

HEY ALEXA! – THE GREAT ADVERTISING POTENTIAL OF IOT (THE INTERNET OF THINGS)

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ABSTRACT

The Internet of Things (IoT) is one of the hottest buzzwords in advertising, with new research and recommendations frequently appearing on the subject. The literature is vast, so this paper aims to analyse the opportunities and threats of smart speakers, such as Alexa. Smart speakers were chosen, as these are some of the most popular IoT devices for consumers. However, brands face several challenges associated with the usage of IoT. The paper begins with a brief background to the IoT, with history, definitions, and key statistics. Afterwards, the required mind-set shift from the industry to adapt successfully into their business model is explored. Subsequently, the implications of the changing consumer behaviour are investigated; this includes case studies presenting best practices. The last issue analysed in this paper is the legal and ethical implications of the IoT that advertisers have to consider when planning campaigns. Finally, the paper includes thoughts for future research.

Keywords: *internet of things, IoT, Amazon Alexa, smart speakers, brands, advertising, consumer behaviour*

1. INTRODUCTION

The Internet of Things (IoT) may be a new term, but these devices have been with us for a while; the first smart vending machine was introduced in the 1980s (The little-known story of the first IoT device, 2018). The number of IoT devices that people interact with has been growing rapidly. Statista (2020), one of the best known online statistics website estimates that the total number of installed IoT devices worldwide will be approximately 30 billion units by 2025. This growth in the number of IoT devices is facilitated by 5G mobile networks, the latest innovation in telecommunications technology (Akpakwu, Silva, Hancke, & Abu-Mahfouz, 2017). The first generation (1G) of networks was voice-only, 2G brought voice and texting, 3G added data, 4G did the same as 3G but faster, and 5G is even faster. This speed is necessary to support the growing network of IoT (Collela, n.d.). First, what is understood as an IoT device needs to be defined. It is simply any device that is connected to the internet, from wearables (potentially with visual search, augmented reality, or virtual reality capabilities), smart TVs, and smart speakers to devices that create futuristic smart cities (Why Media is Important and The Future of Media, 2021). This paper focuses on consumer-facing IoT devices, in particular smart speakers, and their impact on advertising.

2. BUSINESS MODEL CHANGES

According to The World Economic Forum, 500 million tweets and 294 billion emails are sent, 5 billion searches are entered, 4 petabytes of data are created on Facebook, and 4 terabytes of data are created from each connected car, each day. By 2025, it is estimated that 463 exabytes of data will be created each day globally – the equivalent of 212,765,957 DVDs per day

(Desjardins, 2019). IoT devices are integral to fuelling ‘big data’, which is presented as the next revolution in business. This change gives access to even more data than before in environments (for example, in cars) where companies did not previously have access to customer tracking. Because of this data revolution, companies have access to data more powerful than ever before. For example, digital-native companies like Amazon are built on this data. Stores that sell online can track not only the latest trends, but they can also view shopping behaviour on an individual level, and with specific tracking, they can also see what a customer showed interest in but did not buy finally. They can then use this data to build learning and real-time optimising algorithms that predict what the customer will be interested in next (McAfee & Brynjolfsson, 2012). However, raw data – that may be too voluminous or too unstructured to analyse in traditional ways – on its own is not very useful (Davenport, Barth & Bean, 2012). This affects agency structure and processes. There is a new job role that is highly sought after in the industry: data analyst, a role with an advanced understanding of how to analyse and process data in real-time (Tesseract, 2021). Moreover, these individuals also need business and marketing experience, for example, they need to know that correlation does not necessarily mean causation in the industry, as search advertising may generate the highest number of final sales, but a percentage of sales would have happened without these ads anyway (Mela & Moorman, 2018). Therefore, this role requires candidates with highly specific knowledge, skills, and experience. Besides this new requirement, several specialisms exist within agencies, such as strategists, account managers, media buyers, content, sponsorships, research departments, etc. This creates many siloes within agencies, making the job more complex than ever. To manage this complexity, it makes the role of integrated planners essential to the success of advertising. The role of the specialist is to provide subject matter expertise, but this knowledge may create a disjointed consumer experience without the big picture thinking that an integrated planner provides. Therefore, the integrated planner has a critical role, understanding all the touchpoints, and using this understanding, to consolidate these concepts into an interconnected ecosystem.

3. REACTING TO CHANGING CONSUMER BEHAVIOUR

Echo, Amazon’s first smart speaker, debuted in 2014, and despite Google and Apple launching their version of smart speakers, it has kept its coveted number one position ever since (Welch, 2014; Bohn, 2016; HomePod reinvents music in the home, 2017). It is estimated that the installed base of smart speakers has reached 320 million units globally, and brands are taking advantage of this meteoric rise (Installed base of smart speakers worldwide in 2020 and 2024, 2021). Moreover, in just over three years, smart speakers enabled by Amazon’s Alexa - a virtual assistant AI technology, one of the main examples of IoT devices - have gone from having 130 skills to over 100,000 skills (Smith, 2020; Total number of Amazon Alexa skills from January 2016 to September 2019, 2019). Amazon started the revolution of screen-free e-commerce with the humble Dash buttons, and now the company is complementing it with an Alexa-enabled voice shopping experience. Amazon incentivises this approach to online shopping. This is appealing to consumers, as it makes shopping more convenient and offloads decision-making for small choices to Artificial Intelligence (AI) (Gartenberg, 2017). Besides the device’s perceived ease of use, another strong motivator for usage is enjoyment (Kowalczyk, 2018). People seem to love Amazon’s Alexa, and its Super Bowl ad was the most-watched one on YouTube (during the show) (Cohen, 2020). Brands need to understand and discover how to work with these AI algorithms or risk missing a growing number of valuable consumer interactions. For example, Burger King attempted to hack these AI algorithms with a commercial that voice-activated IoT devices when asked, “What is The Whopper burger?” This prompted the device to read out the Wikipedia entry for the Whopper (Diaz, 2017). Other brands took a more traditional approach; for example, Diageo worked with Amazon and created a cocktail mixing Alexa skill to increase at-home consumption moments (Diageo launches

'happy hour' skill, 2018). O2 enhanced their sponsorship of England rugby with a bespoke Alexa skill that featured exclusive pre- and post-match content from rugby legend Jonny Wilkinson (Have Jonny Wilkinson, 2018). NARS, a high-end cosmetics brand, served an ad to those listening to music on a smart speaker, enabling consumers to request a free sample of one of their products via voice-only controls (Calladine & Healy, 2020). These ads show great promise in research. For example, a study in 2018 found that when consumers interacted with an advertisement delivered via smart speakers, the effects of these ads were more significant than the effects of traditional one-way ads (Kim, Park, Park, Ju & Ahn, 2018).

4. PRESSING LEGAL AND ETHICAL CONCERNS ARE RISING

There are several concerns with these devices, beginning on a personal level with Amazon's name for the assistant: Alexa. Parents have expressed disappointment because their children with the same name became targets of bullying at a young age. As a result, some of these children experienced deeper mental health problems, and families even needed to take drastic measures, such as change the children's names and move to a new school (Johns, 2021). Additionally, there are broader security concerns associated with these devices, and these have attracted ample media attention. For example, a device sent a recording of a family's private conversation to a random person on their contact list (Kim, 2018). These are more widespread concerns; for example, when probing Amazon Alexa skills, security experts found that hundreds of these skills requested access to sensitive data without an established set of privacy policies in the first place (Winder, 2021). A recently announced new development called Amazon Sidewalk will be automatically enabled in Alexa devices, sharing a little slice of internet connectivity with nearby devices. This will make setting up new devices easier and allow seamless streaming of outdoor cameras or pet trackers – even when out of range. It is a great enhancement of experience; however, it comes with its own security concerns. Amazon Sidewalk can make it easier for strangers to access the home network and, as a result, seamlessly access the devices (smartphones, laptops) connected to it (Chase, 2021). Despite these concerning developments, privacy protection behaviours among consumers are uncommon (Lutz & Newlands, 2021). Consumers do not want to read excessive Terms & Conditions, and a study found that almost half of the surveyed smart speaker users were unaware that their recordings were permanently stored or that they can delete them (Cakebread, 2017; Malkin, Deatrack, Tong, Wijesekera, Egelman & Wagner, 2019). Another study found that consumers are not concerned about their privacy because they trust the companies behind these devices to do what is required to protect their data (Yao, Basdeo, McDonough & Wang, 2019). Therefore, brands should take responsibility for their data management processes. The General Data Protection Regulation (GDPR), which came into effect in Europe in 2018, is legislation that shows positive progress. GDPR defines the legal requirements for brands to adhere to when dealing with personal data (Principles of the GDPR, n.d.). However, the pace of new technologies emerging is fast, meaning advertisers and regulators will need to work tirelessly to achieve the same level of progress with the accompanying laws and regulations to use consumer data responsibly.

5. CONCLUSION

The IoT, and smart speakers are a new space full of exciting opportunities and business potential for advertising professionals. Brands that want to advantage 'big data', which this fuels need to adjust their business model: agencies need data specialists to help analyse, and process the data, and subsequently turn it into actionable insights. To maximise effectiveness of the work of these specialists, integrated planners are necessary to ensure these insights are aligned at all levels. Smart speakers can also deliver ads to consumers. The initial brand solutions covered in this paper include brand building, high-profile sponsorship amplification, and sampling promotions.

However, regardless the chosen role of smart speakers, brands need to be mindful of pressing legal and ethical concerns, especially because consumers see it as their role. Future research might examine the effectiveness of these ads, for example, compare smart speaker ads with other voice-based ads on traditional radio, online radio, or podcasts. In addition, it would be also interesting to investigate any differences in effectiveness between categories and consumer segments. Today, smart speaker ads may be just a little more than an innovative solution that can only secure a small percentage of the advertising budget. However, as influencer marketing was also in a similar position a couple of years ago, the authors of this article predict that smart speaker ads have great potential in the future based on consumer trends.

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