



The CIREI Smart Home Primer

WHAT EVEN IS A "SMART HOME"?

At its core, the smart home is less a single object, and more of a network of interconnected "smart devices".

These smart devices can range from lights, heating, motorised curtains and more, all being coordinated and managed automatically by a central "smart hub" device.

WHAT SMART DEVICES ARE THERE?

There are many inventions that have gained ground and attention in the last few years, chief of which are the 'smart speaker' and 'voice assistant'.

These include the likes of Amazon's Alexa or Apple's Siri – mysterious little chunks of plastic and metal that can answer questions, play music, and remind you of upcoming events in your calendar (among plenty of other things).



ARE THEY ANY GOOD?

In short: yes!

The functionality of these assistive technologies runs the gamut, ranging from domestic automation tasks and security to communication and remote healthcare.

Some of the most advanced learn and adapt to the specific needs of their owner, like a voice assistant getting better at understanding commands, or a biometric sensor giving advice on how to relieve pressure on the wearer's back based on their sleep patterns.

THERE'S TOO MANY TO MANAGE!

That's the beauty of using a hub, also known as a "middleware solution". You don't even need to think of each of these devices as individual items.

Once they're set up, hubs greatly simplify the interactions with a smart home network. Many can even be controlled through a smartphone, if you don't want to use a voice assistant.

WHAT CAN SMART DEVICES DO?



Remotely toggle switches



Detect when a door or window is opened



Send signals when detecting motion



Change the brightness or colour of lights



Measure temperature and humidity



Open and close curtains

HOW DOES THIS ALL RELATE TO CIREI?

The purpose of the CIREI project is to ultimately develop a more effective middleware solution, going further beyond the learning capabilities shown by technology currently in the industry.

CIREI recognises that there is great, untapped potential, particularly in the realm of healthcare and independent living. Data collected by a smart home can potentially be used to help its owner live independently and identify and address health risks before they become a problem.

So, we need to understand the people that would benefit from it – what are your needs, and what can we do to help? How might these systems fit into your daily routines to make them easier, and what challenges exist that need addressing?