

# The Connected Home – A Series of Evolving Systems

**April 12, 2018**

# Connected Home Primary Areas

1. Communication Protocols
2. Devices
3. Hubs
4. Platforms
5. Home & Electric Connectivity

Photo Source: Utility Dive e-newsletter January 2018



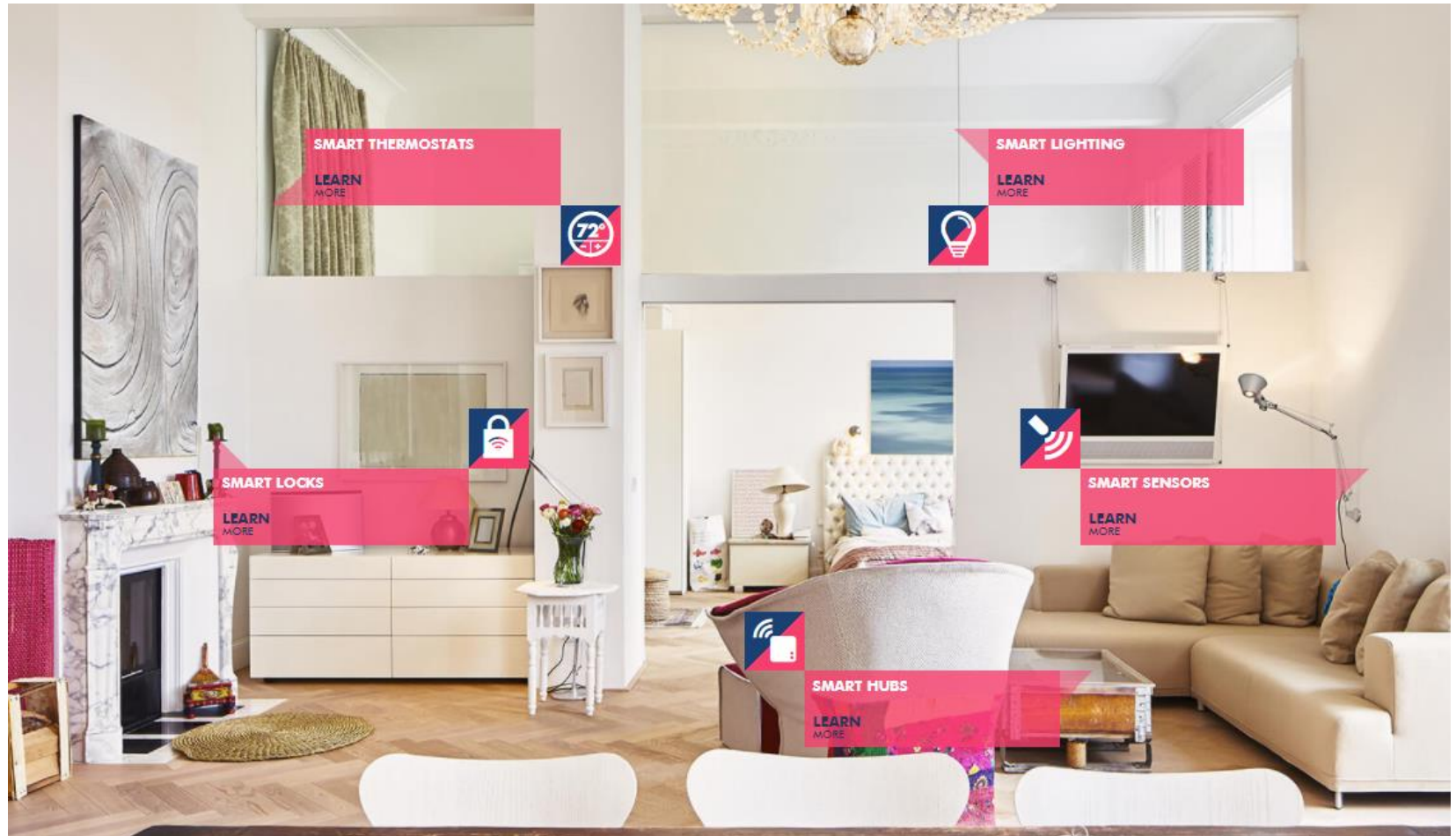
# Connected Home Trends & Drivers

- Decrease in the price of technology: sensors
- Dramatic increase in use of mobile apps
- Increased interest in the capability to customize personal components (younger geek interests)
- Security is one of the biggest drivers
- Offsite remote control
- Visualization of metrics – market expectation of being able to see what is happening
- Cars lead other aspects of our lives – the self managed home
- Cost savings on utilities



Photo Source:  
Magitt.com

# Examples of Connected Components in Today's Home



Source: Z-Wave

# Home Automation – Communication Protocols

- **Zigbee, Z-Wave, Insteon:** Wireless communication protocols.
  - Network using low-energy radio waves to communicate
  - Allows for low power, wireless control of devices

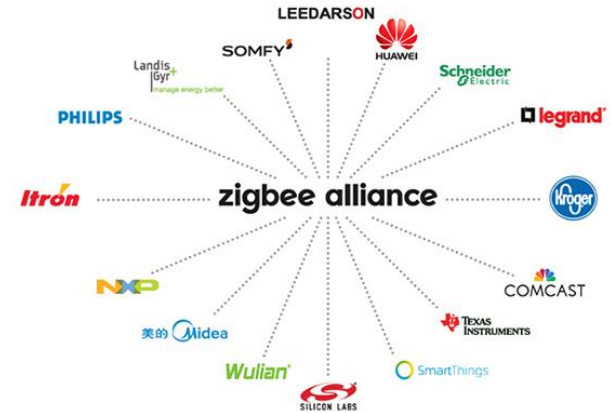


Photo Source: Internet of Things

- **EVERYTHING Smart Products Platform:** Cloud-to-cloud connectors for home automated devices
  - Integration with home automation ecosystems
  - Gives consumer the ability for products to interact with other devices.
- **IFTTT “If This, Then That”:** Free service to craft automation “recipes”
  - Recipes link smart gadgets, web services, and online tools.



# Home Automation - Devices

## Lighting:

Philips Hue Motion Sensor & LED Kit

Lutron Caseta In-Wall Wireless Smart Lighting Kit

## Plug Loads:

Belkin WeMo Smart Plug

HomePlug Green PHY

## Cameras:

Amazon Cloud Cam

Kuna Toucan Outdoor Camera

## Security:

BeOn Smart Security Lighting

August Smart Lock

Skybell WiFi Video Doorbell

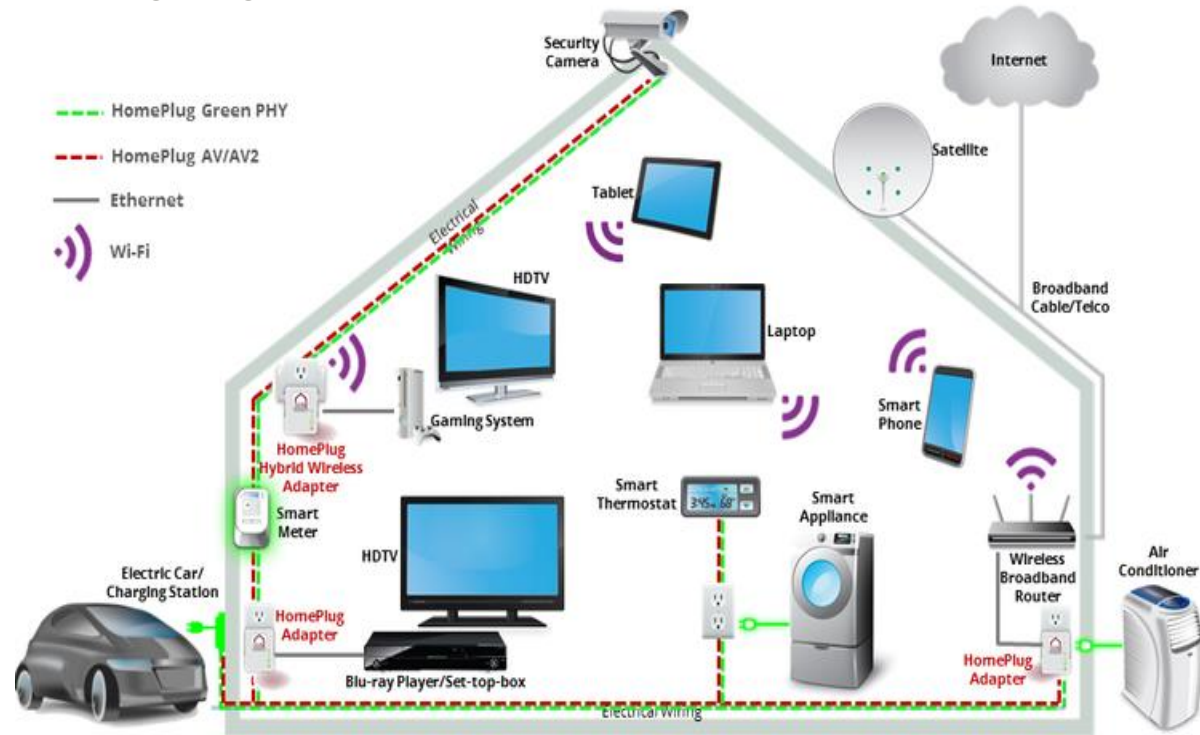
## Thermostat:

Ecobee4 Smart Thermostat

## Other:

Neato Botvac Connected Robot Vacuum

Lutron Serena Remote Controlled Shades



Source: HomePlug

# Home Automation – Smart Hubs

- Centrally communicates with devices in the home from your control device
- Ability to use different product brands & types
- Expands system without complication

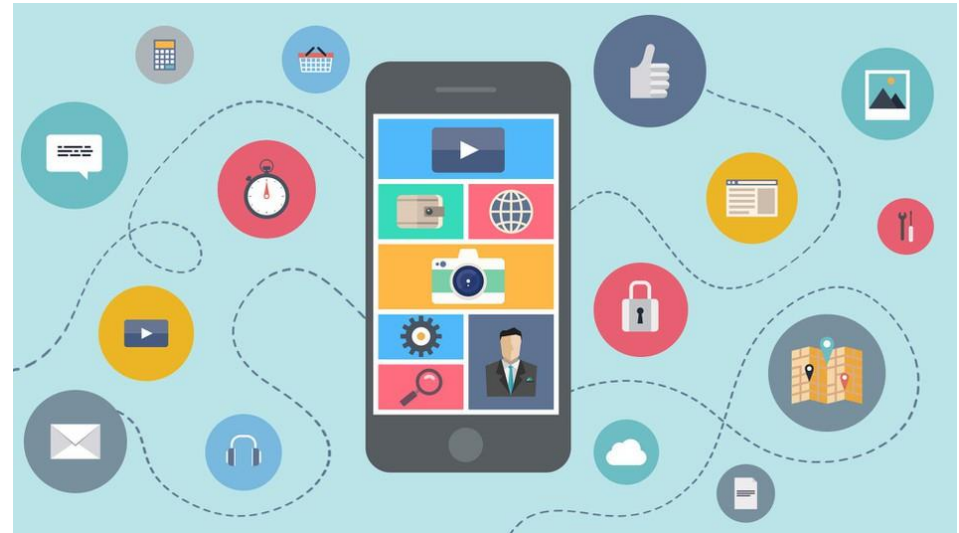


Photo Source: Mashable

**#1 Samsung SmartThings Hub:** Can be used with over 200 devices and is compatible with Android, iOS and Amazon Echo.



# Home Automation – Smart Platforms

## NEST:

- Thermostat
- Indoor/Outdoor Cameras
- Doorbells
- Baby Monitoring
- Alarm Systems
- Smoke Alarms
- CO2 Alarms



Source: NEST

## Z-Wave Smart home products:



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# Home & Electric Vehicles Connectivity

## eMotorWerks JuiceNet Platform:

Integrates with Amazon's Alexa to monitor and control the charging of your electric car with voice commands.

Hey Alexa!  
Charge my car!



Source: eMotorWerks

## VIRTA Home:

1. Automatically chooses and schedules the most economical charging hours based on the market price for electricity.
2. Enables the charge point owner to share his home charger for family, friends or all EV drivers.



"The AirBnB of car charging"

Hey Alexa!  
When is it  
cheapest to  
charge my car?



Source: CTEK Batteries