Is apple losing the smart home battle?

Home automation represents an enormous emerging market, and major brands are battling for pole position in the race for automation dominance.

Just as Apple's iPhone rules over the smartphone segment and dictates the direction of competitor brands, the home automation hub -- similarly -- will be the linchpin for an expansive selection of home automation and lifestyle gadgets.

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Experts estimate that home automation will be a , a scenario that's certainly piqued the interest of tech giants like Apple, Googleand Amazon. A battle is brewing, and the war will be won by the first company that can design a fully-functioning smart home speaker hub while creating an invitingenvironmentfor outside developers and third party manufacturers. So, who will the winner be?

It's not going to be Apple.

Two years ago, I was a firm believer in Apple's strides in home automation, and I focused on building devices tailored only for Apple. After all, the company offered something other companies couldn't: a plan for a smart home ecosystem which would allow device manufacturers, hackers and tech-savvy individuals to create products capable of seamlesscommunicationbetween the user and other devices.

Additionally, Apple's massive user base and expansive market share meant there was real potential for profitable product development. At our company,

we saw home automation as an enormous emerging market, and we believed Apple was the best road to that destination.

Unfortunately, my startup found Apple's policies and business model to be difficult, arduous and occasionally hostile, for a multitude of reasons.

First, in order to work with Apple, companies need to be certified and approved by their Made For iPod (MFi) program. MFi is a licensing application program originally launched in 2005 to regulate the plethora of third-party iPod accessories. It has since expanded to include all i-devices and Apple's HomeKit home automation framework.

The MFi application can easily take a year to process, and HomeKit requires a separate certification. The HomeKit certification, which is operated manually and isn't actually listed in Apple's guidelines, will require at least an additional six months. When all the certification and licensing is complete, every single product requires an eight-week testing process before it's market ready. And of course, there are certification-testing and licensing fees at each level.

If your company and product have actually managed to jump these hurdles without going out of business or becoming technologically irrelevant, congratulations.

And if that's not enough, Apple also mandates that device makers and manufacturers buy core components from its proprietary suppliers. In all my time in manufacturing and product development, I've never had a worse component supplier -- excruciatingly long lead times, unresponsive and ever-

changing terms and conditions that make for a frustrating process -- to put it mildly.

Apple's suppliers aren't the only party guilty of changing agreed-upon terms.

Apple itself frequently alters its testing requirement and HomeKit SDK. That's why HomeKit eligible third-party products are so scarce.

, there are only 18 companies currently certified to make HomeKit devices. Among those 18, a total of 48 products have become available for purchase, and many of those products are very similar to one other.

A quick -- hardly diverse enough to meet consumer needs when it comes to something as wide-reaching and customizable as home automation. So, it seems that Apple may be slowly changing its ways, by taking a page out of Amazon's playbook and .

Amazon has an advantage.

Amazon has hopped into the driver's seat in the race for home automation dominance. How? It's eschewed Apple's traditional walled-garden approach, instead opting for a community-driven, open platform.

Here's an example: When my company, TikTeck, decided to make its LED Smart Light Alexa compatible, all Amazon required was a form, which took 15 minutes to complete. That's it. No extra costs and no time-consuming certification process. Contrast that with dealing with Apple, where our HomeKit project is not yet ready after 18 months of development.

Amazon Alexa debuted more than a year after Apple's home automation offerings became available. Despite that, a quick Google search shows that Alexa has considerably more compatible products available for purchase. Simply put, Amazon has made Alexa much more developer-friendly.

Its tech support forum is extremely efficient, and my questions always answered within a few hours -- exponentially quicker than with Apple. I've even been able to meet in-person with Paul Cutsinger, who is on the Alexa team, to get help with software or hardware issues. Amazon's open-arms welcome to developers and manufacturers is a refreshing experience, particularly after the excruciating process of obtaining a HomeKit certification.

Massive consumer traffic is a big asset that can be effectively harnessed by Amazon to entice smart home consumers.

They can easily source, and build Alexa compatible products and their open-source API can help Alexa become the standard in home automation hubs as the product's variety of skills, like controlling your thermostat or controlling your lights, has now surpassed 300.

It's a similar approach to . Create the platform or thetechnology, and open it to others so your proprietary design becomes the flag-bearer that others follow.

While Alexa's text-to-speech has received considerable praise, there's still a need to refine and improve theartificial intelligence(AI) because the product is still liable to stumble with some seemingly simple questions or requests. If

Amazon wins, that victory will be largely due to the company's advantage as a consumer destination.

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Don't forget Google.

Amazon does not currently possess the technical capabilities of Google, when it comes to creating high-end autonomous robots.

The scope of Google's projects -- from mapping the entire world to pioneering self-driving cars -- suggests that developing a high-quality AI home automation hub is right in line with its abilities. Google has arguably the best AI engine in the world and its opensource machine-learning system, , shows immense promise in smart home automation.

Imagine giving your home the ability to learn from your behavior. It will get to know your daily routine, and it will anticipate what you want and when you want it. Maybe that desire is simply turning on the coffee maker before you wake up, or adjusting the heat, when you leave or return to your home.

With , a speaker hub won't always be the centerpiece for an automated home. Optical machine learning will read your facial expression to anticipate what you want, eliminating the need to talk to a speaker.

Additionally, Google's massive developer ecosystem provides a big boost in leading the home automation pack. Its impressive developer base means it will be able to create a diverse set of applications and functions to fit the

ever-changing needs of people and homes with more intuition and practicality than Alexa.

If it integrates Google Home into its next Android update, its consumer reach will expand dramatically. Unfortunately, its Google Home device is a bit late to the market. It's slated to release in fall 2016, while Amazon's Echo has already sold three million units since its 2014 debut.

The cost barrier is too high.

Your average consumer does not have the disposable income required for Amazon Echo's $180 price tag, particularly when there are home automation growing pains. Comprehensive integration with other devices still requires some development.

Amazon recently -- a move that promises to expedite the usefulness and real-world application of the Echo but also allows competitors and copycats to access the programming behind Alexa.

Either way, open platforms are great for consumers. Accessibility and widespread use lowers costs for manufacturers and consumers alike. Amazon and Google both have a track record of releasing low-cost products to acquire large market shares.

For Google, . For Amazon, . A similar move in the smart-home automation segment provides a unique opportunity to win the race before it's even started.

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In the end, open platforms, which are welcoming to developers and programmers alike, are proving critical in creating a diverse home-automation ecosystem that appeals to people of all backgrounds. Beyond that, price point will define the winner. With the wide-ranging monetization possibilities brought on by home automation, ranging from services and subscriptions to integrated appliances, the company that can bring its automation hub down to $50 will win the race. Hands-down.