

Why We Need More Inclusive Smart Home Research?

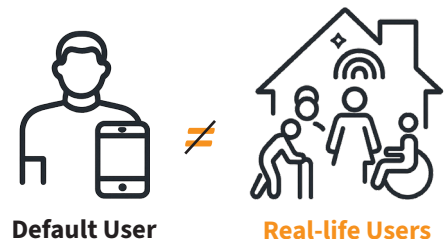
FACT SHEET

Smart homes are changing how we live. But are they working for everyone?

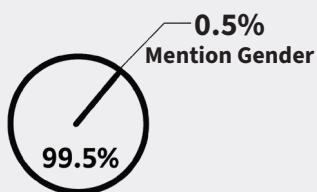
With over **785 million users** expected **by 2028**, **smart home technologies**—like voice assistants, connected appliances, and security systems—are **becoming everyday tools**. They promise comfort, efficiency, and convenience. But these technologies often **rely on outdated ideas** about who lives in homes and how they live.

What's the Issue?

Too often, smart homes are **designed for a so-called “neutral” user**—someone tech-savvy, male by default, and living in a traditional household. This approach can **leave out the real needs of women, LGBTQ+ people, older adults, disabled users, migrants, and caregivers**. As a result, the benefits of smart living are not equally shared—and, in some cases, new technologies can even make life harder for those already marginalized.



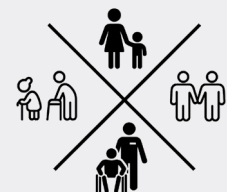
What Research Shows?



Out of **30,000+ studies** on smart homes, only around **0.5%** even **mention gender**.



Women, especially from marginalized communities, are often left out of the research.



Most smart tech is designed without considering differences in users' needs, lifestyles, or identities.

Why This Matters?

When smart technologies **assume a “one-size-fits-all” user**, they risk **excluding real people**.

For example:

- Voice assistants often struggle to recognize higher-pitched voices.
- Smart security features may ignore how safety concerns differ between users.

“ Without diverse input, we build homes that *serve only a few*.

What Needs to Change?



How We Design Smart Homes

Smart homes must be designed with **real, diverse people** in mind — not just tech-savvy users, but individuals of varying ages, backgrounds, and abilities.



How Tech is Built and Guided

Researchers, developers, and policymakers **should work together** to make sure technology helps everyone.



Who Gets to be Heard

That means **listening to a wide range of voices**—especially those often left out: older adults, disabled people, LGBTQ+ users, and caregivers.

Vision Forward



Designing with and for authentic, multifaceted users

Creating equitable smart homes means rethinking our assumptions about users, technologies, and domestic life. It requires a **paradigm shift—from designing for an abstract, 'neutral' user to embracing the full spectrum of people at every stage of the design process.**

Shaping a smarter, fairer, and more humane digital future

By **embedding inclusivity** into the core of smart home innovation, we can transform these technologies into tools of empowerment rather than exclusion. This is not just about fixing past oversights—it's about **shaping a smarter, fairer, and more humane digital future.**

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