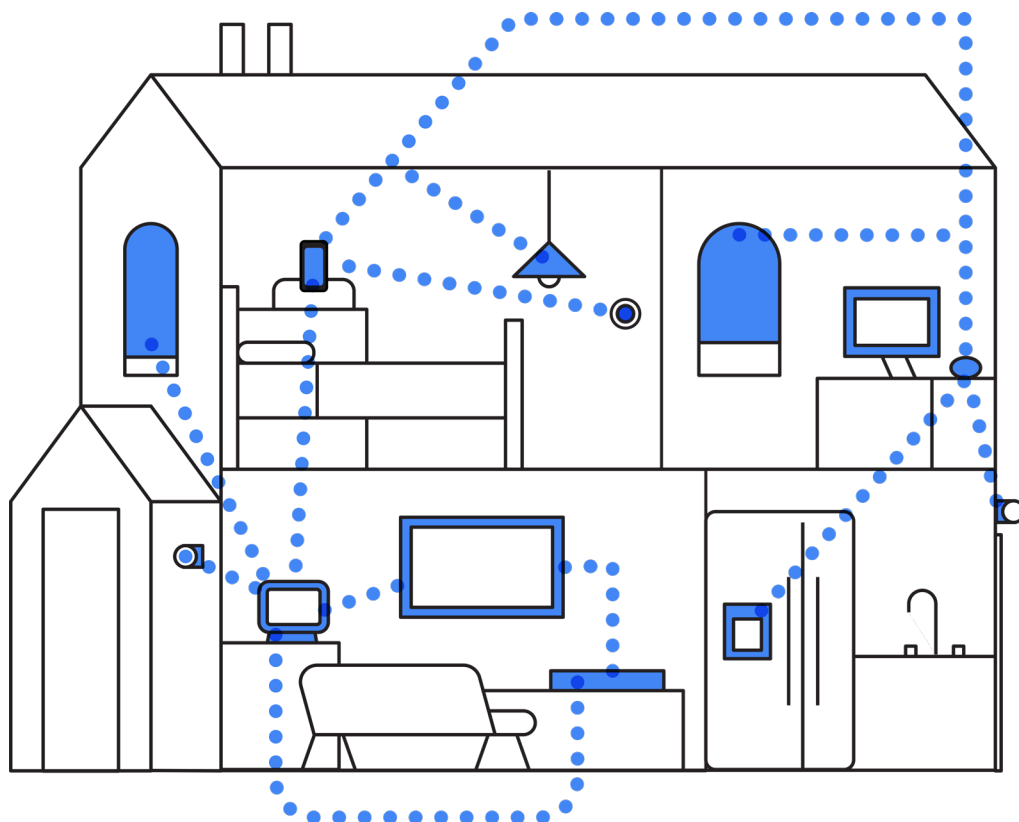


The Rise of the Connected Home in Asia Pacific

2020





Modern technology makes our homes more automated by connecting various devices such as smart appliances, lighting, security cameras.

In this report, we will explore opportunities to further accelerate consumer adoption enabling, a frictionless consumer experience.

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Report Overview



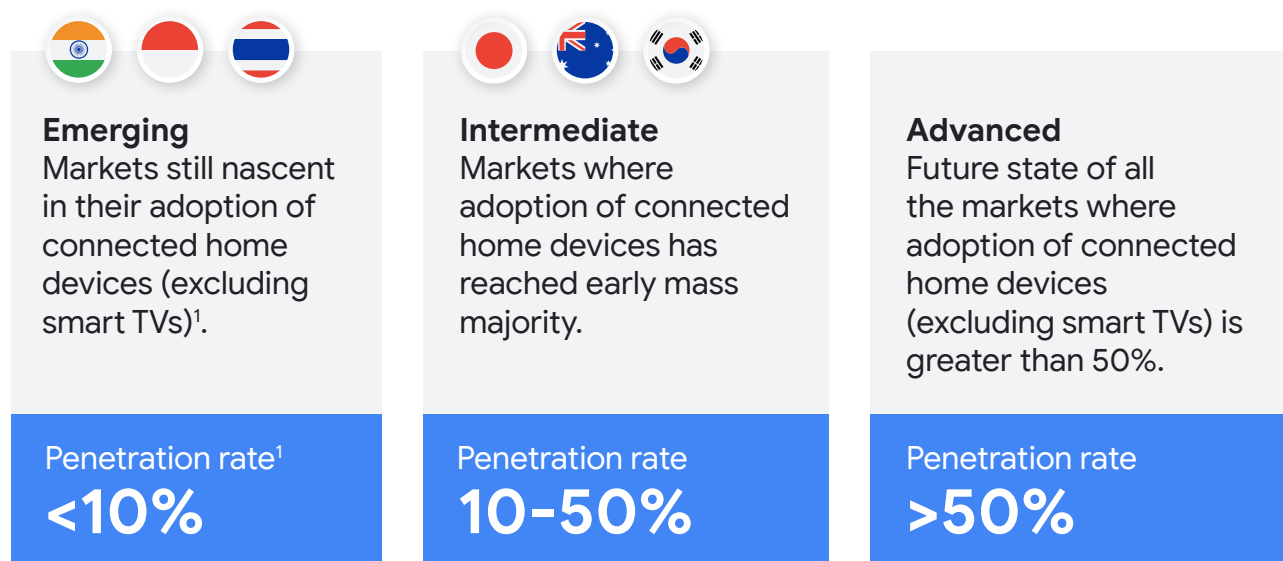
2020 Accenture + Google study on Connected Home consumers in APAC

What are we trying to answer?

This document provides an overview of the **trends** in connected homes in APAC and highlights key areas of **consumer pain points** in the **connected home** and the **living room**.

It further shapes **opportunities for ecosystem partners** in the connected home space, especially for **Telcos** and **Media & Entertainment players** who are looking to improve their relevance to consumers and **accelerate adoption** across APAC.

Which countries have we covered?



How did we generate the insights?

Accenture conducted a comprehensive research comprising **secondary research** in six markets (India, Indonesia, Australia, Japan, South Korea and Thailand) and **primary research** via remote ethnography of households in India, Indonesia and Australia to generate fresh insights and perspectives.

The study was conducted from **March to June 2020** and also explored the impact of COVID-19 on connected homes.

¹ Smart TVs are excluded from penetration rates as they skew figures; several households have smart TVs as the only connected device

What is a Connected Home?

A Connected Home is an interplay of devices, services and apps to enable home automation for consumers

01 Connected Home devices

Smart devices around which use cases revolve



Home Entertainment

Smart TVs



Smart Appliances

Robotic Vacuum Cleaners



Control & Connectivity

Smart Speakers/Hub



Smart Security

Smart Security Cameras



Smart Lighting

Smart Bulbs



Energy Management

Smart Thermostats

02 Connected Home services

Device care services and automated ancillary services triggered by data collected from devices



Set-up & Maintenance Services



Data Management & Ancillary Services

03 Connected Home apps (including OTT apps)

Apps that are used together with smart devices to enable greater functionality

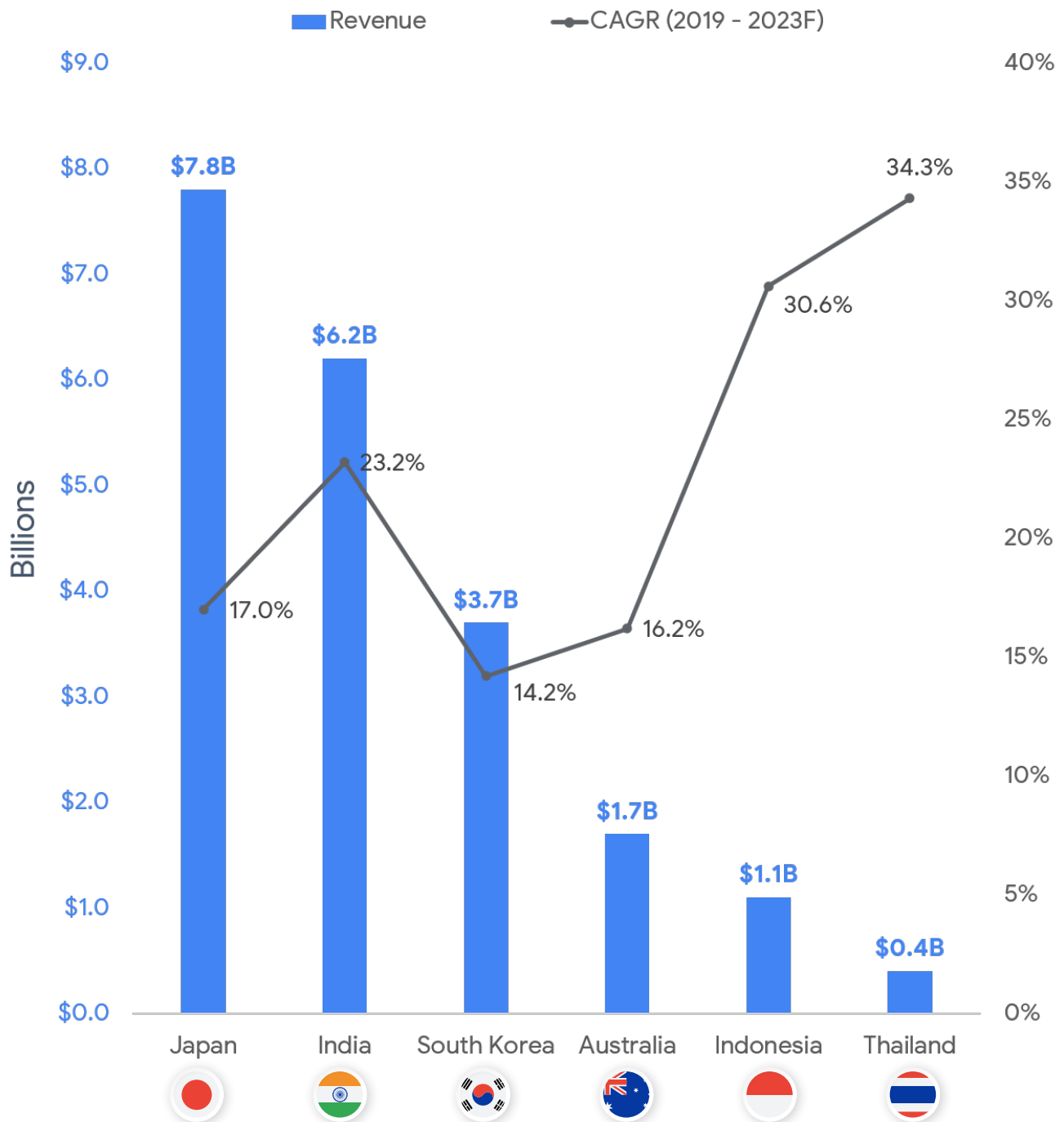


Content, Apps & Services

The Future of Connected Homes



APAC¹ was a US \$21B devices market in 2019 (excluding China) that will double to US \$43B by 2023



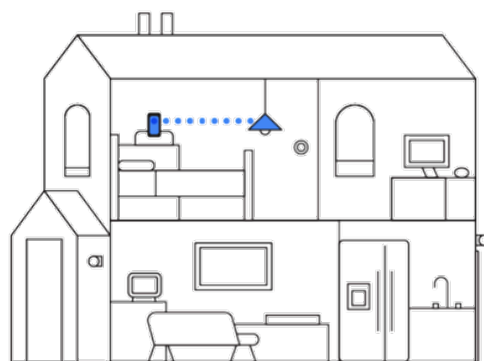
¹ APAC here refers to the six markets chosen for this study (India, Indonesia, Thailand, Japan, Australia, South Korea)

*APAC Connected Home Market excludes China (55%) & all other APAC markets make up less than 5%; Est share of Smart TVs is 45% of US\$21B and US\$43B market size

There are 3 types of Connected Homes: Single Device, Separate Systems and Integrated Homes

01 Single Device

There are minimal devices in single rooms - often living rooms or bedrooms. Functionality and use cases are restricted to a standalone device's (usually a smart TV or smart speaker) features.

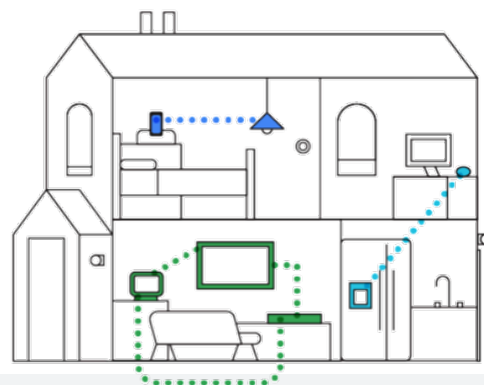


Typical State for:



02 Separate Systems

Rooms have multiple devices, some of which are integrated. Control and connectivity remains fragmented, limiting use cases and making the experience less seamless.

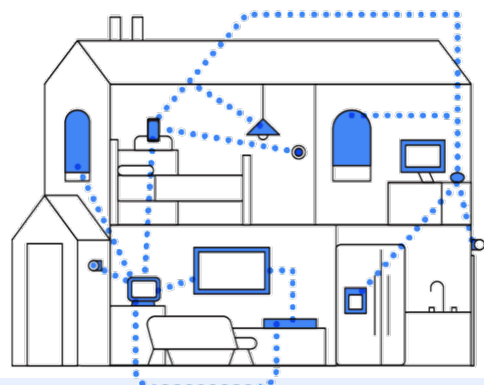


Typical State for:



03 Integrated Homes

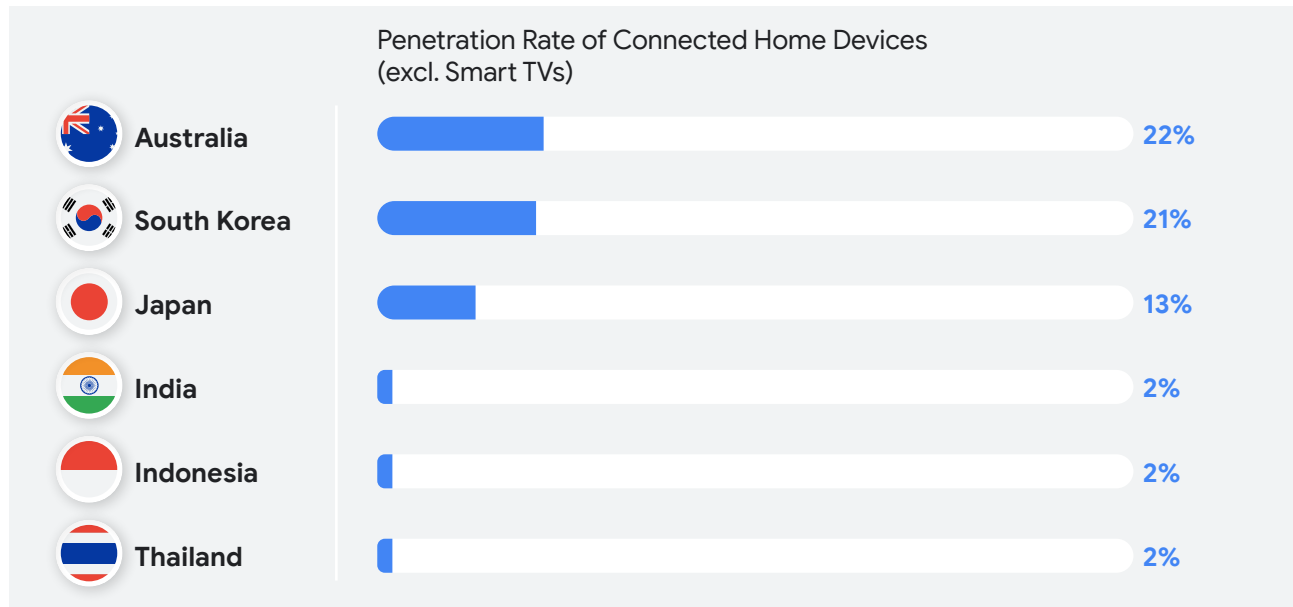
Integrated devices, services and apps work seamlessly to deliver advanced use cases that can be controlled by minimal apps or a single platform. A small number of advanced users are in this state.







Future State:

Currently, no APAC country falls under this state





Household Penetration of Connected Home Devices (excluding Smart TVs) in Key Markets



Drivers in Emerging Markets

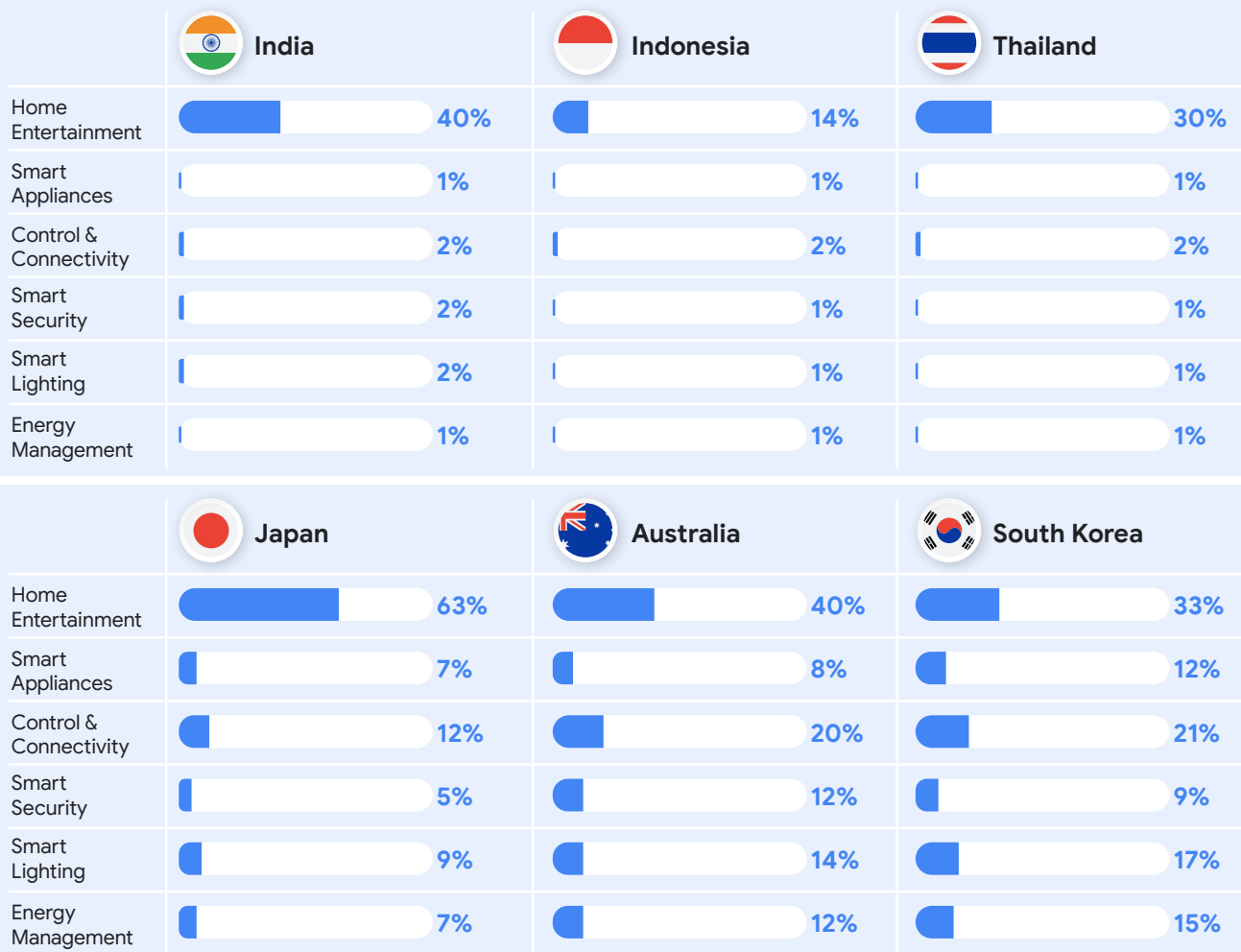
-  Novelty of emerging technology
-  Desire for lifestyle upgrade
-  Popularity of voice technology
-  Comparability of prices to non-smart counterparts

Drivers in Intermediate Markets

-  Value-add of connected devices
-  Demand for connected home content and services
-  Desire for carefree lifestyles
-  Access to broadband with >70% penetration

Connected home penetration % shows the share of Smart Homes from the total number of private households of the selected market (market segment, region) for 2019
Smart TVs are excluded from penetration rates as they skew figures; several households have smart TVs as the only connected device

Penetration of Connected Home devices is still in its early stages



*based on penetration of smart devices as % of households, see key products for each use case below



Home Entertainment
Smart TVs



Smart Appliances
Robotic Vacuum Cleaners



Control & Connectivity
Smart Speakers/Hub



Smart Security
Smart Security Cameras



Smart Lighting
Smart Bulbs



Energy Management
Smart Thermostats

Integrated homes will enable advanced solutions that cater to consumer needs



Media and Entertainment

to bring cinema to the living room

Anchor product: Smart TV



Home Care Solution

for convenience and quality living*

Anchor product: Smart Speaker



Family Safety Solution

to offer peace of mind and safe living for all

Anchor product: Security Camera



Health and Wellness Solution

for a healthy lifestyle*

Anchor product: Smart Thermostat



Elderly/Healthcare Solution

for a safe and independent lifestyle.*

It will be especially prominent in intermediate markets where the population has the ability to afford



Pet Care Solution

for convenience and high standard of living. Common in Australia at the moment due to high pet ownership

Anchor product: Smart Bulb

Please refer to the full report for more details

*Home Care, Health & Wellness, Elderly/Healthcare are expected to have accelerated adoption following COVID-19

Source: Accenture Analysis based on Secondary and Primary Research

The Impact of COVID-19



COVID-19 impact on Connected Homes

COVID-19 has amplified existing health and safety use cases and led to the rise of the homebody lifestyle which will result in new use cases



More Awareness of Health and Safety



Accelerated Shift to Working from Home



Amplification of Homebody Lifestyle

01

Existing Use Cases to be Amplified



Home care solutions to start sooner (such as contactless deliveries with smart lock and cameras)



Solutions for the elderly to live a safe and independent lifestyle, such as remote chronic health monitoring, are gaining momentum



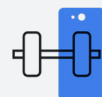
COVID-19 has **amplified health & wellness** as many combat quarantine blues, boost immunity and keep fit during and post lockdown

02

New Use Cases to Emerge



Work from home solutions to maximise productivity like smart speakers/hub being used to keep track of meetings and tasks



More remote services such as guided home workout plans via smart speakers



More entertainment needs around health, spirituality and personal needs on the living room screen

COVID-19 Impact Study

Findings are based on responses from participants between March and June 2020 when India, Indonesia and Australia were in COVID-19 lockdown

COVID-19 has accelerated infrastructure development and regulatory reforms to accelerate Connected Homes

01 Acceleration of fixed internet penetration rate



Significant FTTH¹ investments

The current fixed broadband penetration in India and Indonesia is <10%. Telcos are proceeding with the launch of 5G alongside investments to expand FTTH



Accelerated 5G Launch

Thailand has accelerated 5G launch by 12 months. Japan, Australia and South Korea are expanding 5G coverage

02 Overcoming barriers required for Connected Home evolution



Eased Government Restrictions

The Indian government formalised use of telehealth services in March 2020. The South Korean government also eased restrictions on telemedicine



Increased Partnerships

Indonesia's Ministry of Health has partnered with a ride-hailing giant and Telehealth provider for testing. A Japanese Telco worked with an aged care startup for proof-of-concept of remote monitoring.

¹FTTH refers to Fibre-To-The-Home which utilises optic fibre as part of its network architecture, replacing traditional copper wire infrastructure

Source: Accenture Analysis based on Secondary Research

Consumer Experience in the Connected Home



Consumers today face a fragmented experience throughout the purchase and usage journey



Lack of Awareness

It's a Family Affair



Making Novelty Useful

Lack of Awareness



I do actually want to learn how to use [Smart Hub] just to help me with instructions, because I have seen people doing that, but I never got round to it.

- Participant from Australia

Owning a device doesn't equate to knowing how to best use it, and not everyone is willing to put in the time and effort to learn. Even engaged and tech-savvy users may lack awareness of new features and updates released.

Implications

How can consumers gain more awareness of how solutions can fit into their lifestyles and solve for their key needs in an impactful way?

01

Empower 'Connected Champions'

Real users of devices, especially ones a consumer personally knows, have a big impact. Come up with ways to leverage and enable these relatable 'Connected Champions' to help new users better figure out the specific features, devices, and solutions that best work for them.

02

Provide the right inspiration

Many hobbyists turn to tech magazines, blogs, or streaming channels for updates and inspiration on what they could do with their devices. However, these channels don't always show less-inclined consumers how devices could fit into or improve their lifestyle.

It's a Family Affair



I remember having an argument with my partner about getting [a smart light system] because you can't use the light switch anymore. You've got to use the app all the time.

- Participant from Australia

Main purchasers encounter roadblocks when it comes to convincing skeptical family members. Once convinced, these secondary users can emerge as some of the best advocates.

Implications

How can we turn secondary users into advocates so that they become enablers rather than barriers to growing the connected home?

01

Help me enjoy the learning journey

Find ways to make the learning journey more manageable and fun in order to encourage reluctant users to give devices a go rather than rejecting them outright.

02

Simple use cases, directly experienced

Directly engage secondary users with a curated set of highly relevant use cases that can be immersively experienced to pique their interest.

Making Novelty Useful



I'm planning to place smart switches for my home which could be helpful for my mum because she is aged so she can operate via voice control.

- Participant from India

Connected home devices should eventually go beyond being a novelty and become useful in households. For example, smart speakers could be hero products that drive adoption through novelty purchases. They, however, need to adapt to the consumer instead of requiring consumers to adapt to them to be more useful and last longer.

Implications

How can we present the Connected Home as an option at the right time so that consumers are in the right frame of mind to seriously consider it?

Below are some examples of some ways smart speakers can be useful:

01

Manage music playing in the background

02

Integrate with the TV to quickly navigate to timestamped content

03

Provide hands-free support for recipes while cooking

04

Entertaining and supporting the education of younger children

Connected Home players will have to move to holistic, user-centric strategies to accelerate adoption

Support My Transition

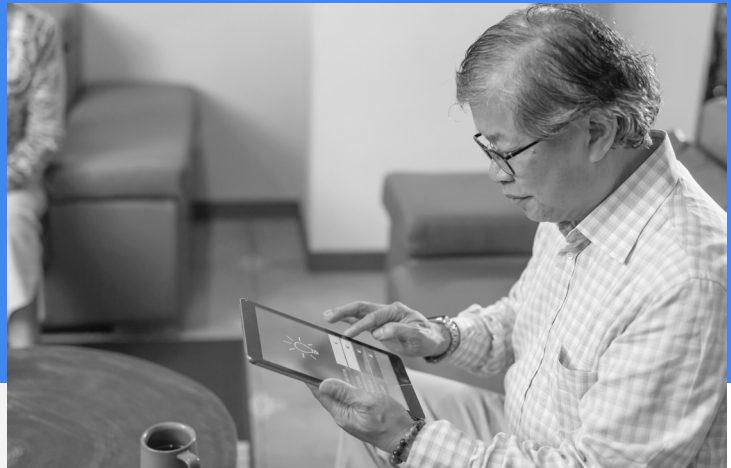


Targeting the Turning Points

Privacy and Security in the Connected Home



Support My Transition



Digital Assistant is great but there is a steep learning curve. It allows very basic integration with some devices, but to do anything slightly out of scope you need to manually edit json files.

- **Participant from Australia**

A connected home is most valuable when it is delivered as an integrated solution, but consumers experience considerable pain points while transitioning towards integrated homes. “Do It For Me” services could support the transition.

Implications

How might we provide the right kind of support for consumers transitioning away from single device homes?

01

DIFM, but only when I need it

Many choose to DIY as a first step, but could be open to DIFM services which are proactively targeted at the right moment and in the right way. This might mean players providing a centralised support platform or directory that links service providers with consumers rather than having to deliver a service.

02

Provide the right inspiration

Things are bound to fail at some point - connectivity goes down, hardware fails, or something goes wrong after an update. The inability to do anything about it, and the lack of alternatives when these things happen is what is most frustrating.

Targeting the Turning Points



“

We'll wait until the house is renovated before buying. Once the house is fully renovated, everything will be replaced with new ones and we will assemble them from scratch, like doors.

- Participant from Indonesia

Consumers are primed to be more open to integrated solutions at key turning points like moving house, but players need to see the bigger picture to target them well.

Implications

How might we present connected home as an option at the right time so that consumers are in the right frame of mind to seriously consider it?

01

Build long-term consumer relationships across life stages

A consumer in their early twenties may not be at the right place or time to be thinking about more integrated connected home solutions, but this doesn't mean they won't be a 'platinum' user later on in life. Players could invest in high potential users for the long haul.

02

Adapt solutions to different living circumstances

Adapting solutions and services for a variety of living circumstances will help consumers overcome some of their specific concerns, particularly when it comes to not owning a home.

Privacy and Security in the Connected Home



Data is still held by the company who controls privacy. When we [the consumer] make mistakes, our data can be made public and we lose real privacy. So with the existence of smart devices we are also expected to be smart in their use.

- Participant from Indonesia

Privacy and security is often only tangible when something goes wrong (e.g. data leaks). This can make consumers feel out of control, which is a barrier towards more integrated expansion.

Implications

How might we address what consumers both practically and emotionally value so that consumers feel assured to place their trust?

01

Make it visible & manageable

It can be hard to feel in control over something as vague as 'privacy' and 'security'. Players could make these concepts more tangible and thus easier to monitor and observe for consumers.

03

Equip consumers to handle risks

Consumers are faced with uncertainty and a sense of 'unknown unknowns' when it comes to managing their privacy and security. Being able to clearly tell consumers what they should know and how to overcome potential risks could help allay concerns and make consumers feel better equipped.

02

Earn consumers' trust

While many consumers accept personal data being used as part and parcel of the world we live in, there is a need to show consumers how they are benefiting from this data 'transaction' and provide them with options to control their own data in order to keep them onboard.

04

Make it easy for consumers to clean up after themselves

While savvy consumers know what actions to take to protect themselves (e.g. manage a long list of passwords, clear cache, turn off devices manually), not everyone has the energy and time to do this. Proactive support for consumers to take care of their personal information could help to keep them better protected.

The Vision of an Integrated Home

One where smart devices and services interact seamlessly to deliver value to the whole family, addressing consumer needs with advanced use cases in a safe and secure manner

A Day in an Integrated Home

Follow a fictional family of 4, Grandpa Mung Bak, Mum Seri, Dad Jyeong Hyek and Son Jae-Joon in Seoul, South Korea, on a wintery Saturday evening.

Family Safety

As the family prepares for bedtime, the house is warmed to 24 degrees C, lights are dimmed and the “night-time” security function is activated. All doors and windows are locked.

Home Care

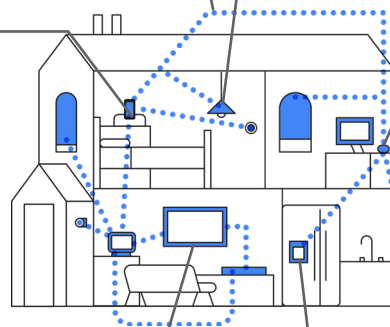
An appointment to replace malfunctioning bulb #3 has been fixed via Smart Assistant for 5.30pm on Tuesday so that Mung Bak is home during the replacement. He likes to ensure that everything runs smoothly.

Healthcare

Jae-Joon quickly checks in with his doctor after he is alerted that his prescription is running low. The doctor is checking if Jae-Joon still needs them before placing an order that will be delivered.

Pet Care

It's 6:00 pm, and the smart speaker reminds Jae-Joon that he needs to take their dog for a walk in 15 minutes.



Media & Entertainment

Earlier, the family sat down for a movie and enjoyed a multi-dimensional theatre experience via a smart TV, automated blinds and smart lights. Now Jyeong Hyek is listening to guided meditation via the smart TV before going to bed.

Health and Wellness

The smart refrigerator detects a shortage in ribs and carrots that Seri needs for her Galbi Jjim dish for Sunday's dinner and places an order via the smart speaker. It will be delivered before 12pm tomorrow.

