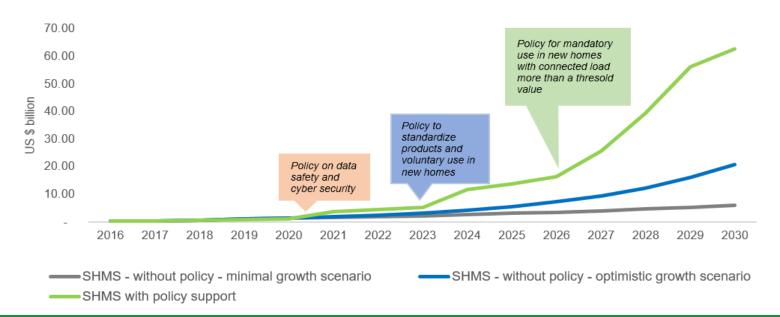
Market growth and forecast



Results – with policy intervention

Some of the key policy required to disrupt Indian smart home market, identified based on the discussion with industry leaders and subject matter experts, includes:

- Policy for data safety and cyber security to protect consumer privacy and to mitigate risk of data theft.
- Policy to standardize products for seamless integration of products of different make
- Policy to promote use of smart home in new and existing homes by voluntary or mandatory compliance.
- With suggested policy interventions, Indian smart home market size may grow to about US \$ 62.8 billion by the end of 2030.





Global best practices



To promote use of home automation systems and to eliminate barriers (to adoption) many countries and regions have developed various plans, policies, standards and certification systems for smart home technologies and for allied domains.

- 1. Standards defining minimum device requirement of smart home. Example
- · Energy Star, USA
- · HDB, Singapore



- 4. DSM, DR and energy monitoring program. Example:
- · SCE, California, USA
- · Energy companies obligation (ECO), UK
- · Energy use monitoring services by utility, Finland





3. Standard, alliance or program to overcome barrier such as lack interoperability, awareness, data security, cost etc. Example:

2. Standard or certifications to assess performance. Example: · Smart Readiness Indicator, EU

Programme, Germany

Smart Home + Building Certification

- · ECONET, Japan
- · OCF, USA
- · Smart Green apartments, Australia







Thank you



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