Innovating *Connected Devices* **Fast**

Driving consumer adoption while maintaining profitability

Capgemini

Amazon's Alexa launched 10 years ago, and the software now supports more than [500 million smart-home devices](#) around the world. But it's now struggling to maintain market share and Amazon is [revamping it](#). Apple Watch is now [the most popular smartwatch](#) in the world with a 55 percent market share but it was initially labeled a flop because it did not start resonating with consumers until the company focused on fitness rather than fashion, and provided standalone connectivity.

Connected Devices are already an essential part of consumer lifestyles. According to a recent [Capgemini Research Institute report](#), 1/3 of consumers say they rely on a connected product around the clock, and 2/3 consider connected products a fundamental requirement. Health and safety factors drive consumers to consider these devices necessities, but entertainment is still the top motivator, at 80 percent. 60 percent of consumers own a connected vehicle, and 52 percent have connected speakers.

Consumer-connected devices have completely transformed technology interactions. For big-tech platform companies, it is more than just selling hardware. These devices play a vital role in providing an ecosystem of services, shaping the future of consumer engagement, understanding user behavior while delivering data, and gaining customer loyalty.

By 2025, IDC predicts there will be more than [55.7 billion connected IoT devices](#), and consumer-connected devices will account for a significant portion of that. Connected devices may be a sizable opportunity, but for many companies bringing a device that would excite the customers without sacrificing profitability continues to be a challenge. To illustrate, the cutting-edge metaverse continues to be a money-bleeding endeavor for Meta, [losing billions of dollars every quarter](#). Even when platform companies deliver hot, new connected products in high demand, they are still challenged to maintain relevance and generate revenue. There is no single formula for launching a successful hardware product in the market.

Connected device conundrum

The market opportunity is there, but consumers are expecting eco-friendly, affordable devices supercharged with hyper-personalized experiences and cutting-edge features while protecting data and privacy. At the same time, new technologies such as Gen AI, Edge computing, and 5G are creating a pressing need for faster ideation and rollouts. Even if connected products might not significantly contribute to revenue when compared to the core business, they are still crucial because a connected device can provide stickiness *that keeps consumers in one ecosystem and acts as the gateway to position add-on services*.

For example, Alexa may have started as a passion project at Amazon, but 10 years later, the company is revamping it to include next-generation technology leveraging Gen AI and charging a monthly subscription fee rather than including it in an Amazon Prime subscription. With 500 million Alexa-enabled devices sold, Amazon has a sizable installed base, but platforms need to evolve to stay relevant.

The connected devices sector requires a range of skills to develop and operate products successfully. Designers, engineers, and technology specialists are needed, while companies are expected to stay lean and have fewer resources. It can be challenging to have the right balance even for the biggest companies. High expectations of users, a continuously evolving technology landscape (Gen AI, Edge Computing, and Spatial), and resource constraints are making it harder to maintain product releases on track.

Google, for example, acquired Nest in 2014 and produces some of the most successful smart home technologies in the world. This provided it with a greater presence in more households; 27 percent of smart home users in the US are Nest customers, and the systems are supported by a robust ecosystem of interconnected devices.

However, it took Google nine years to deliver the fourth generation of the Nest Learning Thermostat after the acquisition.

While consumers push for the next hot product, they are also concerned about e-waste and their carbon footprint. Fifty percent of consumers have obsolete technology products at home that they feel unable to dispose of safely. Customers expect sustainability to be part of the equation and that platform companies will take responsibility for implementing more eco-conscious practices.

Platform companies need to solve all these challenges when launching a new product. With so many variables in the equation, the risk of developing the next successful connected devices needs to be reduced.

Leaders

in these firms need to focus on 'time' - continuing to accelerate time to market to win.
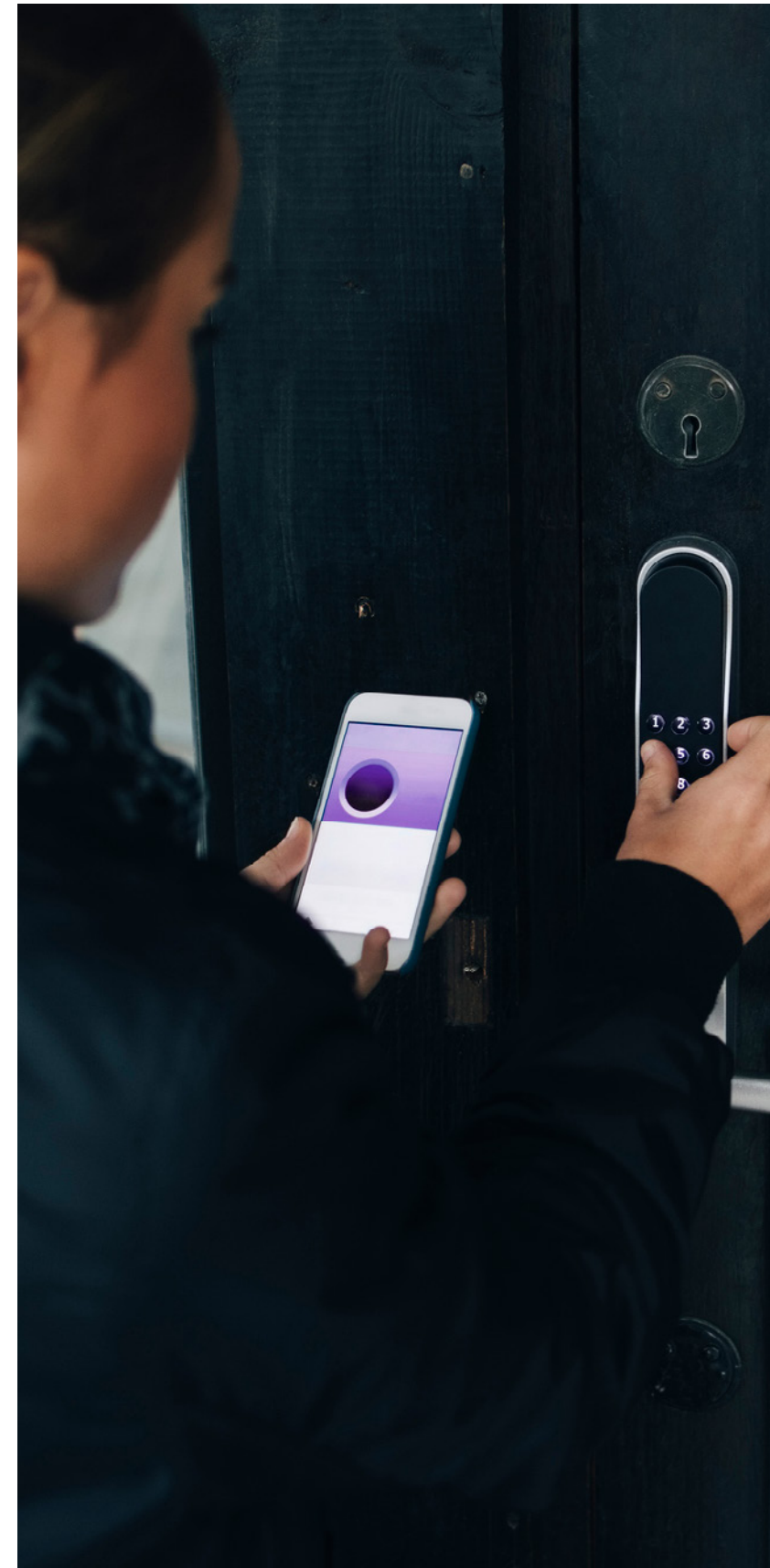
How to win in a connected device world

According to a review of various 2023 annual reports across the top five platform players – Google, Microsoft, Apple, Meta, and Amazon – they earned more than $380 billion in revenues from sales of consumer devices and attached services. There is no one route to connected device revenue. It is about building a portfolio of connected hardware, software, and services to deliver what consumers want, gain stickiness, and open new revenue opportunities.

In the following section, we will discuss five hot trends for navigating the growth curve and how to achieve mass adoption while maintaining profitability

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1 Platformization: a cornerstone for success.

Consumers prefer a single interface to control their connected devices. The foundation for connected devices is an integrated, unified platform. Without it, these devices are destined to be one-off items rejected by the market, like the Amazon Fire Phone, Microsoft Band, Apple Watch Edition, and Google Nexus Q.

These platforms should streamline and enhance the user experience across multiple devices and create an interconnected ecosystem where products interact, share data, and provide cohesive functionalities.

By leveraging shared platforms, companies can accelerate innovation, improve user engagement, and ensure consistent performance and updates across all products. Companies can then build personalized experiences for integrated products and services. This drives the expansion of connected device usability beyond their immediate function and opens opportunities for additional monetization through sales of products and value-added services. When the world is changing fast, the platform will provide a solid foundation to innovate and get to market faster.

2 Hyper-personalization: connect physical and digital.

Consumers want it all from connected devices and they want it tailored to their specific profile. They want real-time, automated, hyper-personalized experiences, and platform companies need to leverage artificial intelligence and a significant amount of real-time data to create highly customized experiences for users. From demographics to past purchases to browsing behavior, customers expect companies to know them, and the data can deliver hyper-targeted recommendations and content to make the right connection.

The small screens on most connected devices make it even more important for interfaces and experiences to be simple and targeted. Use cases require integration with IoT sensors and substantial amounts of data to generate the right personalized experiences, but the limited processing power on many devices adds a level of complexity. Thoughtful design is required to create one-on-one experiences at a granular level for each customer.

Ultimately, platform companies need to integrate digital and physical worlds to create more personalized and efficient experiences by beingcontext-aware and anticipating user needs.

3 Democratization: Interconnect different types of devices.

Consumers just want technology to help them to manage and orchestrate the lives around them. Connected devices must be accessible, affordable, and effortlessly compatible. The findings from Capgemini Research Institute report state that 65 percent of consumers would prefer to have one interface to control the different devices they may be using. Navigating between device ecosystems was identified as a key challenge and establishing unified IoT controllers to overcome this challenge requires inclusive design and cross-manufacturer interoperability.

There is movement in the industry to work towards this goal. The Matter Protocol standard is designed to simplify the smart devices ecosystem and allows different connected devices to communicate securely and consistently. It promises a standardized language for connected devices, allowing them to work seamlessly and eliminating compatibility headaches. This is not going to happen overnight but every step in this direction is a major win for platform companies and consumers.
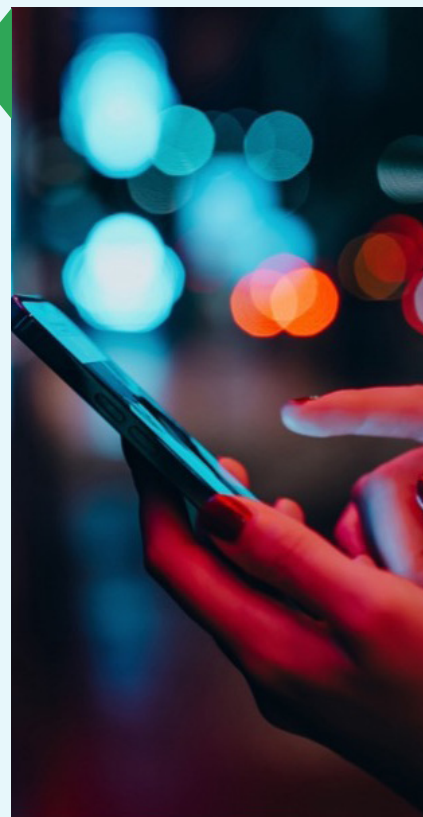
There is also an opportunity to drive societal change for good. The goal should be to create an inclusive technological ecosystem, driving broader adoption and bridging the digital divide.

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4 Monetization: establish new revenue channels.

Platform companies have the opportunity to leverage their customer base and technology foundation to uncover new revenue opportunities with devices serving as the gateway to customers backed by the platform designed to drive connected device innovation. There are a range of possibilities, from bundling new solutions or services to building add-on products. For example, consumers are open to spending money on devices that improve their health – and are more willing to share data when wearing the device to benefit from relevant insights . Building industry-specific solutions on the backbone of the devices is a promising trend that Meta and other platform companies are betting on. Check out how these metaverse solutions have the potential to revolutionize

the way we work. Another notable example, is wearables that focus on health monitoring and biometric data appeal to healthcare and insurance companies, similarly enhancing home automation, optimizing energy usage cost by building utility-centric solutions etc. will create opportunities for mass adoption and open new revenue streams. Consumers are willing to pay for services they perceive as valuable and, with a wealth of consumer data, platform companies should be able to find the opportunities and sweet spots to drive innovation and revenue. Google Play, Kindle eBooks, Audible, the Apple App Store, the Xbox Games Store, and Meta Quest+ are all successful examples of services delivering what consumers want and willing to pay for.

5 Decarbonization and sustainability: solving sustainability challenges.

Consumers want the latest gadget but they also acknowledge the associated sustainability burdens with frequent device upgrades. There is a growing demand for organizations to take responsibility for implementing more eco-conscious practices as consumers become more aware of e-waste and carbon footprints.

It may seem counterintuitive in an industry driven by discarding the old and using the new but sustainable practices can drive

customer loyalty, since paying for software updates are preferred over purchasing new models. Green design thinking leads to eco-conscious practices. Manufacturers should make trade-ins more lucrative for consumers and explore reuse, recycle, and e-waste management of old devices responsibly. Continued focus on innovation in sustainability practices to stay connected to green-conscious consumers are the winning themes here.

Balancing the capabilities to succeed

Connected devices demand a lot of resources and expertise. Constant product innovation, new services, meaningful sustainability, and the cycle of finding the next new thing will never stop. Consumers are demanding but the opportunities also present risks. Innovation and experience are the keys to finding the next successful connected device.

Major platform companies have access to technology, labor, capital, and data to stitch together a connected device strategy. But hyper-personalization, rapidly moving technology innovations, and resource constraints make it harder. Accelerating time-to-market is the key to winning.

Building a strong technology platform provides a base to launch new ideas and products as well as a foundation for an interconnected ecosystem where devices can seamlessly interact. Data is vital to hyper-personalization, but it needs to be protected. More personalized experiences integrate the physical and digital worlds to create what consumers want.

Finding new revenue streams will drive innovation but consumers expect more value for their money. Uncovering new ideas and finding efficiencies will create opportunities to engage consumers. Platform companies should collaborate with other service providers and manufacturers to create a larger ecosystem around their devices. Manufacturers also need to find meaningful ways to decarbonize for more sustainable solutions. Green design thinking leads to eco-conscious practices to solve the sustainability burden.
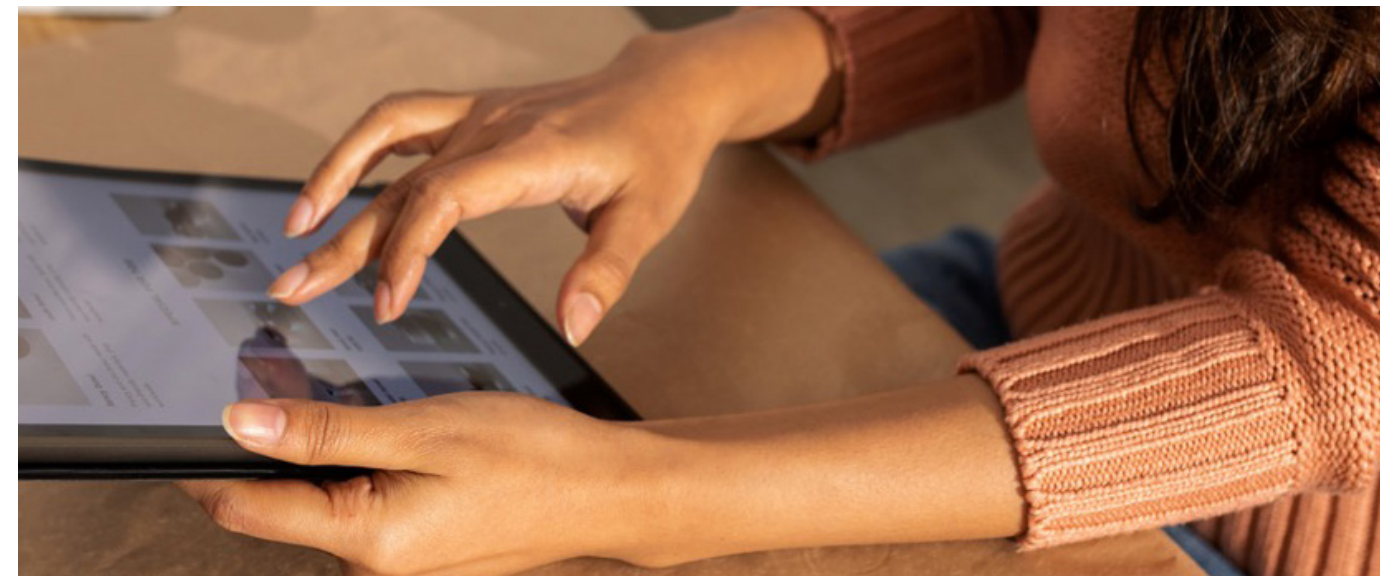
Bringing a well-designed hardware to the market is no longer enough, connected device companies now need to extend their portfolio by providing value-added services and establishing future-proof go to market strategies to drive adoption and revenue. It is about scale, horsepower, and know-how. Speed is the new currency, and the consequences of slow innovation are significant. Capgemini can deliver technology that inspires; our Connected device solution enables the entire value chain – from design to monetization. It is built to elevate user experience and accelerate revenue growth through hyper-personalized, green, and integrated products; bundled with services.

Discovering the next connected device opportunity

Platform companies need to stay close to consumers and move fast. New technology trends are pushing the boundaries of consumer expectations; Artificial intelligence is already enhancing connected devices but Gen AI, Edge computing, AI Agents, integrated immersive experiences, and custom silicon are the leading edge of the next technological wave. In the fast-paced world of business, speed-to-market is the fuel and revenue is the engine. Both are necessary to stay ahead of the competition. Companies need a trusted partner in their path to sustainable growth while balancing adoption and profitability. #getthefutureyouwant

Want to learn about the new and next in #connecteddevices world

Reach out to our experts

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