The Smart Products Landscape in The UK From an End-User Perspective

Purchase experience, perceived strengths and weaknesses: requests for improvement and purchase intent

Introduction

Once a niche phenomenon, smart devices now constitute an established market, with a variety of products currently purchased by consumers, as we will show in the next pages. Over the past ten years in particular, consumers have realized that smart products are not just technological gadgets but are able to solve practical problems quickly and easily. A prime example is the remotely controlled thermostat, which enables people to achieve notable savings and greater comfort, both in their management of second homes and when fixed temperature programming does not suit their lifestyle.

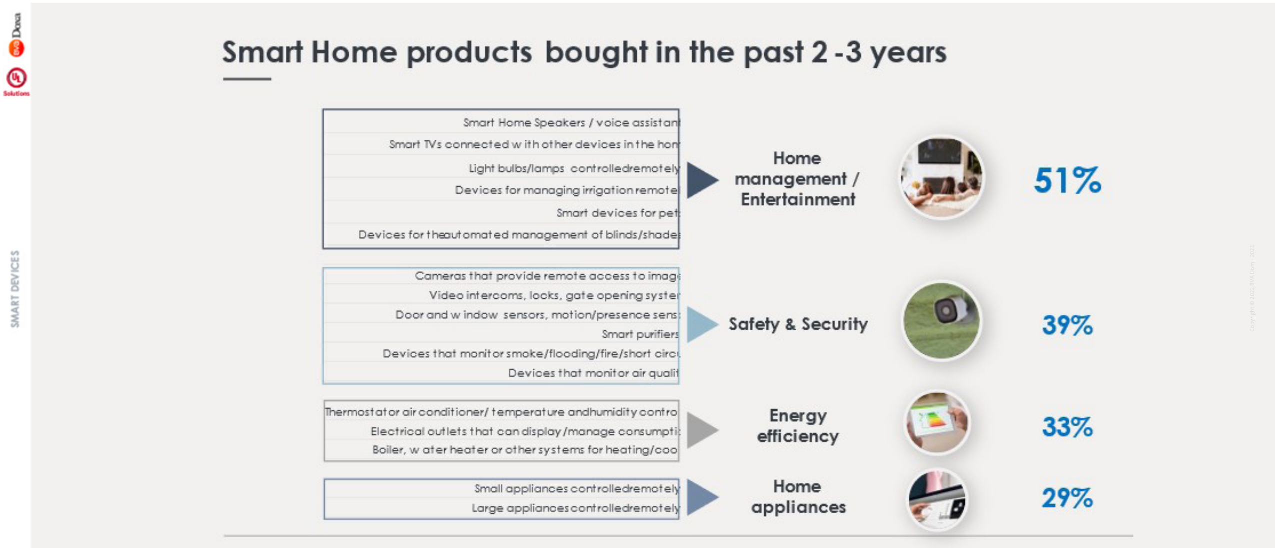
The considerable benefits that smart objects bring (saving time and money, convenience, peace of mind, etc.) are nonetheless counterbalanced by a series of worries related above all to security and safety — mainly in the sense of fear of privacy violations and cyberattacks as well as that of possible harmful effects on the health (fears of electromagnetic radiation first and foremost, but also of equipment that could explode or burn).

It is against this background that UL Solutions, a company specializing in testing, inspection and certification services, identified the need to carry out a market research study, in collaboration with BVA Doxa, to analyse buying trends, reasons for purchase, ease of installation/configuration, areas requiring improvement and future purchase intentions regarding smart devices, e.g., devices (for the home and/or for personal use) that are connected to the internet and have smart functionality - with a final, more general focus on fears relating to smart products and the potential for reassurance through third-party certification.

The study was carried out in January 2023, interviewing 1,000 people selected using a sampling plan built to ensure a representative sample in relation to the relevant universe, in other words to be able to relate the research findings to the UK population aged 18-64, with a small margin of statistical error (+/-3% at a 95% confidence level).

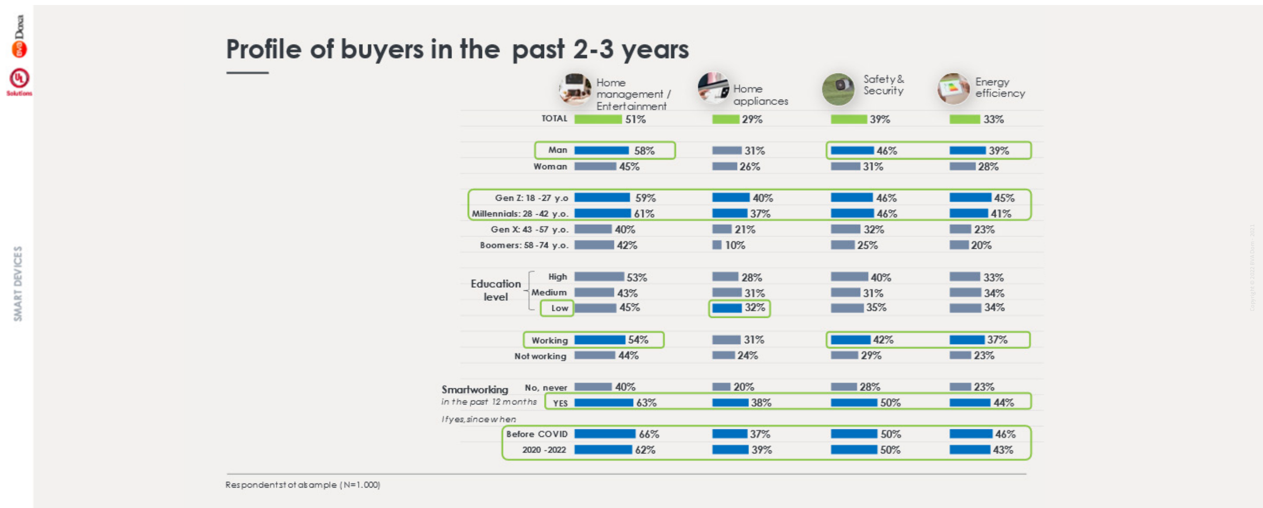
Smart home-related buying trends

In the past two to three years, British consumers' smart home-related purchases have mainly consisted of Home Management/Entertainment products (51%). The safety and security and energy efficiency categories were chosen by 39% and 33% respectively of the representative sample interviewed. Meanwhile smart home appliances (29%) were slightly less popular. There is therefore a strong interest in everything to do with controlling and monitoring the home, both in relation to convenience and entertainment, but also safety and security and energy efficiency.

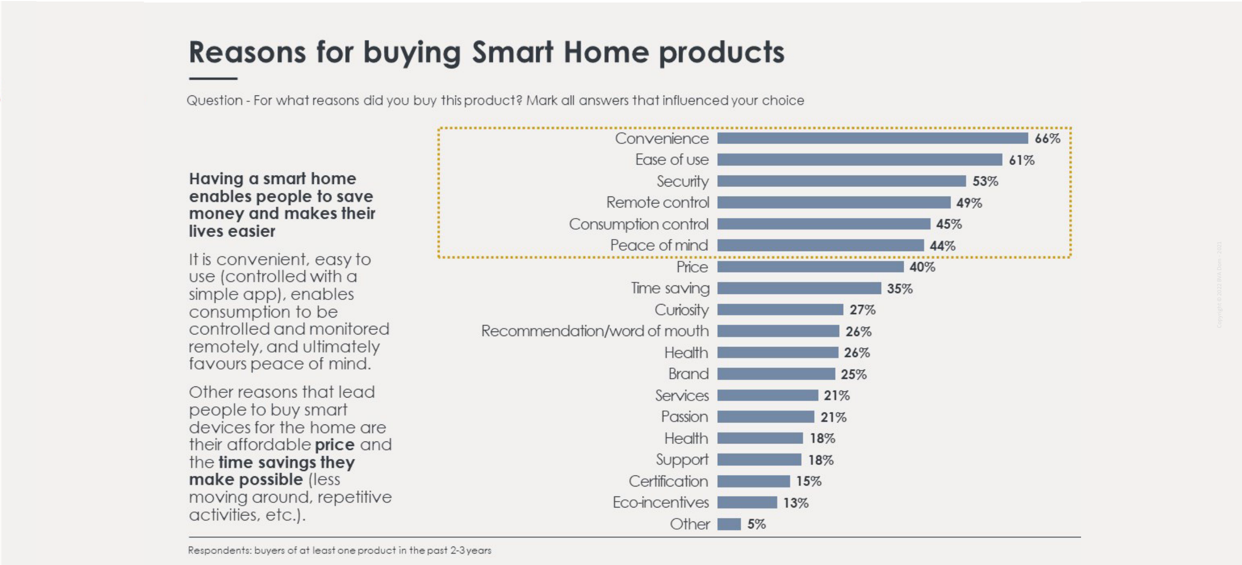


Purchasing of Smart home devices seems to be significantly higher among men (except for Home Appliances), younger people (Gen Z) and those aged 28 to 42 (Millennials).

Another key target group is people doing smart working, who sharply increased in number in 2020-21 due to the health restrictions imposed, although this tendency seems to be structural and not particularly influenced by recent pandemic-related events.

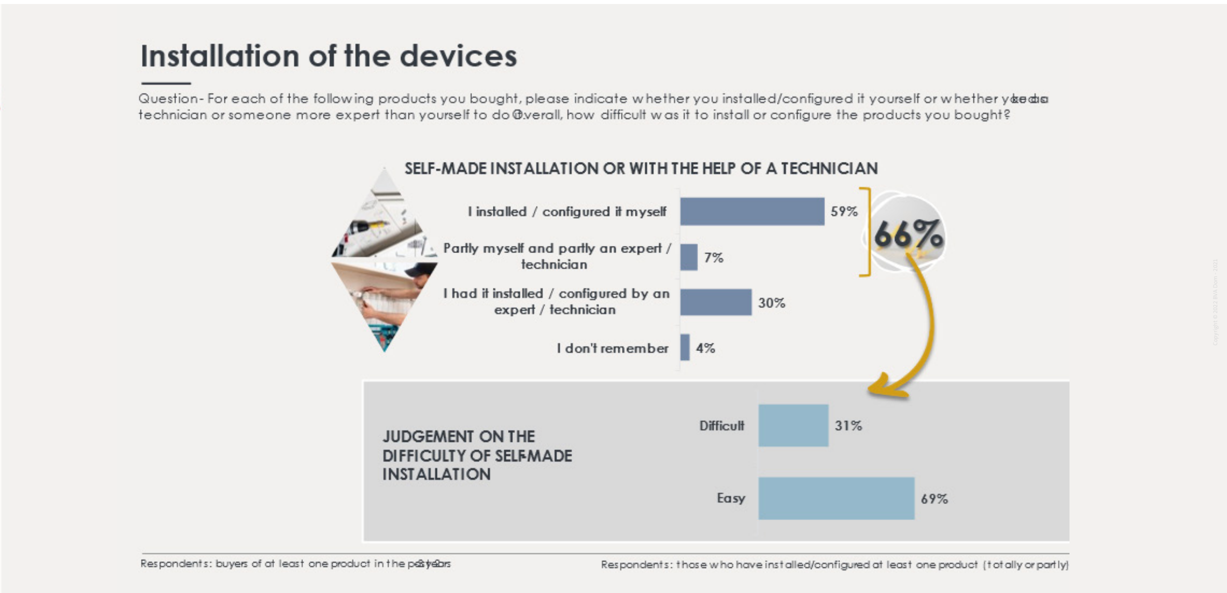


Having a Smart home enables people to save money and it makes their lives easier. It is convenient (less moving around, repetitive activities, etc.), easy to use (controlled with a simple app), enables consumption to be controlled and monitored remotely, and ultimately helps to give peace of mind.

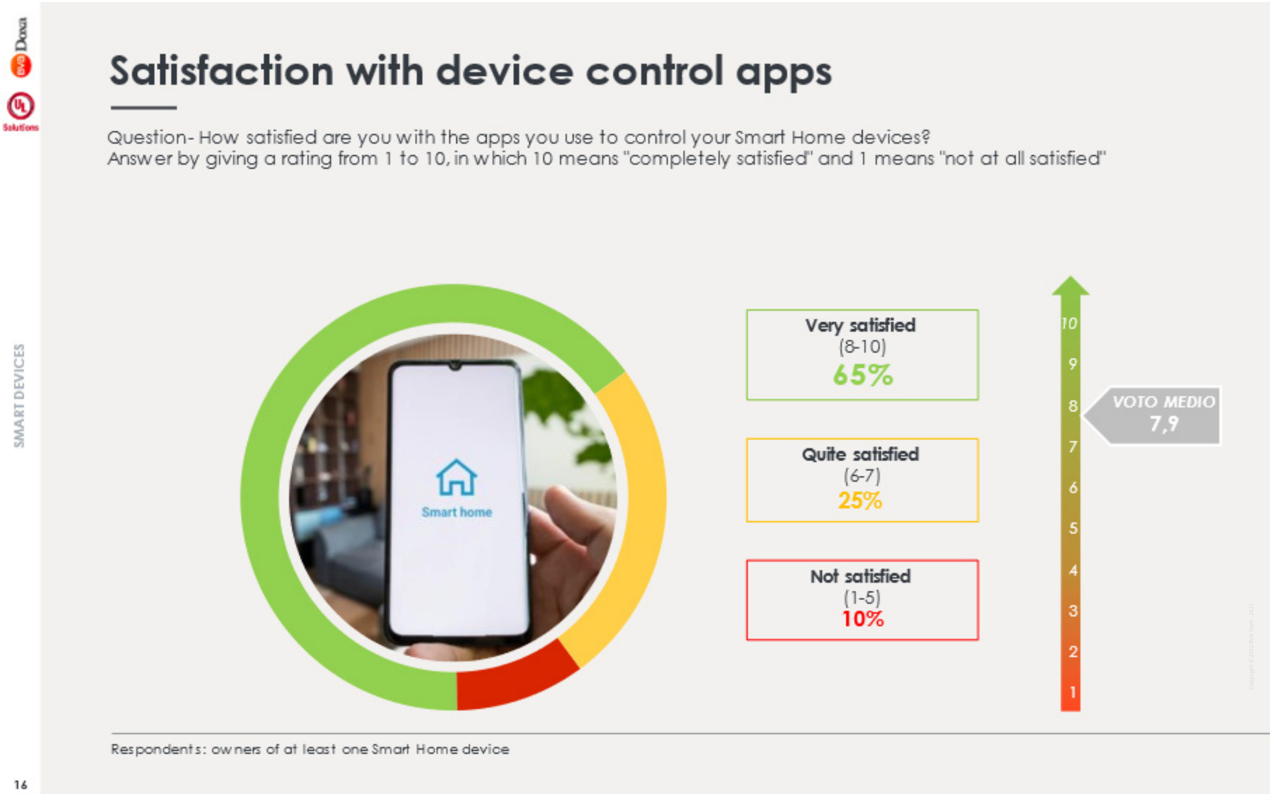


The installation of the devices was mostly carried out by the consumers themselves (2 out of 3 respondents). Home Management and Entertainment products are the least problematic to install, while Energy Efficiency devices are those that most frequently necessitate intervention by a technician. People who chose to install these themselves encountered more difficulties (also true of Home Appliances).

At a time in which there is a particularly strong focus on saving energy, making the installation of these products more user-friendly (also through systemic agreements with installers and technical support centres) would help to incentivize their purchase. Moreover, the creation of an ecosystem to make it easier to measure consumption, to manage and maintain products, and to foster communication with other devices through integrated standards, would be desirable to promote the benefits of efficient energy usage and environmental sustainability.



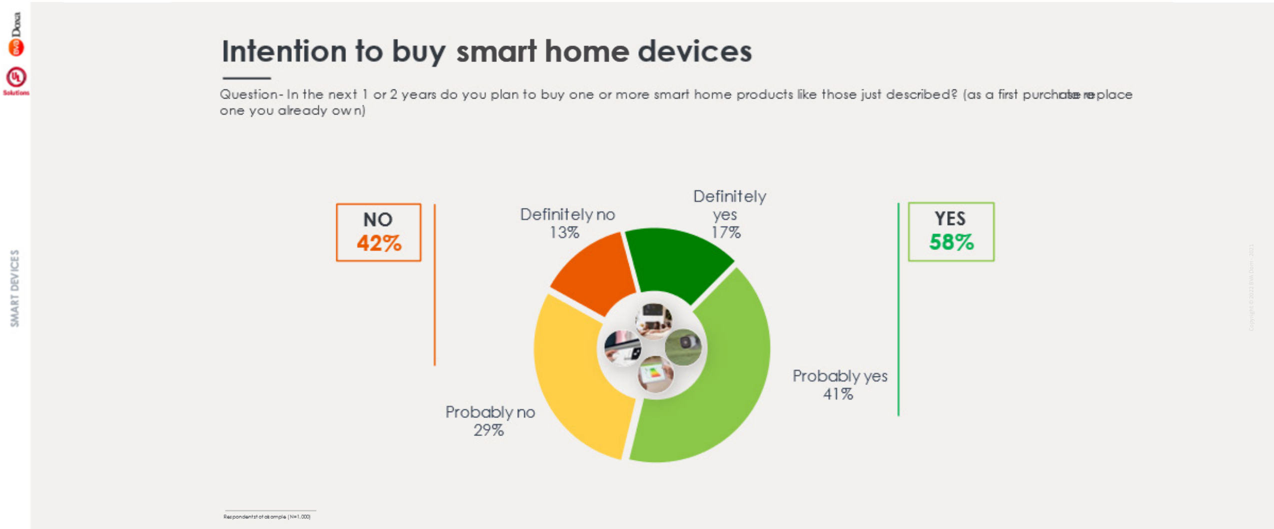
Apps for the control of smart home devices satisfy most buyers (65%), with no particular differences between product categories. At the same time there is considerable scope for improvement in view of a considerable proportion of people (25%) who say they are "quite satisfied", e.g., those who do not reject the apps but would like them to be better. Overall, also considering those who are dissatisfied (10%), one in three respondents (which becomes one in two among Gen Z) ask for improvements.



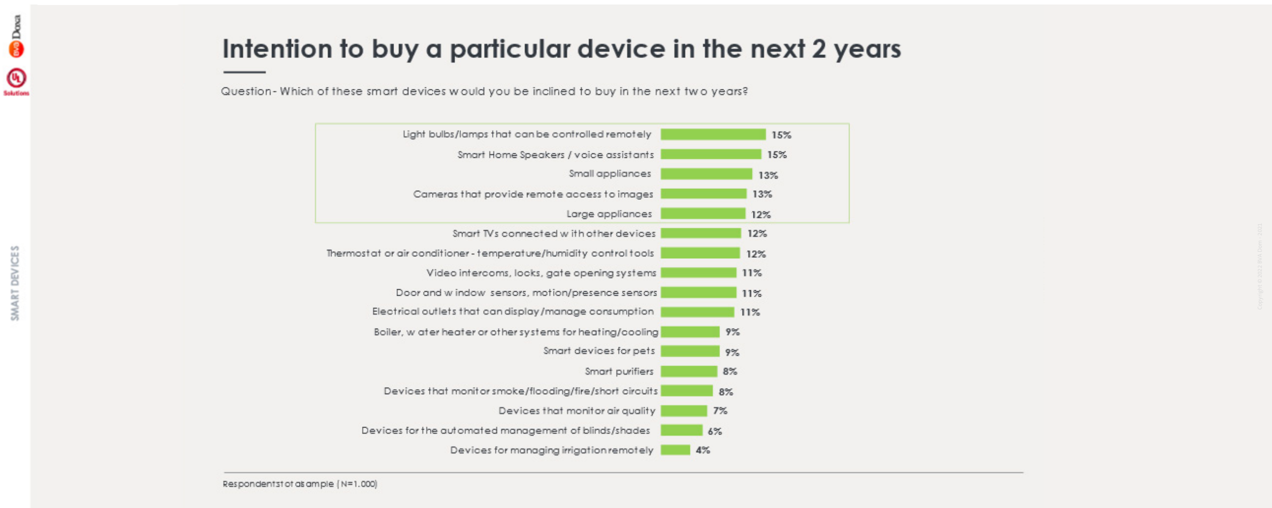
Smart device control apps, being the main (if not only) channel of interaction with devices, undoubtedly have a major role in increasing the take-up of these products by consumers. It would therefore be desirable for manufacturers, in addition to testing their apps thoroughly, to ensure a continuous update program to make them increasingly functional, secure and easy to use — e.g., within the capabilities of the general public and not just those of "technology geeks." Essential to achieving this aim is an in-depth and systematic process of listening to the requirements of end-users (which are often communicated spontaneously in product reviews).

Inclination to buy smart home products

About six in 10 respondents (58%) say they intend to buy one smart home device within the next two years, with 17% saying they will purchase. Only one in 10 respondents reject the idea of buying. In terms of targets, a higher inclination to buy can be seen among men (63%), Gen Z respondents (67%) and Millennials (68%). The “smart revolution markedly less engages Boomers (36%).”

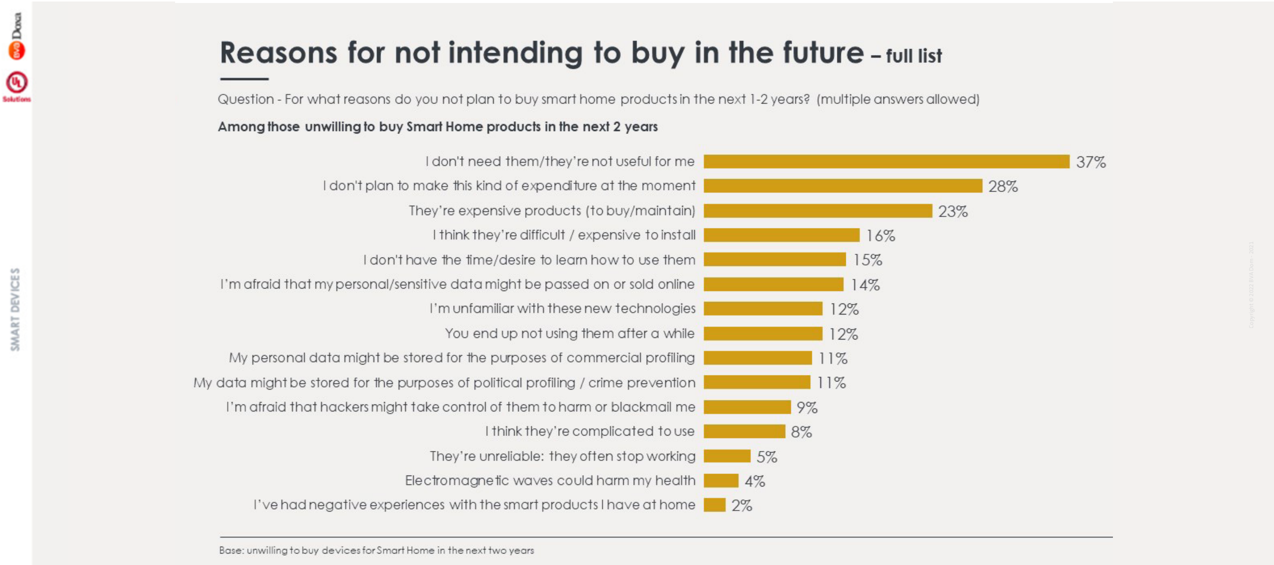


The products most likely to be desired are Home Management/Entertainment devices, particularly remote-controlled lighting and smart speakers. These are followed by Home Appliances (small and large) and home security cameras.

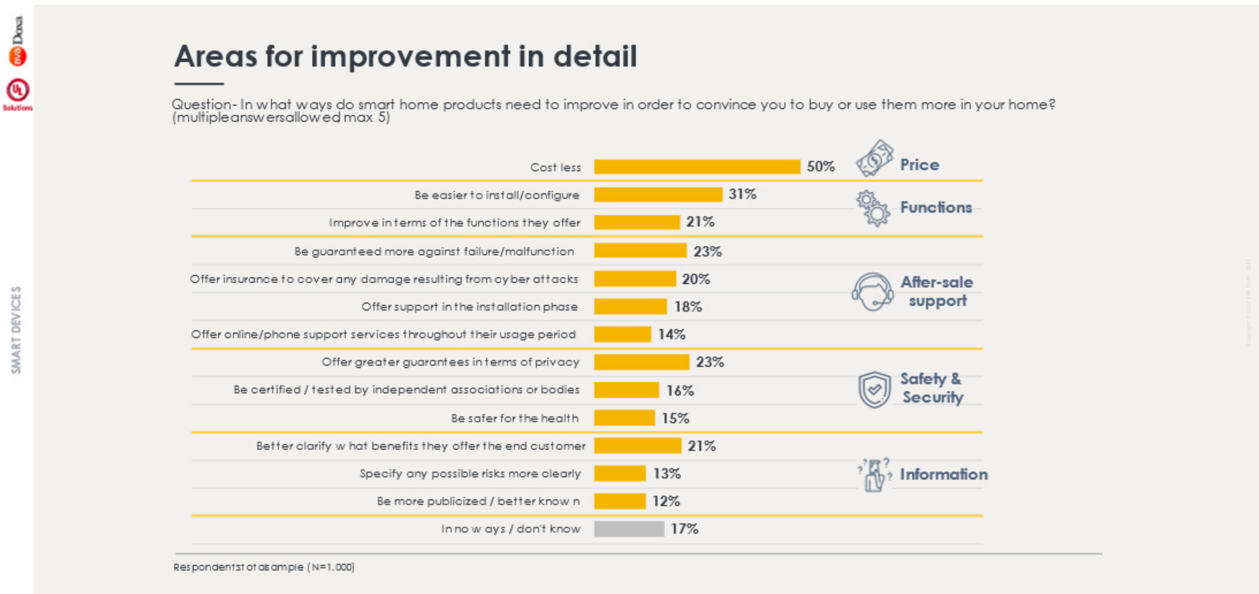


In the next two years,“Energy Efficiency” category particularly attracts Millennials and people who are currently working. Singles show a marked interest in devices for Home Management/Entertainment. People with a low educational level are more inclined to buy Safety and Security devices.

Resistance to purchasing smart home devices arises above all due to a non-recognition of the need for/usefulness of these products (37%).Next comes a generic non-priority attached to their purchase (28% are “not planning this kind of expenditure”), immediately followed by the issue of an excessive cost of purchase and maintenance (23%). Also, not to be overlooked are fears of difficulty/complexity in terms of both the installation phase (16%) and the learning curve required to master the usage of these devices (15%).



When identifying any areas for improvement, the respondents call first and foremost for a reduction in costs. Beyond this initial request there is a clear need for the installation/configuration of the devices to be easier and for reassurance in terms of protecting privacy and the managing malfunctions.

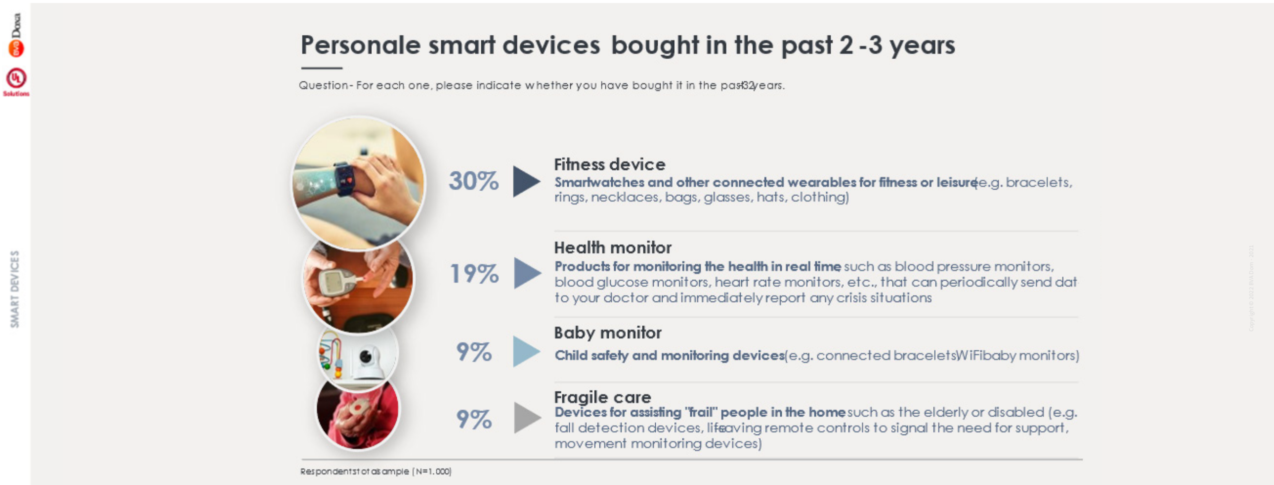


Overall, the inclination to buy smart products within the next two years is high and indicates a certain preference for the Home Management/Entertainment and Safety and Security categories. To overcome the uncertainties referred to and to encourage undecided consumers to buy these products, their needs and expectations must be addressed right from the new product research and development stage. A crucial factor at this stage is third-party testing and certification concerning safety/security and usability. Subsequently, manufacturers will need to work on assuaging the fears expressed by potential customers and on communicating the product’s added value — which must, however, be accompanied by a correct product concept.

Personal smart device buying trends

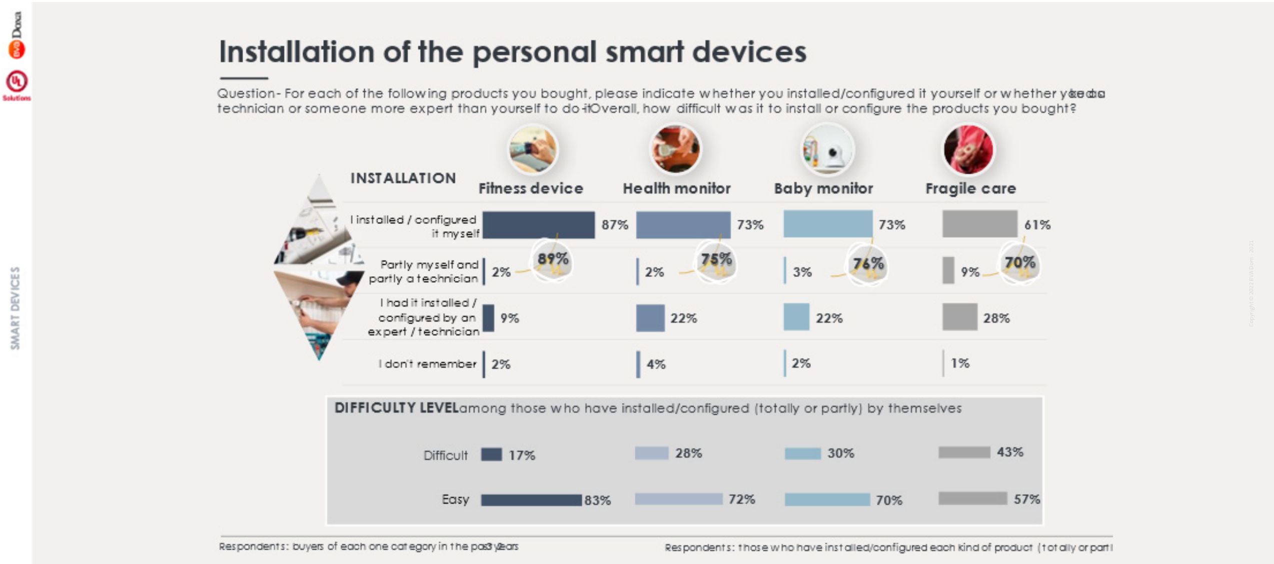
Regarding personal smart devices, those most purchased in the past two to three years are products for fitness and leisure, such as smartwatches and other wearables (30%). These are followed by health monitoring devices, perhaps influenced by the post-Covid health situation, which have been bought by one in four respondents. Baby monitors and devices for assisting frail people follow behind (both 9%).

Smartwatches/Fitness devices seem to be those with the most cross-generational appeal, with the highest purchasing level observed among Millennials (38%). As regards the other product categories, on the other hand, very low purchasing levels can be seen among Gen X respondents and Boomers. From the perspective of Baby Monitors this finding can probably be attributed to the absence of young children in the household, while for Health Monitors and Fragile Care products, it could be due to a real cultural gap or a lack of knowledge/understanding of these types of support devices. For all categories, apart from baby monitors, higher purchasing levels are also noted among men.

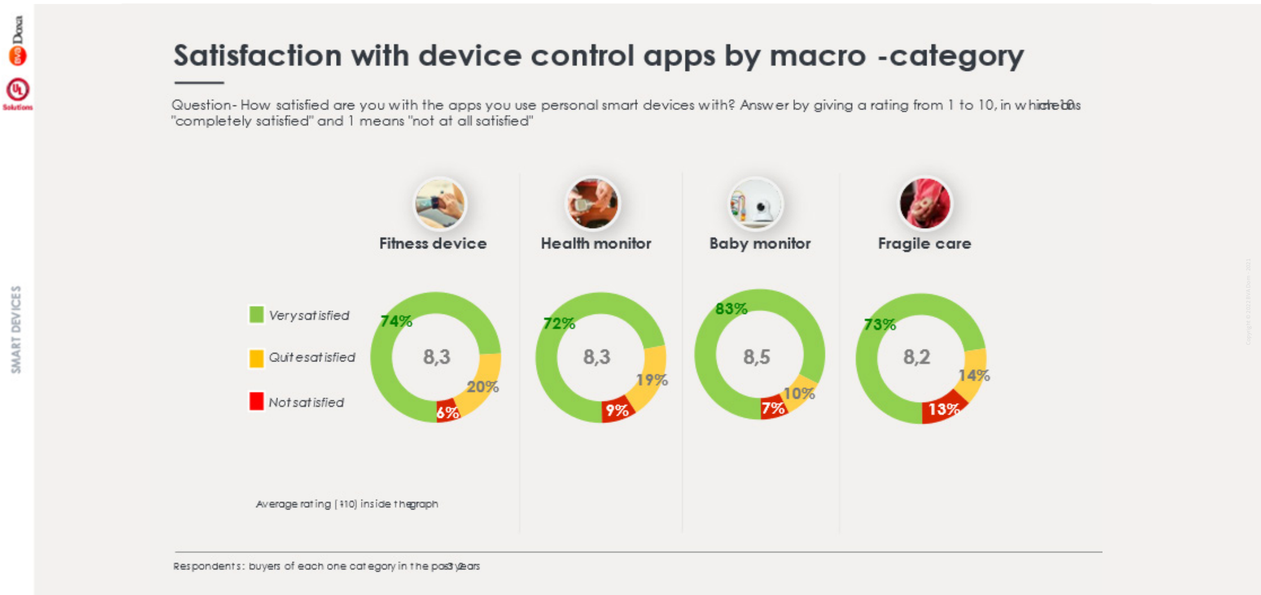


Of the most frequently mentioned reasons for purchase in each category, the universal issue of monitoring stands out in all its expressions (monitoring of people's performance, health and loved ones). Safety is another aspect mentioned across the various product categories, apart from Fitness Devices. Although it never tops the list, convenience also emerges as a recurrent theme among the reasons given for purchase, in terms above all saving time and effort (e.g., monitoring one's health in comfort at home without having to attend healthcare facilities). Then there are also category-specific reasons: Health Monitors and baby monitors, for example, give peace of mind. For fitness devices, an affordable price is also often taken into consideration.

Around seven in 10 users personally installed the devices bought themselves. In the case of fitness devices, which are regarded as easy to install by 83% of the relevant respondents, this rises to nine in 10. For the other categories the installation process seems more complicated, particularly for fragile care devices.

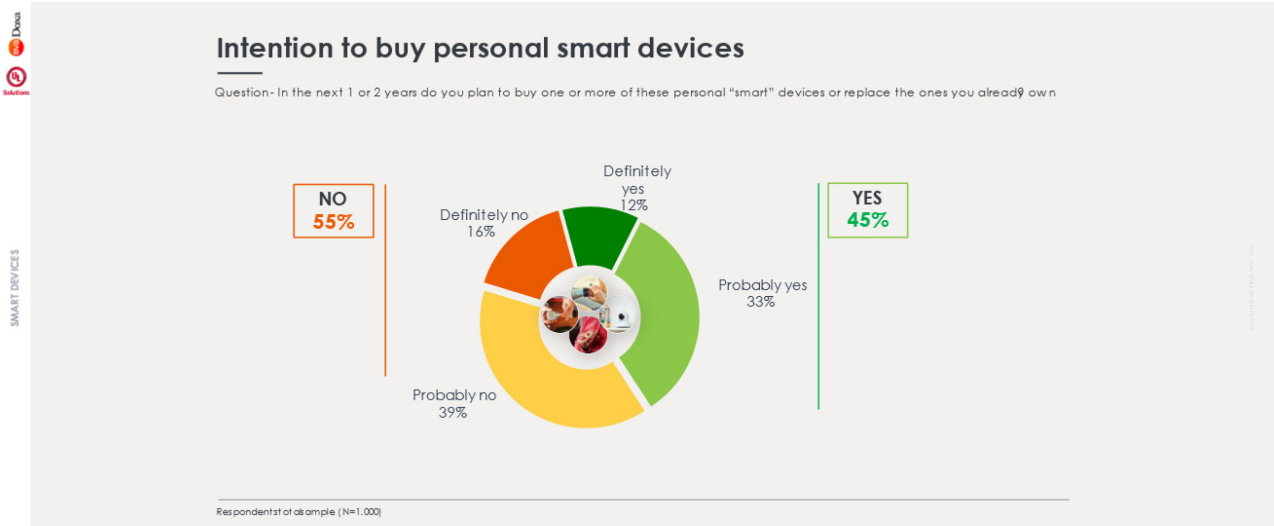


For personal smart device control apps, the same findings emerge for smart home devices. With a good level of satisfaction, which is particularly positive for baby monitors, a considerable desire for improvement emerges among a third of the respondents (the total percentage of those only partly satisfied or wholly dissatisfied).



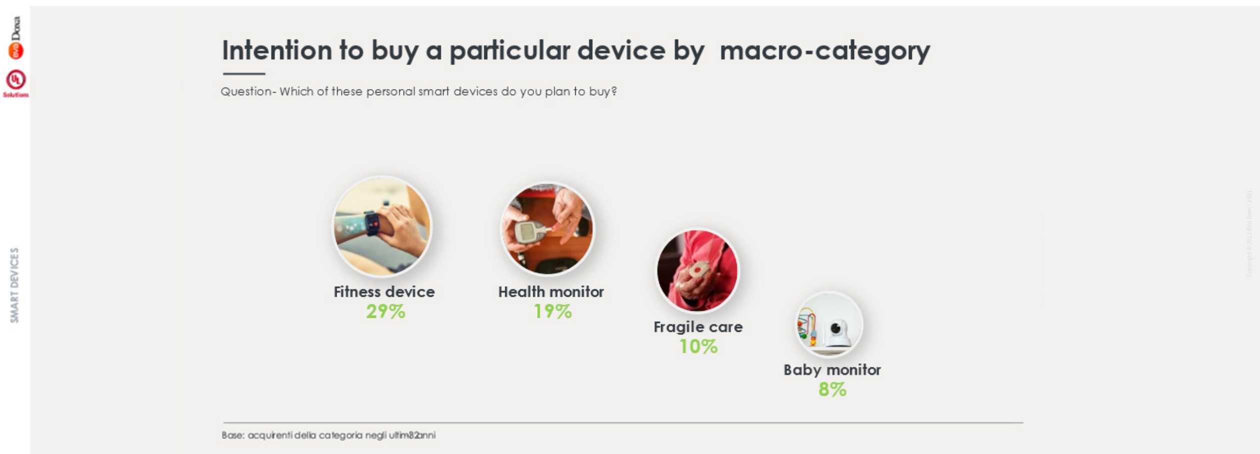
Inclination to buy personal smart devices

According to the research findings, 45% of UK consumers expect to buy at least one personal smart device in the next two years. Those most likely to buy are Millennials (59%) and Gen Z (54%), above all in comparison with the older generations: Gen X (35%) and Boomers (21%). Other targets with a higher inclination to buy are people with a medium-high educational level (48%) and those currently working (50%). Slightly more men than women (50 vs. 40%).



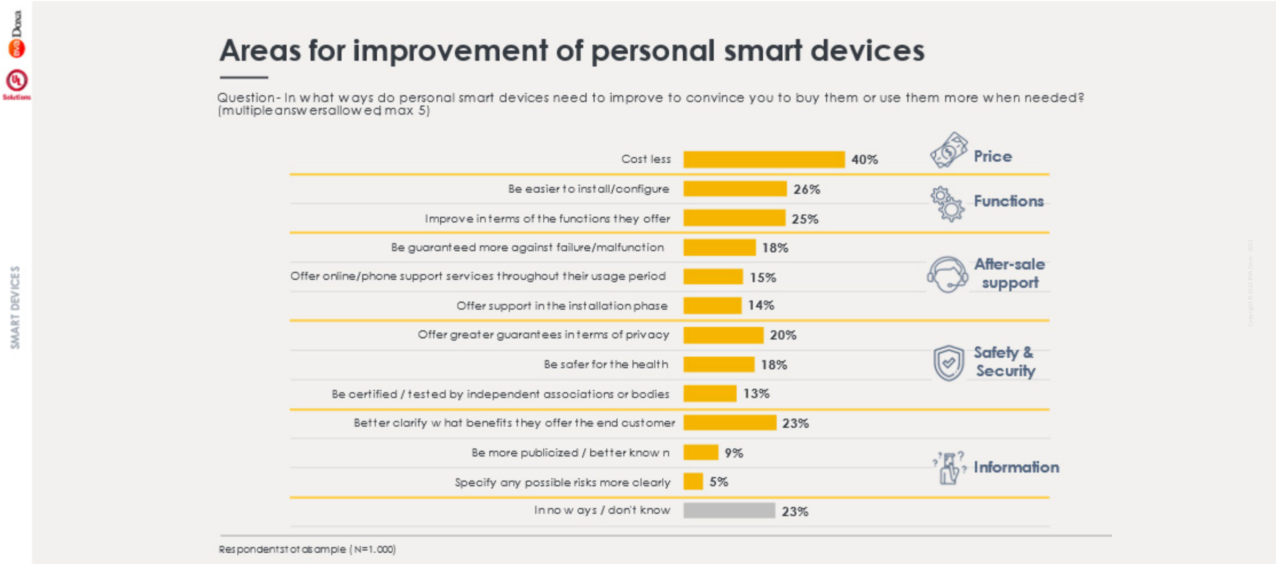
Of the different personal smart device categories, fitness devices are the most in demand, mentioned by 29% of respondents. About one fifth of the sample expect to buy devices for real-time health monitoring, while the intention to buy fragile care devices (10%) and baby monitors (8%) is more marginal.

Smartwatches/Fitness devices are in demand among Millennials (+9% compared to the total sample), appealing equally across genders and educational levels. Health monitors are more attractive for Millennials and Gen Z respondents (+6% for both targets). Devices in the fragile care category are preferred by men (+5%) and people with a low educational level (+8%).



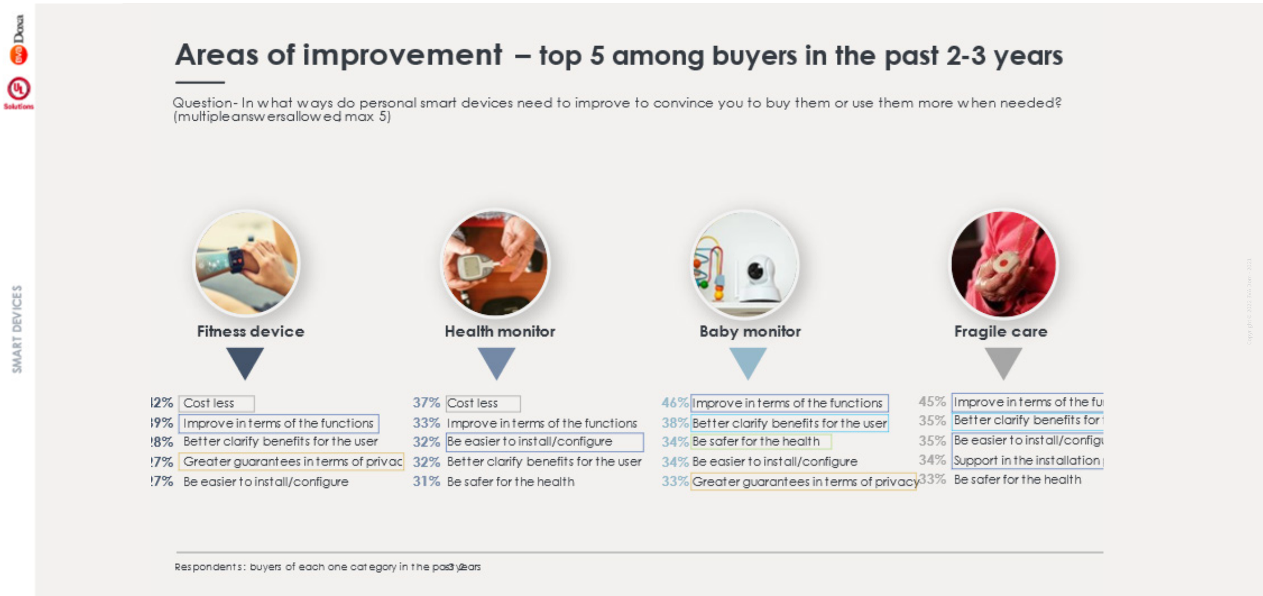
As well as a "physiological" desire for lower costs, improvements expected by the respondents from the viewpoint of purchasing personal smart devices mainly regard:

- The area of functionality (ease of installation and upgrading of the functions offered).
- Communication of the benefits of using smart devices, which must be explained more clearly with concrete examples.
- The area of safety/security, above all in the sense of more guaranteed privacy protection and non-harmfulness to the health; also, through independent testing and certification of the devices.

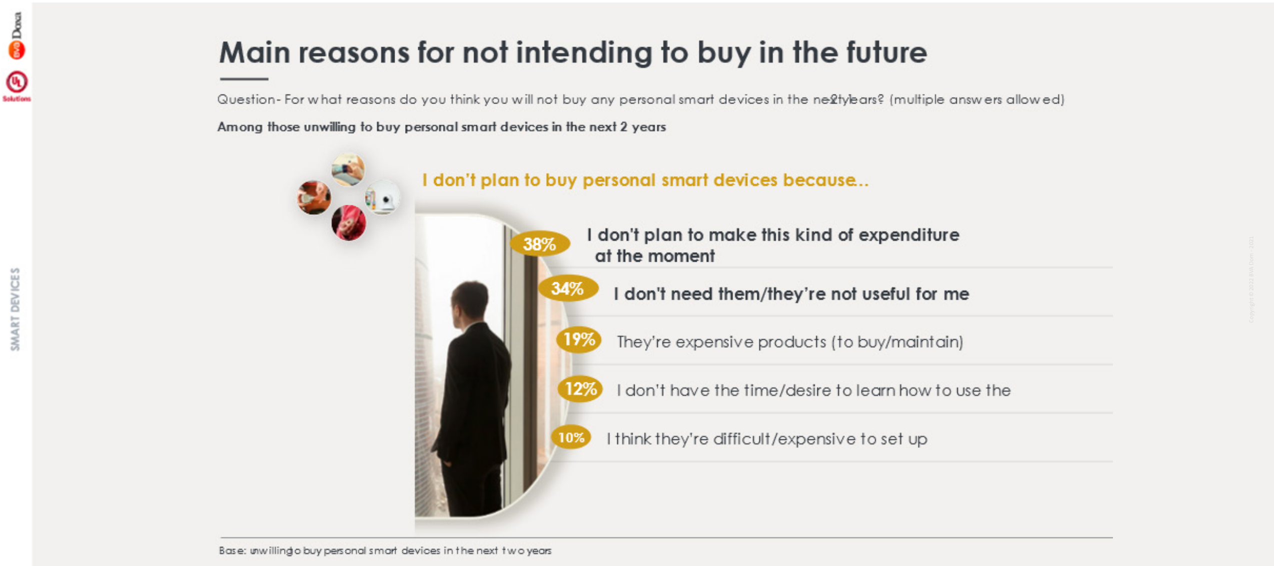


In the analysis by category, specific requests for improvement emerge for each product:

- Lower prices for smartwatches/fitness devices and health monitors
- Improvement/extension of functions for smartwatches/fitness devices and baby monitors
- More precise information on the advantages/benefits for the end user above all for fragile care devices and baby monitors
- Greater privacy protection for smartwatches/fitness devices and baby monitors
- Ease of installation/assistance during installation especially for fragile care devices and health monitors



The impression of a lack of any real benefits/usefulness of personal smart devices is, along with the absence of an immediate need, also the main reason for resistance to purchase. As suggested for smart home devices, a correct strategy for defining the product, more centred on the end user and on the creation of value, needs to be set out. This means paying attention to need of consumers for a product that is easy to install and use, has low maintenance costs and gives concrete benefits that can be easily understood.



The impact of smart working on the purchase of smart devices

Smart workers show markedly higher levels of past and intended purchases of smart devices compared to the equivalent figures for all respondents. They are concentrated among Millennials (+13% compared to the total sample) but are much fewer among Boomers (-24%). They are also slightly more present among men (+5%) and among couples without children (+5%).

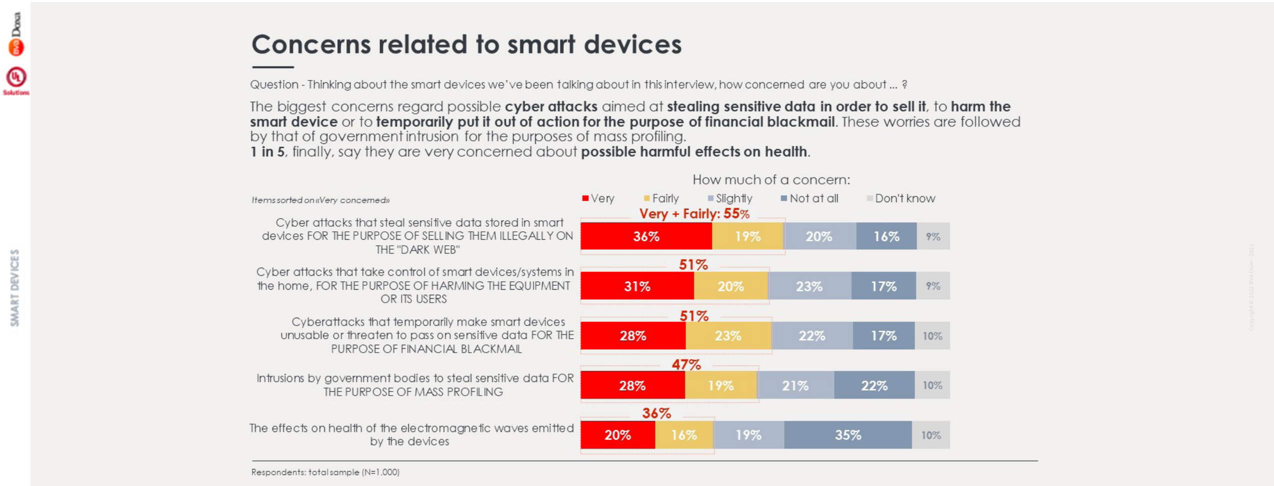
In the past two to three years, smart workers have bought more smart home devices compared to the total sample, with no differences by category: +12 % for Home Management/Entertainment products, +11 % for Energy Efficiency and Safety and Security products, +10 % for Appliances. Smart working, in effect, drastically increases the amount of time spent at home, and this goes hand in hand with higher consumption. Smart solutions for energy efficiency and home security thus take on a central role, but this is also true of remote-control products since smart working allows people to be connected not only to the office but also to their homes.

The higher activity by this target group is also evident in the purchase of personal smart devices. This is particularly so for health monitors (+8% of buyers in the past 2-3 years) and smart wearables (+7%).
In line with this, this target also expresses markedly higher levels of purchase intention in the next two to three years compared to the total sample.

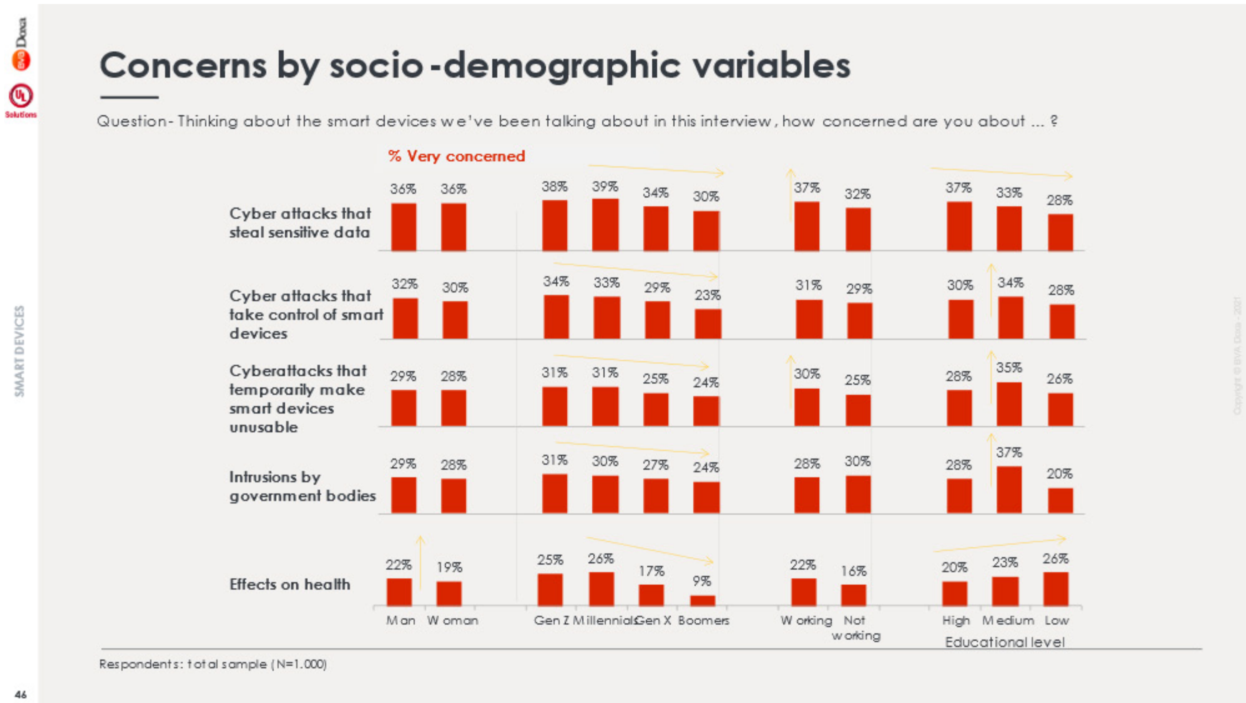
While on the one hand it is fairly obvious that many current smart workers have had to buy equipment as a result of the sudden change in working patterns necessitated by the pandemic, it also transpires from the research data that most of these people were already particularly accustomed to buying/using smart devices and that what might previously have been only an occasional interest/usage pattern has become a structural reality even after the end of the crisis. Ultimately, the smart working approach has now become the new normal for many people, to the extent that we can easily imagine that this trend will continue to grow in the years to come.

Safety/security needs and the role of certification

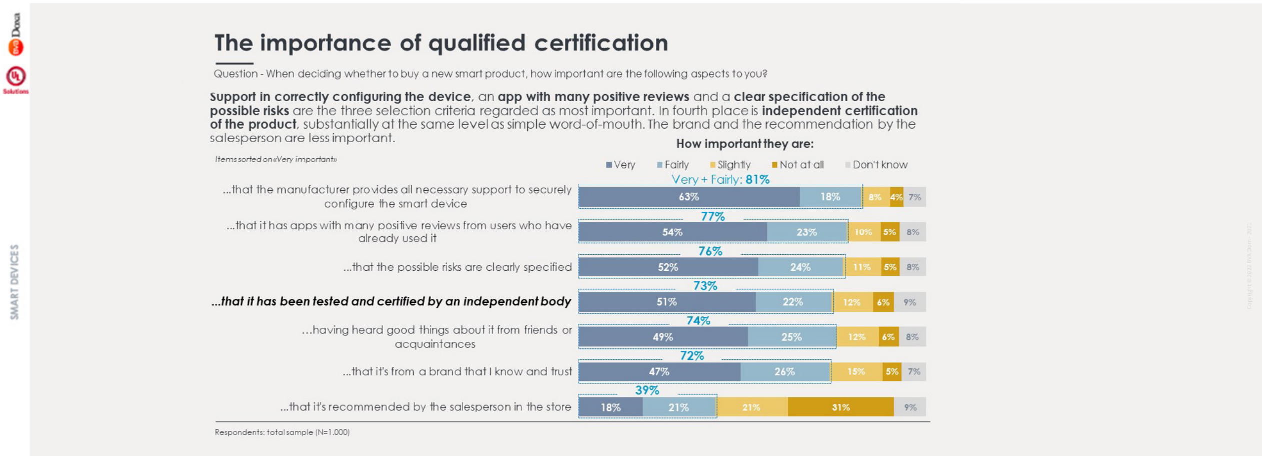
The biggest concerns expressed by the respondents regarding the use of smart devices regard possible cyberattacks that steal sensitive data for the purpose of selling it (36% very concerned) or that are aimed at harming their smart devices (31%) or temporarily disabling them for the purpose of financial blackmail (28%), alongside the fear of government intrusions for the purpose of mass profiling (also 28%). One in five, say they are concerned about possible harmful effects on their health.



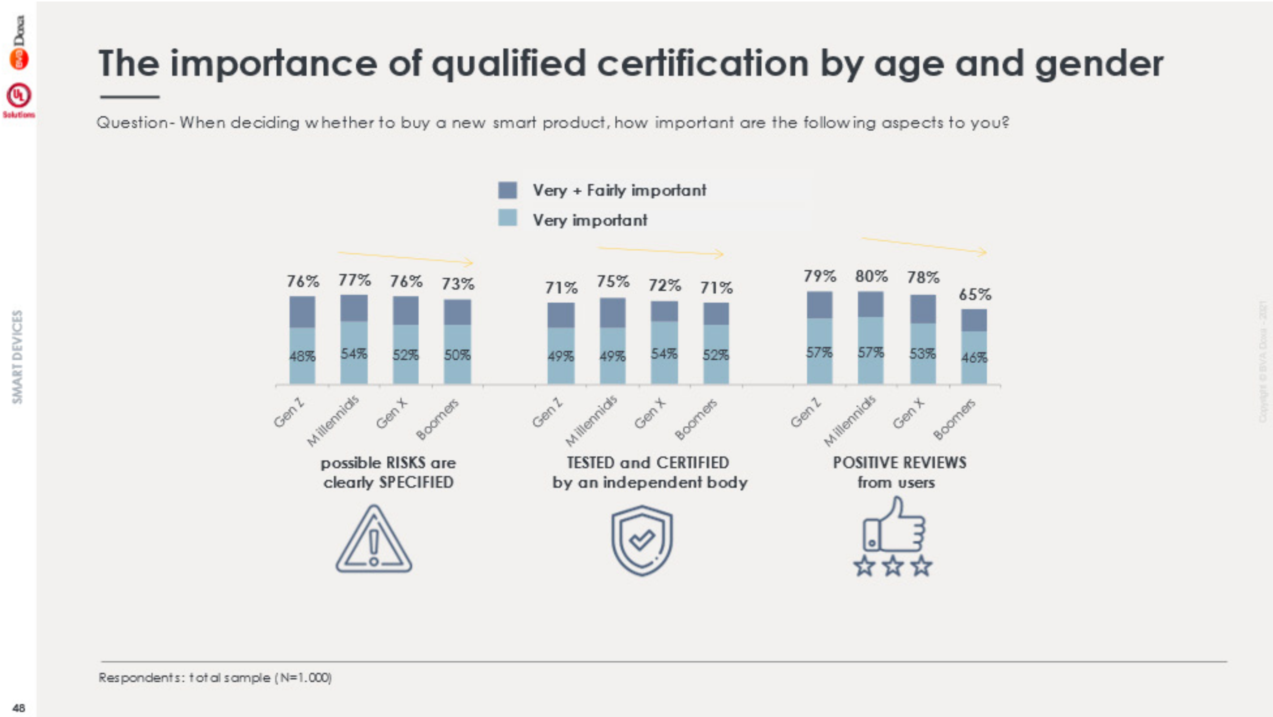
Gen Z respondents and Millennials emerge as the most concerned targets regarding all the aspects considered. The dangers of theft and sale of sensitive data and tampering with the devices are of particular concern to those who are currently working — who probably fear possible repercussions on their professional and personal sphere. Concern about harmful effects on health declines with an increase in educational level.



When asked about the criteria used when choosing smart devices, the respondents prioritize support during installation, positive reviews of the device control app, and transparency regarding any possible risks from using the devices. Looking at the "very important" figures, moreover, it can be seen that certification by an independent body is regarded as more important than word of mouth, brand reputation and recommendation by the salesperson.



Overall, Millennials come across as the generation that pays most attention to qualified certification. Analysing the highest level of attention, however (the figures for "very important"), it is the older generations — Gen X and Boomers — who express the greatest need for reassurance by an independent, qualified body.



In this context, we can legitimately regard certification as one of the indispensable elements required by consumers to overcome any resistance to purchase. Qualified certification is regarded as more trustworthy than other types of "unqualified" certification since it is backed up by scientific data and trials by an impartial and independent third party.

Conclusions and recommendations

Given the data emerging from the study, it seems clear that a process of reinforcing the perception that the consumer is listened to and protected, in all ways and forms, is needed to reassure end-users and thus contribute to the growth of the smart devices' consumer market.

Buyers and potential buyers do in fact express many doubts/concerns regarding the issues of privacy, health and the usability of the devices. The main themes emerging are:

- Potential violations of privacy/exposure to cyberattacks in all their various forms.
- Difficulty in installing smart devices oneself and in using them correctly.
- The resulting need for support during installation and configuration.
- Harmfulness/Risk of smart objects to health
- Excessive costs (of purchase/maintenance)

At the same time, there is an urgent need to communicate more effectively the benefits/advantages of using smart devices since consumers, especially those in the older age groups (Gen X and Boomers), struggle to understand the actual added value in their daily lives.

But communication, although an important driver, is not sufficient in itself to achieve the objectives that have been set. To turn words into substance, companies must show a genuine commitment to the issues that concern consumers through tangible actions to overcome the resistance that still holds back potential buyers. To this end, we recommend the following possible activities aimed at increasing the perception that customers are listened to and protected:

- Building certification tests (hardware and software) into the product design cycle by an independent body to provide reassurance on both cyber security and the non-harmfulness/ dangerousness of devices; it would also be beneficial to include this added value as part of any communications for the product or, better still, the brand. This would make it easier for consumers to identify those brands that invest in the safety of their products by submitting them to the impartial assessment of a third party.
- Continuous updating of control/management apps, which must be ever-more secure but also more functional and user-friendly to a wide audience (listening to the needs of end-users).
- Frequent updating of the software installed in products, if possible, throughout their entire life cycle.
- A support service that offers adequate assistance during installation and configuration, enabling the functions of the devices purchased to be used safely and to the full (possible agreements with installer networks and service centres are worth considering).
- Offering forms of warranty/insurance to protect against malfunctions and damage because of using the devices.
- The prompt recall of potentially dangerous products.
- The publication of manuals, data sheets, tutorials and best practices - written in clear and comprehensible language for a non-technical audience and aimed at achieving maximum functionality and safety/security.
- The promotion of events (offline/online/social media) focusing on privacy and cybersecurity.

To be effective, this process must start from the product concept and/or product ecosystem and not be limited solely to the communication/marketing phases.

UL Solutions portfolio for the smart world

The market for consumer electronics and the Internet of Things is hyper-dynamic and competitive. In addition, the requirements regulatory requirements are constantly evolving and add an additional layer of complexity. Manufacturers must therefore combine the relentless demand for innovation with the need to minimize risks and maintain compliance with global standards on an ongoing basis.

UL Solutions offers manufacturers the experience and expertise to innovate and bring their products to global markets their products by providing testing, certification and certification and inspection services as well as software complementary software products and advisory offerings that support innovation and growth. UL Solutions' services for the world of Internet of Things and connectivity include among others:

- Electromagnetic compatibility and wireless testing to access Europe, North America, China, Japan, Korea and many more
- Testing and qualification for wireless technologies such as Bluetooth®, Zigbee, Thread, Matter, Qi e KNX
- Electrical safety testing and certification
- Battery testing and certification
- Interoperability testing
- Cybersecurity assessment and certification
- Energy efficiency certification
- Notified Body

About UL Solutions

A global leader in applied safety science, UL Solutions transforms safety, security and sustainability challenges into opportunities for customers in more than 100 countries. UL Solutions delivers testing, inspection and certification services, together with software products and advisory offerings, that support our customers' product innovation and business growth. The UL Certification Marks serve as a recognized symbol of trust in our customers' products and reflect an unwavering commitment to advancing our safety mission. We help our customers innovate, launch new products and services, navigate global markets and complex supply chains and grow sustainably and responsibly into the future. Our science is your advantage.

About BVA Doxa

For 70 years Doxa has been synonymous with market research in Italy. Founded in 1946, it has always ranked among the leading companies of the sector both in terms of quality and reliability. Doxa is chosen to address and support the strategic approaches of private companies and institutions. The attention focused on innovation to adapt Doxa's solutions to a constantly changing market, along with the scientific rigor, has always been at the base of our work.

To meet the continuous and different needs expressed by customers, Doxa has built over the years a wide and articulated system of methods, techniques and analysis tools. Doxa's commitment is to continue to design innovative research solutions by constantly investing to offer customers more effective decision support. National and international customers rely on Doxa daily, thanks to its experience in numerous market segments and sectors such as Finance, Energy & Utilities, Tlc & Mobility, Consumer Goods, Pharma, Retail, Media, Public Affair and B2B. For further information, please visit bva-doxa.com/en

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