OCF CES Survey Report

Executive Summary

The market for connected “smart” devices for the home and automobiles is expanding and its momentum is likely to increase throughout 2017 and beyond. Industry research firm Forrester predicts this growth will come both from IoT devices replacing existing products in consumers' homes and from new categories of devices, with the latter driving the fastest growth. We are already seeing evidence of this trend. Indeed, some **68 percent of CES attendees polled by OCF reported that they already owned three or more connected devices, while 80 percent said they were evaluating devices and planned to make a purchasing decision within the next six months.**

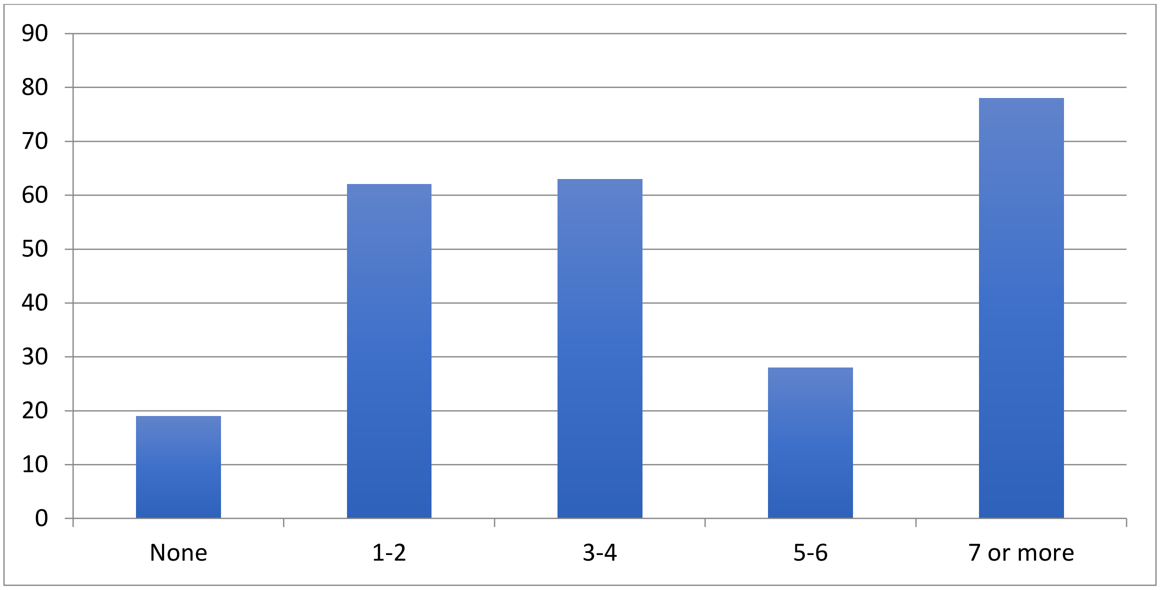
What the OCF survey also revealed, however, is that while major companies including Amazon and Google are making significant headway in the connected home device market, most consumers are not yet ready to swear loyalty to any one brand. **Just 33 percent of survey respondents said that the brand or manufacturer of a device was "very important" and that they only buy from brands they trust.** This suggests that most consumers will purchase devices from a variety of manufacturers; yet tellingly, those same consumers also expect the devices they buy to work together. **Fully 63 percent of survey respondents said it was "very important" that their devices interoperate and communicate seamlessly with each other, while 37 percent cited lack of interoperability as the single biggest limiting factor to universal device adoption.**

Survey respondents further identified open, common industry standards as a key factor in ensuring the interoperability between devices that they demand. Currently, IoT vendors are faced with multiple, competing de facto standards and protocols from which they must choose, causing fragmentation in the marketplace that often hampers the ability of devices from multiple manufacturers to interoperate. Of those surveyed at CES, **73 percent responded that industry standards are "very important" to technology innovation.**

What's more, respondents believed **collaboration between device vendors could yield benefits in multiple areas, with improving ease of use leading the pack at 40 percent, followed by improved interoperability at 32 percent and security at 21 percent.** On the security front, survey respondents voiced overwhelming support for industry security ratings or certifications, with **60 percent reporting that they would be "much more likely" to purchase a device that carried such a certification.** Based on these results, it is clear that the notion of industry players working together to achieve common goals enjoys broad support among customers in the market for connected devices and appliances for their homes and cars.

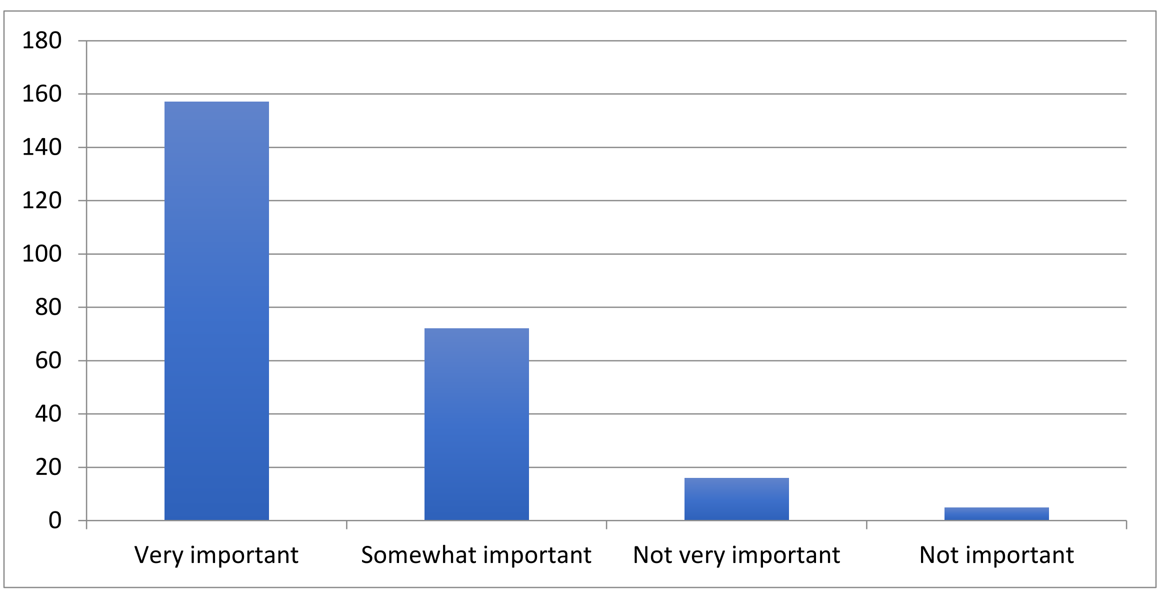
Key findings of CES attendees:

How many connected devices do you currently own, personally or in your home or car? (Connected devices refer to smart watches, fitness trackers, connected car services)



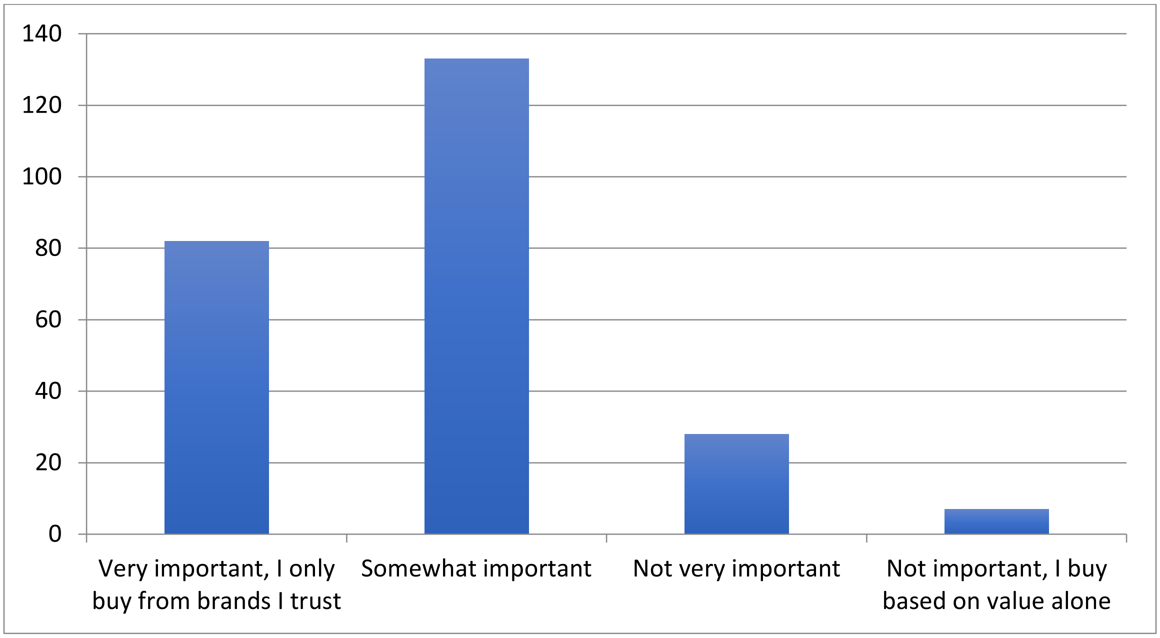
"7 or more devices" was the most common answer (31 percent), while respondents with 1-2 or 3-4 devices were tied at 25 percent. The lowest numbers came from respondents with 5-6 devices (11 percent) and zero devices (8 percent).

How important is it that your devices interoperate and communicate seamlessly with each other?



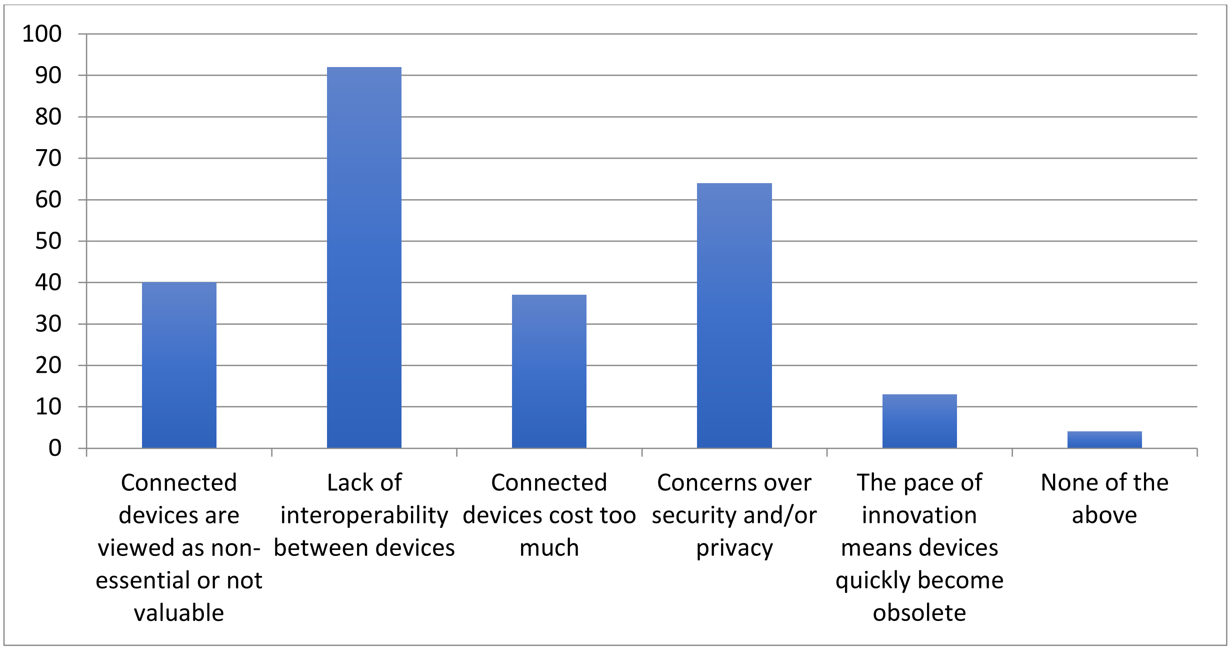
An overwhelming number of respondents found device interoperability and communication to be very important (63 percent) or somewhat important (29 percent). The remaining respondents found device interoperability to be either not very important (6 percent) or not important at all (2 percent).

How important is the brand or manufacturer of a device in your decision to purchase it?



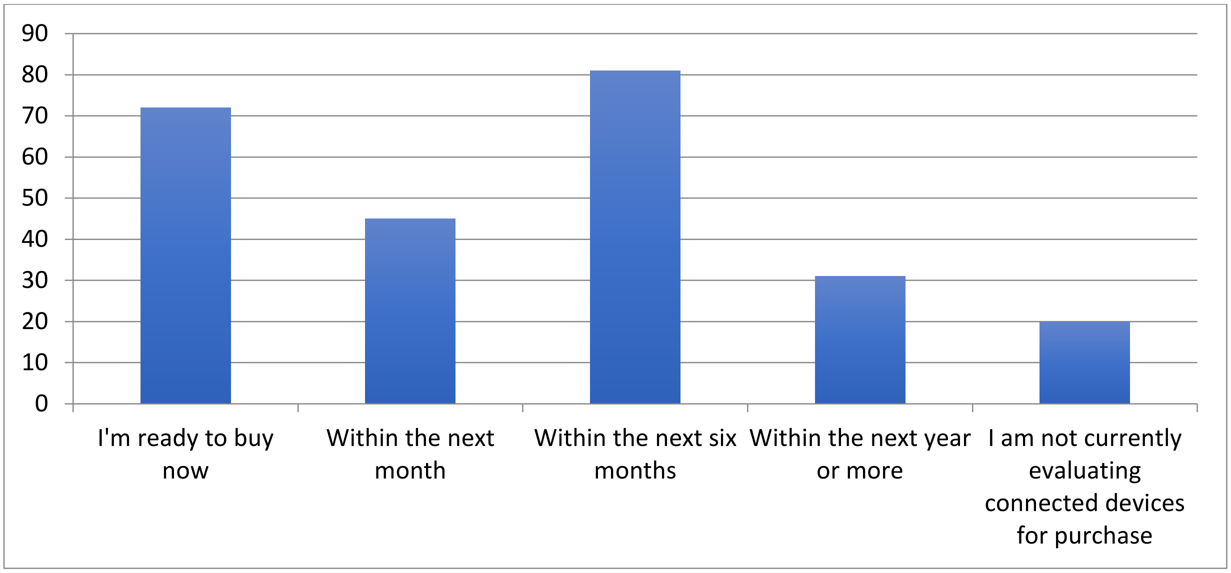
Although many respondents cared about brands, it was only a somewhat important purchasing factor for the majority (53 percent). 33 percent of respondents found brand or manufacturers very important in their purchasing decision, while the remaining few considered product brands to be not very important (11 percent) or not important at all (3 percent).

What do you think is the single biggest limiting factor to universal adoption of connected devices?



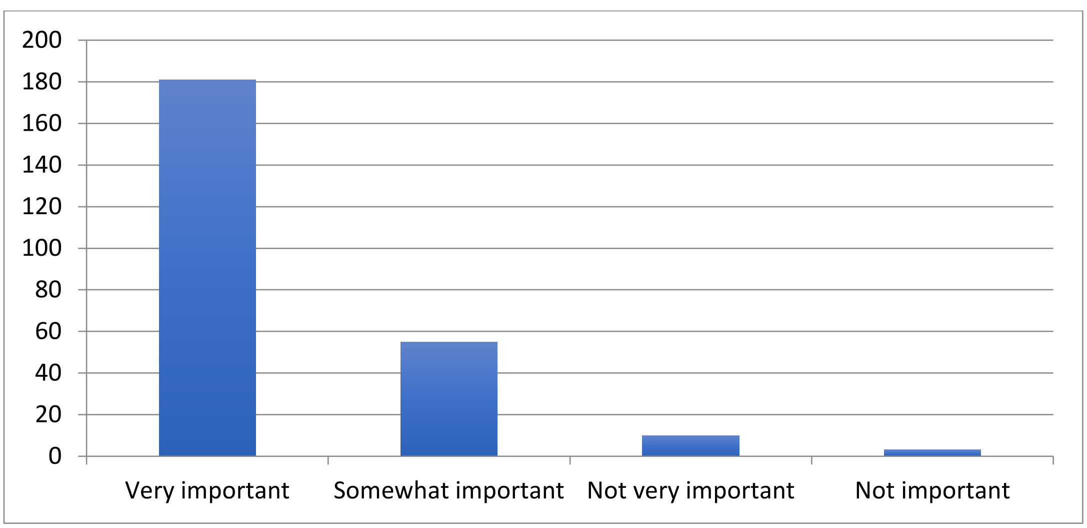
Lack of interoperability between devices (37 percent) was the biggest limiting factor to connected devices according to respondents, followed by concerns over security and/or privacy (26 percent). Concerns over connected devices being non-essential or non-valuable (16 percent) and the high cost of connected devices (15 percent) were also notable limiting factors to respondents.

If you are currently evaluating connected devices for yourself, your home or your car, when do you expect to make a purchase?

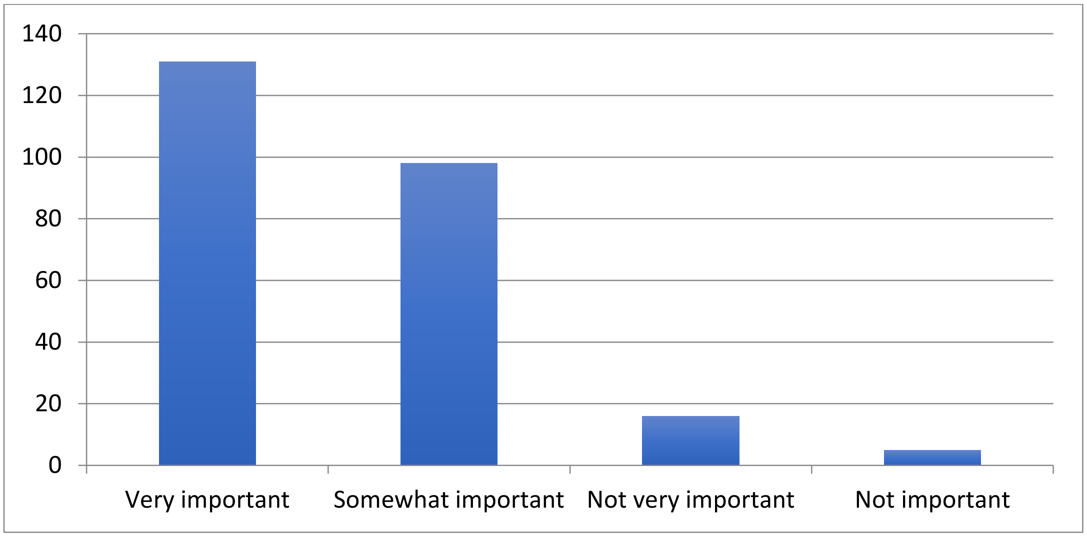


A vast majority of respondents were looking to purchase connected devices in the short term, with 33 percent looking to buy within 6 months, 29 percent ready to buy immediately, and 18 percent ready to buy within the next month. Some respondents had purchase plans in the long term, within the next year (12 percent), while some had zero plans in the foreseeable future (8 percent).

How important are industry standards to technology innovation?

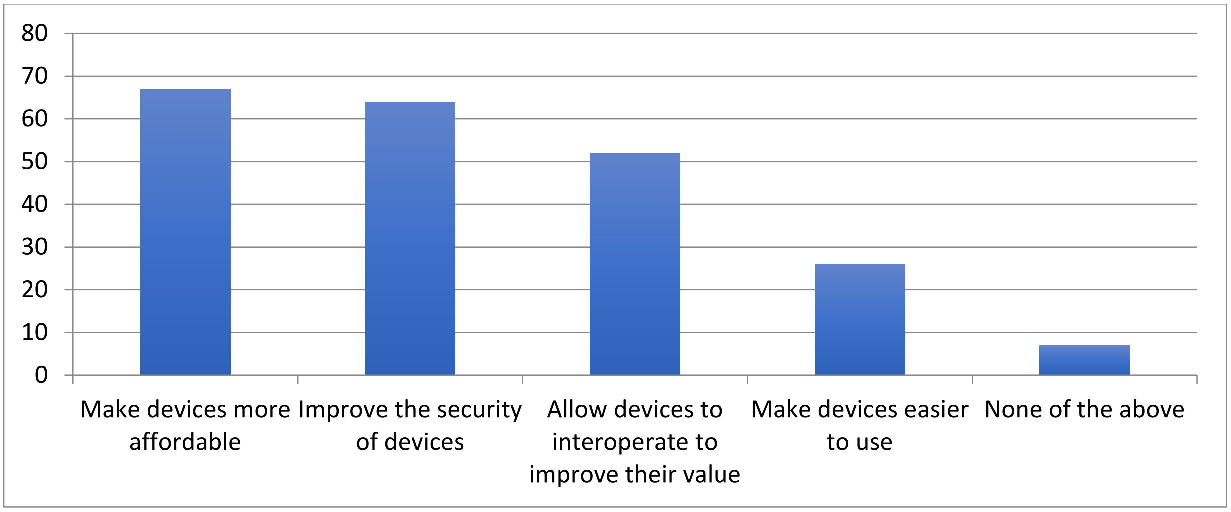


How important is it that the devices and appliances you purchase today be connected via the Internet?



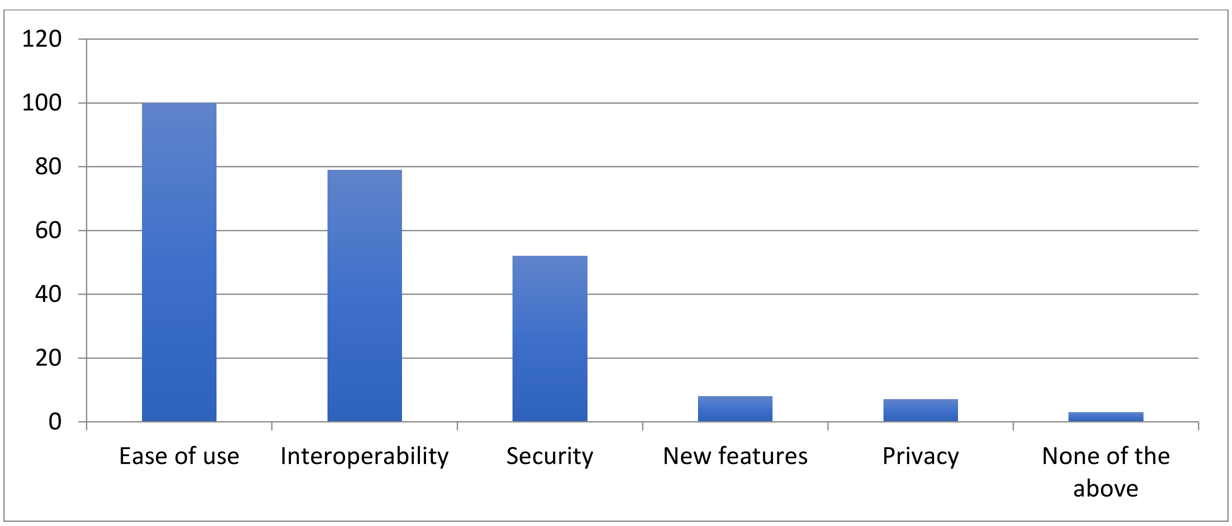
Internet connectivity of appliances and devices is considered very important (52 percent) or somewhat important (39 percent) to most respondents, with only 6 percent finding Internet connectivity not very important.

What is the single most important thing that connected device vendors can do that would make you more likely to purchase their products?



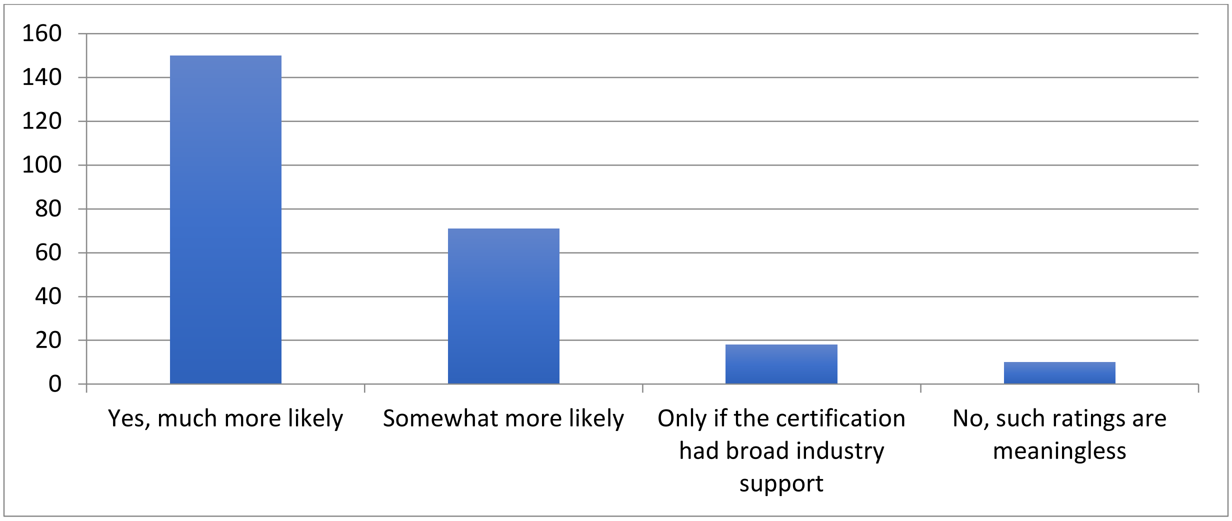
The top three things that would make connected devices more purchasable are affordability (31 percent), better security (30 percent), and interoperability (24 percent). Ease of use of connected devices (12 percent) was also an important purchasing factor.

What is the most important area in which connected device vendors could collaborate to improve the value of their products for their customers?



In terms of vendor collaboration, ease of use (40 percent), interoperability (32 percent) and security (21 percent) were all important areas for respondents. Not very many considered new features (3 percent) or privacy (3 percent) to be important.

Would you be more likely to purchase connected/IoT devices if they carried a rating or certification as to their level of security?



Security ratings and certifications seem to be important factors in connected device purchasing decisions, with 60 percent of respondents much more likely to purchase an IoT device if implemented. 30 percent are somewhat more likely to make the purchase, while a minority found certifications only useful with broad industry support (7 percent).

Conclusion

The market for connected devices and appliances for homes and automobiles is already thriving, but manufacturers still face challenges to growth of adoption. Chief among these is the fact that savvy consumers rely on more than mere brand recognition when evaluating devices for purchase. They also weigh a number of other factors, including ease of use, security, and cost. Moreover, even when they purchase devices from more than one vendor, increasingly they expect these devices to communicate and interoperate seamlessly.

Today, achieving that level of interoperability is harder than it needs to be. Competing IoT technologies and protocols mean many devices are incompatible with each other, or only partially compatible. As the survey responses indicate, overcoming this challenge would significantly lower the barrier to IoT device adoption for many consumers. But no single vendor can make its devices more interoperable in a vacuum. Rather, device manufacturers must work together to establish standards and protocols that can be shared across the industry. Such a standards-first approach has already proven its effectiveness in the successes of the open source movement and the World Wide Web itself, which explains why customers are clamoring for IoT vendors to follow those projects' leads. A collaborative, standards-based approach is the way forward for this industry, to ensure that the next wave of connected home and automotive devices fully meet consumers' needs.

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