Beneath the hype: Underappreciated technologies changing smart homes

It's easy to get wrapped up in the hype of emerging technology. We love the promise and potential of the new and shiny gadgets that give good demo. But for design and business leaders it's important to be able to see through the hype and analyse the wider implications and opportunities that may not always capture headlines.

Temps de lecture : minute

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While conversations about the metaverse, web3, generative AI, and spatial computing dominate headlines, an understated revolution is quietly transforming our domestic lives. Smart home technology, often overlooked amidst the hype of more glamorous tech, is set to improve our everyday experiences in subtle yet profound ways.

The 'visible' side of smart homes

Consumer-facing or "front-end" smart home technology is most familiar to us. As we continue to welcome in an increasing array of smart devices into our homes, leveraging voice control, machine learning, and artificial intelligence in innovative ways. It's beginning to form an intricate network in the home.

The aim is not merely to transfer desktop interfaces into a room, as envisioned by Apple's Vision Pro. Instead, to go beyond the limitations of flat interfaces found on smartphones and laptops, creating a three-

dimensional computing universe. The potential for hands-free immersive experiences, social interactions, and personalised services within our living rooms is already evident with products like Lululemon's Smart mirror and the recently launched Sky Live service, which leverage goggle-free spatial computing.

The 'invisible' power of IoT

While IoT's practical applications have historically struggled to meet expectations for the consumer, at high-profile tech events like IFA and CES, a plethora of IoT-enabled smart home products is unveiled - from internet-connected fridges that streamline shopping, to app-controlled kettles and robotic assistants. The fact we often describe these as gadgets is proof in point. They might be ingenious or novel but often limited in practical purposes in our everyday lives enough to warrant the investment or adoption.

But beyond the visible front-end experiences, a quiet smart home revolution is quietly unfolding. Emerging from the "back-end" of the smart home as a powerful amalgamation of IoT and AI. It will have profound effects on how our homes operate in the future and puts a new focus on the way we look at our future appliances.

An emerging area of transformation now lies in the home's energy network. As people begin to generate and store energy at home through solar panels and battery systems, they are seeing the benefit of these IoT devices surrendering direct user control to intelligent platforms that optimise energy usage, contributing to a more sustainable future. A prime example is the smart charging of electric vehicles. Smart tariffs being offered by energy suppliers like Octopus and OVO Energy now allow consumers to specify when they need their vehicles while AI platforms optimise charging strategies to align with off-peak hours or periods of high renewable energy production. Coordinating across multiple smart

homes to manage peak loads to stabilise the energy grid as it becomes more reliant on renewable energy sources. And giving you the benefit of cheaper tariffs as an incentive to giving up some level of control.

It's time to move beyond thinking of IoT products as standalone smart gadgets and recognise how back-end IoT can orchestrate our smart products. As designers and businesses, who work on improving existing products and appliances and developing new categories, we should be deploying intelligences not just for front-end wow factors but utilise back-end capabilities. To interact with them less, and they interact with each other more, both within and across households. To power more efficient, rewarding, and sustainable lifestyles and everyday experiences.

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