



# Open Web Advocacy

## OWA - Response to investigation to declare iPadOS a gatekeeper

Version 1.1

**Open Web Advocacy**

[contactus@open-web-advocacy.org](mailto:contactus@open-web-advocacy.org)

# 1. Table of Contents

<b>1. Table of Contents</b>	<b>2</b>
<b>2. Introduction</b>	<b>3</b>
<b>3. Why iPadOS should be classified as a gatekeeper</b>	<b>3</b>
3.1. Quantitative Threshold	3
3.2. Network Effects	4
3.3. Cross-Subsidisation opportunities	5
3.4. Apple's customers are on average wealthier	5
3.5. Lock-in	6
3.5.1. Proprietary hardware and software	6
3.5.2. Closed ecosystem and siloed apps	6
3.5.3. Difficult of switching due to iCloud and data	6
3.6. Negative consequences of iPadOS not being declared a Gatekeeper	7
<b>4. Why iOS and iPadOS are a single CPS</b>	<b>9</b>
4.1. Common Foundation	10
4.2. Amount of Shared Codebase	11
4.3. What is an OS?	11
4.4. DMA Article 13.1	12
4.5. Intent of the CPS rules	12
4.6. watchOS, visionOS and tvOS	13
4.7. Android	13
4.8. macOS	13
<b>5. Brighter Future</b>	<b>14</b>
<b>6. Open Web Advocacy</b>	<b>15</b>

## 2. Introduction

We would like to thank the DMA team for opening this important investigation.

It is critical that iPadOS be designated a gatekeeper, as it is a massive platform in its own right and a key part of the iOS ecosystem. Allowing Apple to ignore all of the DMA obligations for such a significant segment of its ecosystem, will allow Apple great power to not only increase lock-in, reduce interoperability and hobble competition on iPad but also to curtail the effectiveness of the DMA with regards to Apple's obligations on iPhone.

Without the DMA's obligations Apple will be able to continue to block browser competition and ensure that Web Apps will not be able to contest their native app ecosystem. Additionally even if we are successful in ensuring that browsers are allowed to bring their engines in every other jurisdiction, without iPadOS being classified as core platform service, browser vendors would be forced to build a separate browser for iPad in the EU because of Apple's restrictive AppStore rules.

Regardless of the legal and technical arguments, unless iPadOS is designated a gatekeeper, Apple will continue to harm consumers and businesses in the EU through reduced contestability due to restrictions against modern web browsers.

## 3. Why iPadOS should be classified as a gatekeeper

There are a number of strong arguments why iPadOS should still be classified as a gatekeeper on a standalone basis:

### 3.1. Quantitative Threshold

According to the [IDC Worldwide Quarterly Personal Computing Device Tracker report](#), there were an estimated 42 million active iPads in western Europe and 3 million in eastern and central Europe. Although several countries in these regions are not in the EU, this suggests that iPadOS is at least close to the threshold of 45 million active users to be automatically declared a gatekeeper on quantitative grounds. Unfortunately the number of active users that Apple provided to the commission is redacted.

The number outlined in IDC's report is sufficiently close to the threshold that it is likely worth carefully examining and scrutinizing how Apple estimated the figure they provided, what assumptions went into that estimate and collecting other details such as yearly sales figures, number of owned but unused iPads as a verification tool.

iPadOS's entrenched and durable position is magnified by network effects, lock-in and cross-subsidisation opportunities. The negative effects on consumers of iPadOS not being

declared a gatekeeper apply not only on iPad but also to iPhone due to the fact this will severely undermine the goals of the DMA with respect to the iOS ecosystem.

Because of this, it seems reasonable to us that the bar for arguing that iPadOS should be declared a gatekeeper by bridging the gap between actual and required quantitative threshold should not be high. In our opinion, the negative consequences of failing to declare iPadOS as gatekeeper and the various qualitative elements that magnify iPadOS's position and importance easily bridge this gap.

## 3.2. Network Effects

Apple has created a strong network effect between its iPad and other Apple devices.

The first type of network effect is the typical direct network effect. Apple creates its products with Apple-centric features, like iMessage, FaceTime, Photos, Game Center & iCloud. Any person with an Apple device has the ability to communicate easily with any other person also in ownership of such a device. As more people own compatible technology, the value of also owning an iPhone, iPad, or Macbook increases.

The second type of network effect is the extensive App Store, which benefits from the 2-sided network effects. If there is a large market population (the owners of Apple devices) there is more value for app developers to invest and concentrate on iOS apps. A greater number of developers means statistically better made apps and more variety, which increases the value of owning an iOS device to be able to use these apps. Apple has also managed to capture the wealthiest of consumers, amplifying this effect.

The last type of network effect is the intra-personal network effects, in which Apple makes it beneficial to buy into the Apple ecosystem by making each different device (phone, tablet, laptop) compatible with one another. Data can be shared via iCloud between different devices owned by the same individual, making it advantageous to own multiple devices from the same company. The same reasoning applies to features like AirDrop. Importantly these features are not compatible with non-apple products.

If a user purchases an app or makes an In-App purchase on an iPhone, that exact same app is made available on the customer's iPad and for many apps vice-versa. This not only ensures that customers who have purchased an iPhone are more likely to purchase an iPad but creates a strong disincentive to purchase devices from other ecosystems (such as Android) since they will no longer be able to access the library of Apps, Books and Media they have purchased.

That is, Apple has created an exceptionally strong network effect between its iPad and other Apple devices by creating Apple-centric features, an extensive App Store, lock-in with purchases, and making each different device compatible with one another but not with the devices of competitors, and by locking in all purchases into the ecosystem.

### 3.3. Cross-Subsidisation opportunities

As outlined in detail in a later section of this document, iPadOS is simply a variant of iOS with a small number of UI changes and one additional and optional input device, the Apple Pencil that is sold separately and the majority of iPad users users don't own (based on anecdotal evidence, the commission could request that Apple supply exact numbers).

This means that the cost of maintaining this version of iOS is significantly cheaper than developing iOS and its underlying components. The team working on iPadOS is likely substantially smaller than the team working on iOS. The reason for this is when an update is released only those parts of the update that interact with one of iPadOS UI changes will require significant work to merge in. Apple rarely introduces new features to iPadOS.

Finally as part of the iOS ecosystem, the iPad can take advantage of all of Apple's existing infrastructure in terms of the iOS App Store, maintenance and support.

### 3.4. Apple's customers are on average wealthier

[Apple's customers are on average wealthier](#) and spend more than Android customers. While this survey was not conducted in the EU, we suspect this relationship is broadly true in all markets that Apple and Android operate in.

This is important as it means they have an outsized effect on the market. This effect alters the choices the companies make, ultimately affecting all consumers in the EU.

For example, should iPadOS not be required to support effective browser competition, certain Web App critical features will continue to be missing on iPad. This will have a stronger impact on the calculus of companies than if such a feature were missing from the Web on an Android tablet due to relative wealth of the consumers on each platform and estimates of expected sales. The company may decide to develop a Native App for iPad and in doing so not only raise development costs but also be forced to agree to pay Apple 30% of its revenue for that platform. The company might even decide not to develop an App for Android tablets now that its code is not interoperable, as code between iOS and Android can not easily be ported (typically the App is simply written twice). Being interoperable is one of the key advantages of Web Apps over Native Apps.

Said simply, the relative wealth of iPadOS customers causes iPadOS to have an outsized effect on the market not just for iPadOS customers but also for Android customers.

## 3.5. Lock-in

Customers of Apple's iPad face considerable lock-in due to the following reasons:

### 3.5.1. Proprietary hardware and software

Apple's iPad is designed to work seamlessly with other Apple products. This means that if a user owns an iPad, they are more likely to purchase other Apple products to ensure compatibility. For example certain features and services such as Airdrop and iMessage are not interoperable with other operating systems. This creates a lock-in effect where users are more likely to purchase other Apple products to ensure compatibility.

This lock-in then extends in the other direction to help ensure they purchase a new iPad when it comes time to replace their existing iPad.

### 3.5.2. Closed ecosystem and siloed apps

Apple's ecosystem is closed, which means that users cannot install apps from third-party sources. Users are limited to the App Store, which is curated by Apple. This means that if an app is not available on the App Store, users cannot install it on their device. If a user has purchased apps on iOS, they will not typically be able to use those apps on other platforms. This effect is compounded by the fact that Apps for iOS/iPadOS are written in different programming languages than on Android. This means that developers will typically have multiple teams and write the application twice. In some cases Apps might only be available on iPadOS and iOS, it is typically this way round due to the iOS ecosystem having wealthier customers.

This creates a lock-in effect where users are more likely to continue using iOS devices to access their purchased apps.

The same logic also applies to digital items/services purchased on those apps. This is typically not transferable to other ecosystems and adds an additional layer of lock-in.

### 3.5.3. Difficult of switching due to iCloud and data

Transferring data from an iPad to an Android tablet can be challenging. Apple and Android devices use different operating systems, which means that transferring data between the two devices can be difficult. While there are several methods to transfer data, these methods can be time-consuming and may not always work as expected.

If you use iCloud to store your data, you may face difficulties when switching from an iPad to an Android tablet. iCloud is Apple's cloud storage service, and it is designed to work seamlessly with other Apple devices. This means that if you switch to an Android tablet you must typically manually copy your data across.

This issue is compounded by the fact that total user data may be greater than the space on iPad or Android tablet. For example, if a user has a lot of photos, videos, or music files, they may not be able to transfer all of your data to the new device. Fixing this may involve purchasing and backing up to portable hard drives and then reimporting into Androids cloud backup equivalents. This is a time consuming and difficult process that many consumers might choose to simply avoid by staying in the Apple ecosystem.

Finally, the lack of data portability between iPadOS and Android makes users less likely to have an iPad and an Android phone due to the friction this adds to their lives.

This creates a lock-in effect where users are less likely to switch to another platform. Each of these barriers, while not insurmountable, add to the lock-in that iPad has and magnifies its presence on the market beyond what would be typical for its number of users.

Apple has not provided the means for any other company to compete with iCloud which is essential not only to apply competitive pressure on iCloud pricing but for offering a service which could provide syncing between devices from different manufacturers and running different operating systems.

### 3.6. Negative consequences of iPadOS not being declared a Gatekeeper

Allowing Apple to circumvent its obligations for the version of iOS called (iPadOS) will do significant harm to consumers in the EU.

The obligations that Apple would avoid on iPad include (among others):

- Measures that would facilitate Web App competition with Native Apps
- Effective competition for third party browsers
- Various measures enabling fair access to system and hardware APIs
- Various interoperability requirements
- Alternate App Stores, including web-based App Stores

While iPad is a smaller segment of Apple's iOS ecosystem, Apple consumers tend to buy multiple devices within the ecosystem. Apple consumers who own an iPad but none of Apple's other products such as iPhone are rare. Apple's likely response to not being obligated to comply with the DMA for iPad would be not implement measures the DMA might impose on iPad which would reduce lock-in.

This would have several negative effects for both consumers and developers:

- Developers may feel forced to distribute to the iOS App Store simply to provide their App for iPad users

- Browser vendors would likely need to maintain and ship alternative browsers for iPad locked to the system provided WebKit WKWebView, this will both cost and be confusing for consumers, rather than shipping their own engines.
- There will be no effective browser competition on iPadOS
- Web App developers may need to consider developing Native Apps specifically for iPad if key functionality is missing

A failure to designate iPadOS will directly harm the web, and potential contestability with native apps through web apps. This effect is located in the decision-making process of web developers and the businesses that produce web apps. Apple-ecosystem users are significantly wealthier, and therefore more heavily represented among the ranks of technology leaders, directors, and funders. A pervasive effect of iOS and iPad-OS has been to create a dead zone in their market conception: because the Web is not a viable alternative thanks to Apple's browser ban, they fail to invest in web technologies that can contest App Store hegemony.

Failing to include iPadOS as a gatekeeper, with the consequence of preventing true browser choice for important use-cases, will suppress the web's chances as a true market counterbalance. This suppression operates in two ways:

1. Reducing the addressable market for alternative browser makers for own-engine competitors to Safari further reduces the incentive to produce high-quality ports, adding to existing concerns about the DMA's geographic reach.
2. Providing additional arguments within technology purchasing organizations against investing in the web, due to the continued requirement to reach wealthy users via the App Store.

Apple's attempt to re-brand iOS for iPad users has not changed the essential market calculus for technology market participants, and the commission must recognise that reality in fairly judging whether to judge iPadOS a gatekeeper.

The core aim of the DMA is to increase competition, contestability and interoperability in ecosystems where massive gatekeepers wield extraordinary power to increase lock-in and inhibit competition. Allowing iPadOS a significant part of Apple's iOS ecosystem to not be subject to the DMA will severely undermine these goals with respect to the iOS ecosystem and cause significant harm to the Web's ability to compete as the world's only truly open and interoperable platform.



## 4. Why iOS and iPadOS are a single CPS

It is both logical and in EU's consumers best interests that all the branded versions of iOS namely iPadOS, watchOS, visionOS and tvOS should have been considered a single core platform service under iOS. We respectfully disagree with the Commission's decision to view it as a standalone service separate from iOS and urge the commission to reconsider in light of the arguments outlined in this paper. In our view, based on technical rather than legal expertise, **renaming** a version of an operating system which has a few minor features to take advantage of the larger screen should not meet the high bar set out in the DMA's Article 13.1 Anti-circumvention clause to allow a gatekeeper to subdivide a core platform service.

While we understand that for the purposes of this investigation iOS and iPadOS have been declared separate by the commission we feel it's worth outlining why we disagree with that decision for three reasons. One the commission may at some point in the future change its mind, two, the arguments below may be helpful in rejecting similar future claims and three aspects of these arguments are an important qualitative component in deciding whether to declare iPadOS a gatekeeper on a standalone basis.

It's worth discussing here what an OS (operating system) is.

An operating system is a piece of software that manages computer hardware and software resources, and provides common services for computer programs. It is the most important software that runs on a computer. The OS acts as an intermediary between programs and the computer hardware, although the application code is usually executed directly by the hardware and frequently makes system calls to an OS function or is interrupted by it.

The architecture of an OS consists of several components, including the kernel, low-level APIs, file system, security model, user interface, and primary input devices.

Of these between iOS and iPadOS only the user interface and input devices are different in any meaningful way. Even there the differences are minor. While the iPad supports the Apple pencil, the primary input mechanism on iPadOS is touch and most iPad users do not own an Apple Pencil. With the UI, the differences are minor changes to take advantage of the larger screen, the most significant being the ability to display two apps at the same time and the mac style app doc at the bottom of the screen. We outline this argument in more detail later.

As a thought experiment were Microsoft to rebrand Windows on laptops a Microsoft Windows Laptop Edition the level of difference between desktop windows and laptop windows would be similar in terms of UI changes and primary input devices (touch pad, in some cases touch screen, smaller screen, battery life indicators etc).

Apple's decision to brand iOS and iPadOS as two operating systems is primarily a marketing and product design choice. By differentiating iPadOS, Apple can highlight features that are unique to the iPad's larger form factor, like improved multitasking and the use of Apple Pencil.

Likewise by setting users expectations as to the differences in functionality (however minor), Users won't complain that they cannot use their iPad stylus on the iPhone or split screen because it is running iOS and not iPadOS. It's worth noting that these features were available on the version of iOS on iPad for nearly 5 years before they renamed it from iOS to iPadOS. These features do not reflect a significant divergence at the OS level.

The distinction between iPadOS (iOS running on an iPad) and iOS (iOS running on an iPhone) is much less about technical differences and more about branding and targeting specific use cases for each device type. While iPadOS has some unique features to take advantage of the larger screen size and capabilities of iPads, it remains, at its core, very similar to iOS. The development environment, shared features, and the seamless experience across devices suggest that iPadOS and iOS are variations of the same operating system tailored to different hardware products. It should be noted that Microsoft has not argued that Windows on a desktop and laptop (including touch screen laptops) are different operating systems and Google has not tried to separate Android for phones from Android for tablets.

The DMA contains a clause that seems directly targeted at preventing this type of behavior. Allowing Apple to circumvent its obligations for the version of iOS called (iPadOS) would do significant harm to consumers in the EU.

Allowing Apple to subdivide iOS into smaller fragments that are not subject to the DMA will severely undermine these goals with respect to the iOS ecosystem.

## 4.1. Common Foundation

The first iPad was released on January 10, 2010. It runs a version of iOS that was slightly modified to take advantage of iPads' larger screen. When it was initially released and for the first nine years of its existence this version of iOS was simply called iOS.

These features included:

- Slight alterations to iOS UI
- Support for Apple pencil (introduced in 2015)
- The ability to display multiple running apps simultaneously (introduced in 2015)
- A dock similar to the one on macOS (introduced in 2017)

Since then, aside from stagemanger introduced in 2022, most new features for iPadOS have been re-enabling certain iOS Apple Apps available on iPhone that had been removed on iPad such as Weather and Health.

In 2019 this version of iOS was rebranded iPadOS as a marketing move to signal to both developers and consumers the different use cases that Apple envisioned for the form factor. Despite this rebranding there has been no significant further divergence and the level of divergence remains minimal.

## 4.2. Amount of Shared Codebase

While there's no public data on the exact amount of code shared between iOS and iPadOS, we know from developers that there is a significant overlap. Most apps developed for iOS can run unmodified on iPadOS, indicating a shared codebase for many system-level functions and libraries. This figure would be known to Apple and the commission should consider requesting it. We would be surprised if the shared code base between iOS and iPadOS was not over 99.9% identical.

## 4.3. What is an OS?

As discussed in the introduction an operating system (OS) is a software that manages computer hardware and software resources, and provides common services for computer programs.

The architecture of an OS consists of several components, including the kernel, low-level APIs, file system, security model, user interface, and primary input devices.

The kernel is the lowest software layer of the OS, on top of the hardware. It is responsible for program execution, interrupts, input/output, memory management, multitasking, disk access, file systems, device drivers, networking, and security.

Low-level APIs are programming models offered by the OS that allow developers to write programs based on different system-level APIs.

The file system is responsible for how files are named, stored, and retrieved from a storage device. It handles file access control, data encryption, metadata, data integrity, and space management.

The security model is responsible for ensuring the security of the system and its users. It includes authentication, authorization, and access control mechanisms.

The user interface is the part of the OS that allows users to interact with the computer. It includes graphical user interfaces (GUIs) and command-line interfaces (CLIs).

Primary input devices are the devices that allow users to input data into the computer. They include keyboards, mice, touchpads, touchscreens and microphones.

Developers write and distribute apps for an OS using different programming languages and development tools. The process of writing and distributing apps varies depending on the OS. On desktop operating systems including macOS developers distribute Native Apps directly to the user, typically downloading executables over the internet and installing them. On mobile operating systems such as iOS, developers typically distribute through the gatekeepers App Store and are required to share 30% of their revenue with them.

As mentioned, all of these aspects of the OS are almost identical between iOS and iPadOS. The only two that have any difference is the UI (minimal) and the available input devices.

With regards to the UI most aspects remain identical between iOS and iPadOS. The most significant change is the ability to display two apps at the same time and the mac-like app dock at the bottom of the screen. In our experience, the majority of users do not take advantage of the ability to display multiple apps at the same time either because they are unaware the feature exists and they use the iPad to interact with a range of apps in the same manner they would interact with those apps on an iPhone.

The final distinction between iOS and iPadOS is that while apps are distributed via the iOS App Store, the developer may have a build that targets iPadOS to take advantage of its larger screen or pencil. It is worth noting that all iPhone apps will automatically still work on iPadOS, and that the additional effort in targeting the iPad's larger screen size on top of the range of form-factors Apple offers across its mobile phone range is fairly small.

#### 4.4. DMA Article 13.1

The DMA contains specific and strong language to prevent this type of gaming of the rules.

##### *Article 13 - Anti-circumvention*

*1. An undertaking providing core platform services shall not segment, divide, subdivide, fragment or split those services through contractual, commercial, technical or any other means in order to circumvent the quantitative thresholds laid down in Article 3(2). No such practice of an undertaking shall prevent the Commission from designating it as a gatekeeper pursuant to Article 3(4).*

Digital Markets Act

There is a clear argument here that Apple is attempting to use its previous **renaming** of a version of iOS to fragment iOS into smaller pieces some of which do not individually meet the quantitative thresholds of the DMA.

#### 4.5. Intent of the CPS rules

The DMA seems designed to only be enforced against large services delivered by gatekeepers that operate on a massive scale. Further it appears to be the concern of the legislation that even if a particular undertaking is massive in scale that not all of their projects be instantly be declared core platform services. This is presumably in order not to stifle small projects with no market power within these gatekeepers.

It is in this lens that separating iPadOS out from iOS does not seem reasonable. iPad's are not some small new project within Apple, they are an important part of Apple's iOS ecosystem.

## 4.6. watchOS, visionOS and tvOS

Many, if not all of the arguments about iPadOS also apply to watchOS, visionOS and tvOS. While this is not the purpose of this investigation the commission, in our opinion, should consider these branded versions of iOS which contain modifications for different form-factors and interfaces as a subset of iOS.

## 4.7. Android

It's worth noting that Google did not attempt to split Android on tablets and Android on phones into two branded operating systems. There is likely a similar level of difference in feature set between Android tablets and Android phones as there is between iOS phones and iOS tablets.

This is a reasonable argument as to why Apple should not be able to divide iOS for phones and iOS for tablets for the purposes of the DMA.

## 4.8. macOS

Currently macOS appears distinct from iOS in both how developers distribute applications to it and how users use it.

Unlike iOS (including iPadOS, watchOS, visionOS and tvOS), on macOS Apple wields considerably less power over third party competitors. This is because users can freely install any application they want with only limited restrictions from Apple and without the developers sharing revenue with Apple. Further these applications can be written in any programming language and have all the access they need to the underlying operating systems and hardware. This includes the ability to install the real version of any browser using its own engine.

The low relevance of the macOS App Store and the inability to force developers to share 30% of their revenue on was lamented in an email by Apple executive Philip Schiller:

*"Neither is on the store because they don't have to be. They can be on Mac and distribute to users without sharing the revenue with us"*

[Philip Schiller - Apple Upper Management discussing the macOS App Store](#)

This is important as currently Apple's ability to commit anti-competitive behavior on the mac is greatly curtailed. As such, much of the urgency in applying the DMA to iOS in order to allow third parties the ability to compete fairly and effectively with the services of the gatekeeper is absent on macOS.

In our opinion, it is justifiable for Apple to separate macOS from iOS and doing so will not cause consumers any significant harm. In the event that Apple fundamentally alters macOS to make it more similar to iOS, then the commission can rereview.

## 5. Brighter Future

We would like to thank the DMA team for pursuing this critical investigation.

Even restricting considering the harms just to those related to browser and web app competition is significant enough for alarm at the prospect that iPad may be exempt from the requirements of the DMA. Simply put, Apple has hampered the Web from competing in its iOS ecosystem for over a decade. This anticompetitive behavior is compounding and will require considerable effort on the part of third party companies to rectify.

As outlined in this paper iPadOS enjoys a powerful position in the market and will likely continue to do so for the foreseeable future. As such it is critical that it is declared a gatekeeper, either by designating it a subset of iOS or in its own right as a standalone gatekeeper.

This will lead to considerable benefits to EU consumers including:

- Fair and effective browser competition on iOS both on iPhone but also on iPad
- Fair and effective Web App competition with the Apple's proprietary iOS App Store
- Better security
- Cheaper and higher quality software
- Software that is interoperable between operating systems by default
- Software that Apple/Google can not demand a cut of the revenue simply by blocking its ability to be installed
- Inhibit Apple/Google's ability to block software that competes with their own

Competition not walled gardens leads to the brightest future for EU's consumers.

## 6. Open Web Advocacy

Open Web Advocacy is a not-for-profit organization made up of a loose group of software engineers from all over the world, who work for many different companies who have come together to fight for the future of the open web by providing regulators, legislators and policy makers the intricate technical details that they need to understand the major anti-competitive issues in our industry and potential ways to solve them.

It should be noted that all the authors and reviewers of this document are software engineers and not economists, lawyers or regulatory experts. The aim is to explain the current situation, outline the specific problems, how this affects consumers and suggest potential regulatory remedies.

This is a grassroots effort by software engineers as individuals and not on behalf of their employers or any of the browser vendors.

We are available to regulators, legislators and policy makers for presentations/Q&A and we can provide expert technical analysis on topics in this area.

For those who would like to help or join us in fighting for a free and open future for the web, please contact us at:

Email [contactus@open-web-advocacy.org](mailto:contactus@open-web-advocacy.org)

Web / Web <https://open-web-advocacy.org>

Mastodon [@owa@mastodon.social](https://mstdn.social/@owa)

Twitter / X [@OpenWebAdvocacy](https://twitter.com/OpenWebAdvocacy)

LinkedIn <https://www.linkedin.com/company/open-web-advocacy>