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Feedback of

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to the

European Commission's Directorate General for
Competition (COMP) – Unit C.2

on its

Preliminary Report - Sector Inquiry on Consumer
Internet of Things

ACT | The App Association feedback to the Commission's Preliminary Report of its Sector Inquiry on Consumer Internet of Things

I. Introduction and statement of interest

ACT | The App Association writes to provide input to the European Commission's preliminary results of its competition sector inquiry into markets for consumer Internet of Things (IoT)-related products and services in the European Union (EU). The preliminary findings confirm the rapid growth of these markets and identify the respondents' potential concerns for the sector.

The App Association is a not-for-profit trade association located in Brussels, Belgium, that represents more than 5,000 small and medium-sized enterprises (SMEs), application developers and connected device companies located across the European Union (EU), the United Kingdom (UK), and around the globe. We are committed to creating an economic environment that fosters innovation and supporting competition between and growth for all participants in digital markets. In 2019, the ecosystem the App Association represents—which we call the app economy—generated €187 billion in revenues in the EU alone and is responsible for over 1.3 million European jobs.¹ Alongside the world's rapid embrace of mobile technology, our members develop innovative hardware and software solutions that power the growth of the internet of things (IoT) across modalities and segments of the economy. The App Association's members include many EU-based innovators who develop mobile technology products in both established and emerging markets. For our members, a functioning IoT and app ecosystem is essential. Maintaining the level-playing field between big and small-sized developers and manufacturers helps to ensure a healthy, competitive, and innovation-friendly ecosystem.

We welcome the Commission's efforts to understand opportunities and challenges related to IoT consumer markets and to explore ways in which it can help the EU fully realise the immense benefits of IoT. Considering the dynamic characteristics of the various business models in the IoT sector, future competition policy must allow new technologies to develop in a flexible and reliable digital environment. Competition-themed policy actions must find basis in a strong, data-driven evidence base and consider the possibility of unintended market distortions, rather than being based on edge use cases or hypotheticals. As the Commission states, the final results of the sector inquiry will provide 'guidance to the Commission's future enforcement activity' as well as 'feed into [its] regulatory work'. Therefore, the App Association, representing the small business IoT innovator community in Europe, believes it is of crucial importance to provide the viewpoints of our members on the preliminary findings of this inquiry to ensure that the trends identified in DG Competition's Preliminary Report correspond to the experiences of IoT innovators like App Association members. In our comments below, we share our thoughts with regard to some of the preliminary findings in the Report.

¹ <https://actonline.org/wp-content/uploads/Deloitte-The-App-Economy-in-the-EU-2020.pdf>

II. General remarks

As the Commission reports in its preliminary findings, the IoT sector is widely expected to grow rapidly in the next decade. IoT is a concept that encompasses a wide range of devices ranging from voice assistants, smart home appliances, and smart wearable technologies, to consumer services like creative content, information and search, health and fitness, intermediation, and shopping services. We expect IoT to improve efficiencies in processes, products, and services across every consumer sector. The real power of IoT products comes from the actionable information gathered by the sensors embedded in every connected device and the leveraging of that data. The largest value will be in how this data becomes part of ‘big data’—a term we define to mean structured or unstructured data sets so large or complex that traditional data processing applications are not sufficient for analysis. As IoT sensors become smaller, cheaper, and more accurate, big data analytics enable more efficiencies across consumer and enterprise use cases. While the scope of the Preliminary Report is restricted to the consumer context, the App Association notes that IoT is beginning, and will continue, to positively transform countless enterprise use cases as well.

The mobile software apps our members create provide the gateway to IoT for consumers, and we welcome the Commission’s acknowledgement that mobile apps are the most used user interface to access smart devices and IoT services. In the last two decades, the mobile app industry has experienced monumental growth alongside the rise of smartphones and other smart devices. Apps have revolutionised the software industry, touching every sector of the economy. While smart devices encompass a diversity of applications across consumer experiences, the interface for communicating with these devices will likely remain a mobile app on a smartphone. The rise of IoT will, therefore, hinge on the app economy’s continued innovation, investment, and growth. In short, apps are the interface for the IoT revolution. Further, the small business innovator community itself is constantly evolving, with App Association members increasingly building connected IoT products, along with associated mobile apps, to compete.

The app economy is led by start-ups and small businesses. We are, therefore, disappointed that over 70 per cent of the stakeholders the Commission interviewed for the IoT sector inquiry belong to multinational groups with global turnovers of over €500 million. The limited presence of SMEs in its pool of surveyed stakeholders is highly concerning, and we urge the Commission to include a larger number of these businesses as it continues the sector inquiry. SMEs are the backbone of the European economy, so they must play a prominent role in this sector inquiry to ensure accurate information that includes the viewpoints of all stakeholders. SMEs represent 99 per cent of all European businesses, employ around 100 million people, and account for more than half of Europe’s gross domestic product (GDP) while also playing key roles in every sector of the economy. Because of their fundamental value, the Commission should take immediate steps to reach the European SME community, take in its feedback, and incorporate its views in DG

Competition's consumer IoT policy development process. Ultimately, DG Competition must consider SME views on an equal footing with large companies in the IoT sector inquiry.²

III. On technology platform related issues

The report states Apple and Google are the leading operating system (OS) providers to operate the main app stores that determine access to consumer IoT services via apps (Section 4.4.). Since the Commission is investigating the consumer IoT sector, the study should reflect the fact that many more than two providers of smart speakers, security systems, and wearables exist.³ Perhaps most importantly, the universe of platforms is continuing to evolve and expand as different kinds of hardware begin to connect to the network. Today, in addition to iOS and Android, there are many more OS choices such as Alexa OS, HarmonyOS, EcoBee, Fitbit OS, and others. Moving forward, it is very likely that consumer IoT devices will use an even wider variety of OS, marketplaces for apps, and application programming interfaces (APIs). The Commission must align its characterisation of the consumer IoT space to reflect these realities. Portraying consumer IoT software platforms as dominated by only two companies, Apple and Google, is a serious error that will fatally flaw the evidence base used by DG Competition for future decisions.

Through their ecosystems that combine voice assistants with search and/or marketplaces and/or operating systems and/or app stores, the Commission considers Google, Apple, and Amazon to have a unique position in the consumer IoT sector, to be able to benefit from important network effects, and to obtain unprecedented access to user (and sometimes competitor) data (Section 4.4.). Such a blanket assertion does not reflect the experience of the App Association's SME membership. While ecosystem/platform providers may benefit from network effects, so do the innovators who rely on platforms as well as European consumers. Increased platform traffic attracts more developers, which brings in more consumers who then benefit from a higher quantity of high-quality apps. For SMEs and start-ups, the network effects of this multi-sided market are particularly beneficial. Network effects and multi-sidedness are the key characteristics of digital markets like the IoT sector. Conducting this study with a multi-sided scope will produce a more complete and accurate result, and we encourage the Commission to do so.

In Section 5.2., the preliminary findings mention that interoperability is essential in the IoT sector. We, too, believe this is the case and that technology platforms must play a key role in advancing technical integration progress. This is especially important for micro-businesses and SMEs who rely on data interoperability as they access technology platforms to build and innovate on top of APIs. However, the Commission's preliminary findings also report that the 'majority of respondents' consider leading platforms to hold a bottleneck position in the consumer IoT sector—which we again note do not reflect the experience of many EU small business innovators omitted from the group of companies

² https://ec.europa.eu/growth/smes_en.

³ <https://buildfire.com/mobile-app-stores-list/>.

surveyed. Smart device manufacturers and IoT service providers (of all sizes) often need to follow certification processes to gain approval for their customised integrations and abide by the terms and conditions of these platforms. In general, it is worth highlighting that all developers on a given technology platform often compete under the same terms and conditions and certification processes, bringing smaller competitors on a level playing field with larger companies. For the App Association's small business technology developer members across the EU, these terms and conditions are essential in providing certainty and aligned expectations for both the platform and the developer and generally translate to improved quality and security. Without terms and a process to assess quality assurances, IoT consumer platforms would inevitably admit lower quality apps and devices with higher security risks. Smaller device or app makers (as lesser-known brands) would particularly suffer from the lack of consumer trust in their products; they need to gain, build, and maintain consumers' trust. Further, it is important to consider that consumer IoT platforms' terms and conditions and certification processes must be regularly updated in response to demands from developers, with platforms competing with one another for developers. We again strongly encourage the Commission to broaden its consultation pool to include far more small business viewpoints and to align its foundational findings in this matter with the views and experiences of the broader tech developer community in the EU.

In Section 7.4., the preliminary report finds that the leading voice assistant providers can impose standard terms and conditions that limit the data access and use for third parties while reserving extensive data access and use possibilities for themselves. How our members can use and share data affects how their products function and how consumers engage with those products and services. For SMEs, transparency, and a reasonable level of control over data use and collection is essential to building the high levels of consumer trust that helps them succeed. For this reason, strong privacy is crucial to maintain consumer trust, confidentiality, access, and integrity of data. The most competitive consumer IoT platforms, including in the context of voice assistants, are responsive to the needs of developers while also providing for consumer security and privacy, a characteristic of the dynamic consumer IoT market that is beneficial, and which should be reflected in foundational findings that will influence future policy decisions. We, therefore, encourage the Commission's inquiry to balance its concerns around data sharing with the benefits of data protection and safeguarding user protection.

IV. On standard-essential patent (SEP) related issues

In Section 6, the report references the standard-setting process and Standard Developing Organisation (SDOs). Overall, we support the Commission's efforts to assess existing SDO processes related to the consumer IoT and to address bottlenecks within the standardisation system, including procedural aspects and delivery mechanisms to ensure speed and quality. While we appreciate the Commission's outline of the 'most relevant' SDOs, we strongly urge the Commission to capture that the list of SDOs with an impact on the consumer IoT is not static, with new SDOs and sometimes less formal alliances

regularly forming and competing with one another to develop standardised solutions at numerous levels (transport, semantic, syntactic, etc.).

Further, in practice, it is worth highlighting that too few small business technology developers participate in (or are even aware of) designated European standardisation efforts across various sectors that may be part of or impact consumer IoT. App Association members, however, rely on standardised technologies to grow and innovate and support market driven standardisation. Further, EU start-ups and small businesses, particularly in the digital sectors, bring unique skills and expertise in the development of open source software-based solutions. We encourage the Commission to include the views of these stakeholders, which appear to be underrepresented, in its consumer IoT sector inquiry as well.

In the outline of *intellectual property rights* (IPR) policies in Section 6.3., we urge the Commission to address how abusive SEP licensing practices harm European entrepreneurship and innovation, and to endorse the well-established fair, reasonable, and non-discriminatory (FRAND) licensing principles established in CEN/CENELEC CWA 95000:2019 ('Core Principles and Approaches for Licensing of Standard Essential Patents'),⁴ which (a) provides educational and contextual information regarding SEP licensing and the application of FRAND, (b) identifies and illustrates some of the questions that negotiating parties may encounter, and (c) sets forth some of the key behaviours and 'best practices' that parties might choose to adopt to resolve any SEP licensing issues amicably and in compliance with the FRAND obligation. App Association members in Europe and around the world continue to face anticompetitive behaviour from aggressive SEP licensors who seek to exploit ambiguities in SDO IPR policies and hold-up standard users. For example, some SEP licensors systematically disregard their voluntary commitments made to standards organisations, by seeking or threatening to seek an injunction to extract supra-FRAND terms, engaging in forum shopping to force potential licensees into court-determined global portfolio licenses or refusing to make licenses available to any interested licensee in a supply chain on FRAND terms. Without an improved policy and legal environment in the EU, such licensing abuses will only increase as the consumer IoT expands into new areas of the economy. The App Association strongly encourages DG COMP to further use these insights to establish clear guidance on SEP licensing and FRAND principles.

There is no "one size fits all" in standardisation, but rather different standardisation sectors and SDOs may organise themselves in ways that best address their needs. Although SDOs' IPR policies may have some variations, they should all abide by FRAND principles. For example, IEEE's 2015 policy clarification (1) addressed the use of prohibitive orders in the context of the enforcement of patents claimed to be required to use IEEE standards, (2) provided patent owners, users of IEEE standards, and judges with guidance regarding how "reasonable" should be applied in the context of royalty analysis and (3) clarified that

⁴ <https://2020.standict.eu/sites/default/files/CWA95000.pdf>.

licenses be made available at all levels of the supply chain. This adds predictability to licensing negotiations, helping reduce the uncertainty that has led to time-consuming and disruptive worldwide licensing disputes.⁵

Additionally, other SDOs, such as CSA (formerly Zigbee Alliance), Thread Group, Bluetooth SIG and W3C have successfully adopted Royalty Free (RF) IPR policies with companies, all sizes, including some of the top SEP holders, actively contributing their technologies to their standards in order to promote broad-based interoperability in the IoT ecosystem.

While SEP licensor pools (which are horizontal agreements currently permitted, under certain conditions, according to the Commission's Horizontal Guidelines) may reduce licensing transaction costs when operated in good faith and in alignment with FRAND encumbrances on the SEPs they license, the Commission would be remiss to omit that SEP licensor pools that choose to disregard FRAND commitments on SEPs and act abusively will have a far more deleterious impact on consumer IoT markets, as they consolidate SEP licensor market power, than individual SEP licensors. There are already well-documented cases of SEP licensing pools doing exactly that, such as the Avanci patent pool, which does not comply with FRAND principles, including by not offering truly FRAND rates and routinely refusing to license SEPs to willing licensees and argues, without justification, it is not bound by the FRAND encumbrances on the SEPs it licenses because it is an agent of the SEP holder. We strongly encourage the Commission to take all steps possible to prevent SEP licensor pool abuses and their pronounced harms on the consumer IoT market.

V. Respondents' concerns on issues relating to competition, innovation and consumer choices raised during the sector inquiry

a. Interoperability (Section 8.2.)

The preliminary findings suggest that several obstacles exist for those seeking access and integration of products with IoT technology platforms, namely Apple, Google, and Amazon. The Commission states that these platforms control and determine access to relevant voice assistants and smart device operating systems by setting technical requirements for integration in consumer IoT. Further, the Commission's report states that the heterogeneity between APIs provided by technology platforms makes integration costly and time-consuming and causes diverging user experiences. While we believe this is a real experience, we encourage the Commission to consider the reality that consumer IoT platforms are not one entity, and homogenous APIs are not practically implementable or technically feasible. Additionally, as part of its expanded and more inclusive approach to outreach that we have strongly encouraged above, we urge the Commission to also seek stakeholders' feedback about the positive aspects consumer IoT platforms have on interoperability as they play a significant role in advancing technological integration.

⁵ See <https://actonline.org/wp-content/uploads/Multistakeholder-Ltr-to-IEEE-SA-9-Feb-2021-1.pdf> and <https://actonline.org/2021/05/04/ieee-must-keep-its-2015-patent-policy-updates/>

Regarding the limitation of functionalities for third-party products and services on technology platforms in comparison with the performance of first-party products and services, App Association members' experience is that such occurrences are usually a temporary issue. For example, new versions of iOS address most of the past interoperability issues via APIs. Examples of previous interoperability issues included the ability to open Spotify via Apple's Siri or Netflix signing up users through its website. We disagree with the notion that leading platforms have incentives to restrict the operability of third-party products and services and to discriminate against those third-party products to favour platforms' own products and services. Market-driven incentives lead consumer IoT platforms to keep their services attractive for consumers by providing variety and choice (by, for example, integrating and interoperating with as many safe, high-quality app and device choices as possible). The Commission should examine these incentives in its sector inquiry and include relevant findings in its knowledge base to be used for future policy decisions. On the developer/manufacturer side, IoT consumer platforms want to offer the best tools to make the apps that make the mobile device more useful. Digital markets are often multi-sided markets and characterised by the presence of network effects. The consumer IoT platforms' developer users on one side of the market derive value from consumers on the other side of the market.

b. Standardisation (Section 8.3.)

The App Association appreciates the Commission's concern that a high number of standardization bodies, and competing standards, may become a barrier to reaching broader user bases and generate a lack of transparency in terms of SDOs and alliances for SMEs and new market entrance. The App Association strongly believes that the Commission's concerns are misplaced in this respect, as healthy competition between standardisation efforts drives the development of better standardised solutions. Such solutions cannot be developed based on Commission mandates and should be generated from in the market from the bottom up via the consensus of the private sector, civil society, academia, and other technical stakeholders. We encourage the Commission to inquire about how it can help to enable bottom-up standardisation that rapidly responds to market demands across consumer IoT, as well as greater participation by small businesses across standardisation efforts, and whether focused outreach and subsidies to new communities of start-ups and small businesses would help them to participate in European standardisation.

Regarding the cost of standardisation, lack of transparency and diverging views on FRAND terms in relation to SEPs, we agree that the often-unclear costs and uncertainties of SEP licensing as well as the costs of their specifications present a potential barrier to consumer IoT market entry by smaller entities. Similarly, the failure by some SDOs to appropriately develop guidance on key participant behaviours can be a barrier to quicker and broader development of standards in the IoT consumer sector. Most importantly, the diverging interpretations of FRAND licensing terms primarily due to SDOs' failure to adequately guide

their members on acceptable SEP licensing behaviours (e.g., concerning royalty base calculations, limiting the use of injunctions or that licenses should be available to anyone regardless of where they reside in the value chain, etc.) has had and will continue to have, a chilling effect on future standardisation participation and the EU standards system's success. On this issue, in particular, the Commission should use the successful examples of SDO's IPR policies highlighted above to establish additional safeguards for FRAND licensing within its Horizontal Guidelines for standardisation agreements principles and prevent them from further erosion.

c. Data (Section 8.4.)

The Commission describes an imbalance between the ability of major voice assistant providers and third-party providers raises concerns, notably as to the ability of the major providers to use third-party data to develop and improve their own competing products. The App Association does not believe that the Commission demonstrated that its characterisation is accurate and urges further collection of experiences and data (namely from the App Association's community, which was not adequately represented in the Commission's outreach pool informing its preliminary report) in a neutral manner that will accurately capture positive and negative feedback.

d. Pre-installation, default setting and prominence (Section 8.5.)

While there is an argument that pre-installed apps possess an advantage over similar apps available for download, consumers now reasonably expect devices to come with certain functionalities preinstalled. This is also true for voice assistants, as they started as intermediaries but are now used more directly, e.g., to play music, to order items, to communicate, without other devices.

Further, users evidently chose the applications or devices that they like, rather than the preinstalled versions. Default settings do not, in practice, give a competitive advantage if they are not the best product for the users, as demonstrated by the example that Spotify holds 36 per cent of the music streaming market share despite not manufacturing any devices or being pre-installed on any devices. We urge the Commission to consider market realities such as these in its IoT sector inquiry and gather further experiences and data to be collected (namely from the App Association's community, which was not adequately represented in the Commission's outreach pool informing its preliminary report) in a neutral manner that will accurately capture positive and negative feedback.

e. Exclusivity, concurrency and tying (Section 8.6.)

The preliminary results of the sector inquiry, according to the Commission, indicate that attempts to secure exclusivity of voice assistant presence on smart devices could potentially raise competition concerns if they prevent competing voice assistants from being built-in simultaneously on the devices. On the other hand, it may raise competition

concerns if platform providers were forced to allow any alternative voice assistant to be built-in simultaneously on devices. The range of consumer IoT products available today that feature innovative voice assistant features demonstrate strong competition across the consumer IoT platforms where consumers are generally able to choose a paired consumer IoT device and hardware over other alternatives. Respecting that the Commission took input from smart device manufacturers raising concerns about voice assistant providers bundling different types of software, technology, and applications, including voice assistants; the App Association encourages the Commission to gather further experiences and data (namely from the App Association's community, which was not adequately represented in the Commission's outreach pool informing its preliminary report) in a neutral manner that will accurately capture positive and negative feedback.

f. Disintermediation (Section 8.7.)

Some respondents fear losing their brand recognition and their direct relationship with their users, as the voice assistants of OS providers usually have the most direct relationship with users. According to the Commission, many respondents indicated that the leading technology platforms impose their own setup and user onboarding processes on third parties.

In terms of access control to IoT data and negotiating conditions with large platform providers, we reemphasise that these are typically the same for all third parties, though exemptions will often benefit smaller companies. While we acknowledge that respondents indicated that they are dependent on the technical support provided by voice assistants and smart device operating system providers, we believe this may only be a concern for larger businesses who don't need this kind of support, as opposed to SMEs. The App Association encourages the Commission to gather further experiences and data (namely from the App Association's community, which was not adequately represented in the Commission's outreach pool informing its preliminary report) in a neutral manner that will accurately capture positive and negative feedback.

g. Contractual issues (Section 8.8.)

According to the Commission, respondents have drawn attention to some companies' agreements containing clauses that reinforce commercial imbalances between them and the weaker contractual party, e.g., unilateral termination clauses. Absent clear evidence of widespread harm and distortion to the consumer IoT market (which the Commission's limited sample size informing its preliminary report cannot adequately justify), the App Association strongly cautions the Commission against interjecting new policies or mandates into well-established contractual norms that underpin the consumer IoT market. The App Association encourages the Commission to gather further experiences and data to be collected (namely from the App Association's community, which was not adequately represented in the Commission's outreach pool informing its preliminary report) in a neutral manner that will accurately capture positive and negative feedback.

VI. Conclusion

The App Association appreciates the opportunity to provide detailed input to the Commission on various aspects of the consumer IoT market. It is vital that the Commission undertake a focused effort to gather further experiences and data to be collected (namely from the App Association's community, which was not adequately represented in the Commission's outreach pool informing its preliminary report) in a neutral manner that will accurately capture positive and negative feedback. After this enhanced data collection and analysis, we urge the Commission to issue revised preliminary findings for public input before advancing this policy development process to the next stage.

The App Association looks forward to engaging with the Commission on this issue in the future.

Sincerely,

[Personal contact information]