

# Intelligence in Connected Home (Case study)

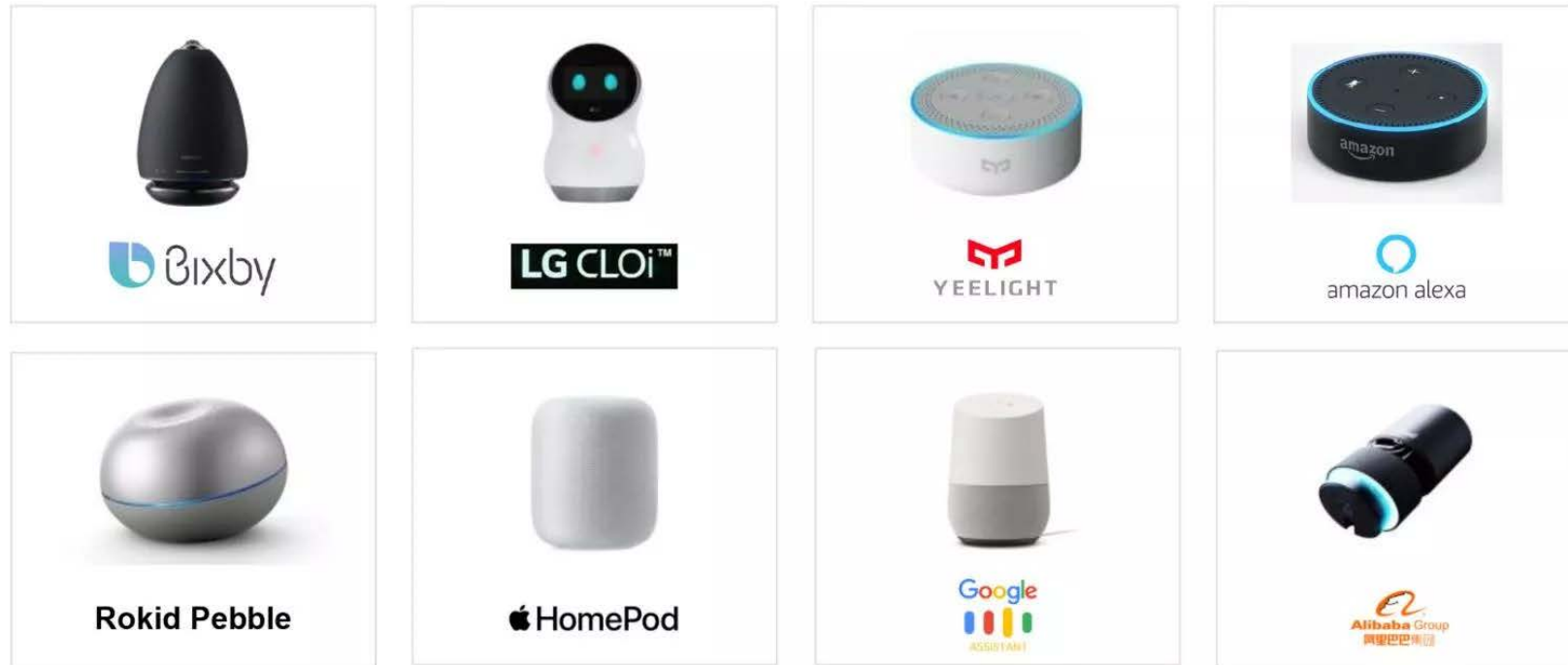
- Smart home technology has its applications in household appliances, home safety & security, lighting, and entertainment.
- Key industries have started integrating artificial intelligence with smart devices to enable connectivity among these devices.
- AI encompasses the ability to connect multiple IoT devices, coupled with superior processing and learning abilities, and use them to pre-empt human behaviour.
- AI-powered smart home devices can interact with each other and acquire new data that assists in learning human habits.
- Data collected is used to predict the behavior of users and develop situational awareness, i.e., understand user preferences and change parameters accordingly.

# The Rise of Digital Assistants: Alexa, Siri, Google Assistant, and Bixby

- Apart from its application in home security systems, artificial intelligence is utilized to control smart devices with the voice control feature of AI-enabled units, such as Alexa, Siri, and Google Assistant.
- Advanced home security systems can also be controlled through voice commands.
- Researchers are focused on bringing in innovation in the field of voice recognition technology that will further add value to voice control devices.
- Latest advancements in home automation systems can enable owners to gain access to hands-free channel surfing and control Bluetooth speakers.
- The emergence of the voice assistant feature also raises security concerns, as some researchers have managed to hack smart devices through inaudible.

# Cont...

## EXHIBIT 1: AI-based Voice-assistance and Control Systems



Source: FutureBridge analysis.

## Cont...

- AI-powered machines can easily recognize objects or faces owing to the pattern/face recognition feature.
- Face recognition can easily check facial landmarks, such as cheekbones, eyes, chin, etc., and compare them with the existing data.
- Furthermore, these machines can send notifications to the home owner's smartphone regarding visitors at the front door.
- Most advanced home security cameras can identify the faces of family members, friends, and pets.

## Cont...

- Sophisticated smoke alarms that can think and alert the user with the help of artificial intelligence are currently available in the market.
- Some of the smart features of smoke alarms include providing notification on phones regarding low battery and issuing alerts in case of smoke or carbon monoxide leaks, and pinpointing the location where there has been a fire or smoke outbreak.