



DMA

OUTPUT INDICATORS

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1. DMA COMPLIANCE REPORTS

The aim of the **obligations introduced by the Digital Markets Acts (DMA)** and imposed on gatekeepers is to influence and change the conduct of gatekeepers and, by so doing, to advance the overall objectives of **contestability and fairness** in digital markets.¹ The impact on competition and market outcomes will, however, also depend upon how and whether users or other firms take advantage of the new opportunities that the obligations are intended to create by facilitating entry by firms and allowing users to exercise choices that have not previously been available to them. **How and the extent to which users and firms do this will be determined by whether and how the gatekeeper complies with its obligations but also by many other factors outside of the gatekeeper's control.**

The impact of obligations might also be expected to **change over time**, with more limited effects being seen when the DMA is first implemented and more significant effects being seen later as other firms and users take time to respond to the opportunities that arise.

The European Commission is responsible for enforcing the DMA and ensuring that gatekeepers comply with their obligations under Articles 5, 6, and 7. Article 11 requires the gatekeeper to produce a **compliance report** within six months after the designation that describes “the measures it has implemented to ensure compliance”.² These reports are then required to be updated at least on an annual basis. Article 11 does not specify the evidence or information which a gatekeeper is expected to provide to the Commission but it appears to envisage a description of the ‘process measures’ that have been implemented by the gatekeeper. Article 26 also requires the Commission to “take the necessary actions to monitor the effective implementation and compliance with the obligations laid down in Articles 5, 6, and 7” without specifying what those actions might be.

The Commission is consulting on what it calls a standard ‘**template**’ for **compliance reports**, including the contents of these reports.³ The Commission currently envisages this to be a mixture of ‘**process measures**’ which explain the actions the gatekeeper has taken in order to comply but also:

*“a **set of indicators** which allow – or will allow based on their future evolution – to assess whether the measures implemented by the gatekeeper to ensure compliance are ‘effective in achieving the objectives of this Regulation [the DMA] and of the relevant obligation’, as required by Article 8 Regulation (EU) 2022/1925 [DMA], including an explanation why you [the gatekeepers] think that these indicators are the most relevant;*

*any relevant **data** which can inform whether the measure is or will be **effective** in achieving the objectives of Regulation (EU)2022/1925 [the DMA], such as, depending on the circumstances, data on the evolution of the number of active end users and active business users for the relevant core platform service and, for each relevant obligation, data on the*

¹ Regulation 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives 2019/1937 and 2020/1828 (Digital Markets Act), OJ [2022] L 265/1.

² On the key importance of those compliance reports, see J. Cremer, D. Dinielli, P. Heidhues, G. Kimmelman, G. Monti, R. Podszun, M. Schnitzer, F. Scott-Morton, A. de Streel, Enforcing the Digital Markets Act: Institutional Choices, Compliance, and Antitrust, *Journal of Antitrust Enforcement*, 2023

³ Template for reporting pursuant Article 11 DMA: <https://ec.europa.eu/eusurvey/files/7635871b-5946-4a39-b9b7-3491143f3128/a61347f2-d113-42db-a5a4-33df0fe49c28>



evolution of the fees and revenue share for the relevant services, the interaction of end users with choice screens and consent forms, the amount of in-app purchases, the amount of pre-installed defaults, counts of end users who switch, counts of business users who obtain data access, etc.; and

*any **internal systems and tools** used to monitor the effectiveness of the measure and the output of such internal systems and tools”.*⁴

This **paper recommends that the Commission should foresee the gatekeepers to report against a common set of ‘output indicators’** in order to contribute – alongside other evidence – to an overall assessment of DMA compliance and effects. In the rest of this paper, we first explain what ‘output indicators’ are, and how they are situated in relation to other types of indicators or other evidence relevant to an assessment of compliance. We then make recommendations as to how they should be implemented. A proposed list of suitable indicators in relation to Articles 5, 6, and 7 will be published later in 2023, separately.

⁴ Section 2.1.2 of the template, points q, r, and s (our emphasis).



2. DEFINITION, FUNCTION, AND LIMITS OF OUTPUT INDICATORS

2.1 Definitions

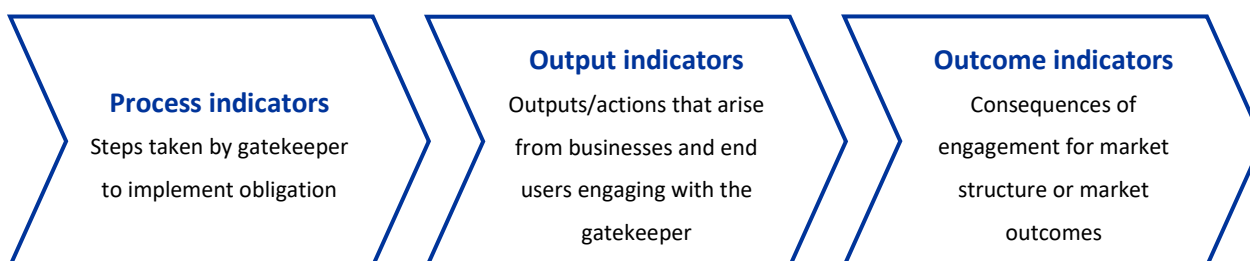
DMA compliance and effect could be measured by different types of indicators, each of them having advantages and drawbacks and none of them being mutually exclusive.

One approach to **assessing DMA compliance is by reference to the processes** that are adopted by the gatekeeper to comply with the rules, on the assumption that these processes will thereby influence the gatekeeper's conduct and ultimately market outcomes.

Another view is that **compliance should be assessed by reference to the actual outcomes** or changes in competitive conditions or market structures which result from the gatekeeper's conduct, with the means by which they are achieved being left unexamined and for the gatekeeper to determine.

The **output indicators** that we propose can be thought of as being **situated downstream of process indicators but upstream of outcome indicators**. **Output indicators** are intended to capture both the extent to which conduct by the gatekeeper has created new opportunities for firms or users *and also* the extent to which firms or users have engaged with those opportunities with respect to a particular gatekeeper. For instance, the output indicators relating to Article 6(3) on uninstallation of apps, could include the percentage of gatekeeper apps that have been uninstalled during a relevant period and the percentage of third-party apps that have been uninstalled during a relevant period. The indicators relating to Article 6(10) on business users' data portability could include the percentage of active business users requesting portability during the relevant period and the percentage of active business users that have portability implemented at the end of the relevant period

In contrast, **outcome indicators** will measure how market outcomes as a whole are affected by these outputs, such as how prices or market shares change in response to action being taken by one or a number of gatekeepers within a particular market or as a result of other factors that may be unrelated to the actions of gatekeepers or their compliance with the DMA.



2.2 Functions

Output indicators should help the Commission to focus its attention on where additional pieces of evidence may be required to determine DMA compliance or non-compliance. Thus, **alongside other information** submitted by the gatekeeper, third parties, or assembled by the Commission itself,



output indicators would inform an overall assessment of whether the gatekeeper has complied with the relevant obligation, and in case of non-compliance, why this has occurred and what steps might be required to remedy any breach.

The output indicators we propose are not targets. They are intended to help the Commission (and gatekeepers and third parties) understand **what is happening in a dynamic sense rather than to establish whether a gatekeeper can be said to have complied with its obligations or to have achieved a particular target**. Output indicators are intended to provide information about the impact of changes in the gatekeeper's conduct, particularly over time, and the overall direction of travel rather than a 'snapshot' assessment. Thus, an important feature of output indicators is that, provided the methodologies and metrics are specified in advance and remain **consistent through time**, they will allow the Commission (and gatekeepers and third parties) to understand how the effects of various measures being taken by the gatekeeper are changing over time.

Output indicators are also intended to **allow for comparison or benchmarking between gatekeepers providing the same Core Platform Service. However, this should only provide a basis for further investigation of differences** in outputs rather than allowing for any immediate conclusions about compliance to be drawn from such a comparison because the business model and the ecosystem of the gatekeepers may differ. We also recognise that comparisons concerning some CPS and some obligations may be less appropriate and more challenging than others. This may be the case with respect to 'online intermediation services' where the business model adopted, market conditions faced, or end or business users served by one gatekeeper may be quite different from those of another. This could mean, for example, outputs indicators with respect to Article 6(9) DMA (that is, porting of data) may be quite different for a gatekeeper providing a service in a market in which multi-homing is commonplace from a gatekeeper providing a service in a different market in which it is not. We, therefore, recognise that comparison for some CPS may not be appropriate or possible either because the gatekeepers providing the CPS operate in different markets and serve different users or because only a single gatekeeper has been designated in respect of that CPS. On the other hand, comparison will be useful when several gatekeepers provide the CPS under similar market conditions and to the same groups of business and end users.

Comparison is more difficult with respect to process measures, which may differ significantly between gatekeepers, or if different gatekeepers are left to propose or adopt their own indicators. Comparison is also more difficult with respect to **outcome measures** as they capture the aggregate effect of the implementation of measures by all gatekeepers on the market, but it may be impossible to attribute these outcomes to actions taken by any individual gatekeeper. Output indicators avoid both of these challenges.

2.3 Limits

However, it is important to note that **output indicators have some shortcomings**. First, they may provide a measure of the consequences of a user's interaction with the gatekeeper (in terms of switching or providing consent) but they do **not offer any assessment of the users' experience** when doing so (in terms of whether they understood the choices presented to them or the basis on which they made their decision or did not act). Process indicators may assist here, but other investigative



tools may also be required. Process indicators may be required to assess the extent to which compliance is or is not inhibited by the gatekeeper taking measures that it justifies as being needed to ensure the **integrity of hardware or operating system or security** in relation to third-party party apps or app stores, as provided for in Articles 6(4) or 6(7).

Second, some output indicators may refer to aggregate outputs or averages, which may **disguise important underlying variances**. For example, Article 6(5) relates to organic search result rankings across all search categories but this may disguise significant variances in outputs between these categories.⁵

Third, as with outcome indicators, output indicators **may be influenced by factors other than the conduct of the gatekeeper** or their compliance with the DMA obligations. For instance, changing market conditions, or the introduction of disruptive technologies, may mean that users are less interested in making use of some of the opportunities provided by the DMA, even if the gatekeeper is complying with it effectively. However, unlike outcome indicators, these factors are likely to be common to all gatekeepers with respect to the indicator in question, meaning that comparison between them may still pick up differences that are attributable to the conduct of the gatekeeper itself rather than these other factors. Gatekeepers will obviously have an opportunity to explain the factors which may account for such differences (for instance, over time or between gatekeepers in the same time period).

Therefore, the European **Commission will need to use the output indicators, alongside other evidence**, to decide whether the steps that the gatekeeper has taken, and the outputs in which they result, mean that the gatekeeper is or is not complying with its obligations at any particular point in time. Output indicators are intended to perform a complementary (but important) role in the Commission's compliance assessment alongside other evidence that it may collect or that the gatekeeper or others may submit.⁶

This is why we also recommend that the Commission give further consideration as to what **other evidence is required to complement the output indicators** and the gatekeeper compliance reports. This could include the use of **surveys or A/B testing** to allow the Commission (and others) to better interpret indicators. For example, output indicators that suggest that end users have been unable to benefit from the choices which the DMA obligations are intended to confer will need to be interpreted by reference to other evidence on whether end users were able to exercise a choice but chose not to do so whilst indicators which suggest that end users have been able to and have exercised a choice may not reveal how well informed they were when doing so. If survey or A/B testing evidence is to be used in this context, we then recommend that the gatekeeper is required to consult with the Commission before the survey or testing is undertaken and that the **Commission first approve the**

⁵ In the absence of industry-agreed categories for search queries (such as travel, or shopping) we do not propose further indicators for Art 6(5) at this stage but such data may be submitted by gatekeepers as part of the compliance report.

⁶ One important issue that has arisen during this project is whether output or outcome indicators are required to assess the extent to which the DMA obligations lead to users replacing a service provided by the gatekeeper with a service provided by another service provider (that is, single-homing) or whether implementation leads to use of multiple services (that is, multi-homing). This may have important implications for the way in which competition might develop but it is not something directly relevant to the compliance assessment which the Commission is required to undertake.



methodology and approach.⁷ This does not preclude gatekeepers from submitting other surveys or testing evidence that they consider relevant to the Commission’s assessment of compliance, and we would indeed expect them to do so.

⁷ When necessary, the Commission may be supported by independent external experts when reviewing and approving the methodology proposed by the gatekeeper, as per Article 26(2) DMA.



3. SPECIFICATION AND IMPLEMENTATION OF THE OUTPUT INDICATORS

3.1 Specifications

Quantitative measurement for the purposes of assessing compliance cannot start until gatekeepers have taken steps to comply with their obligations.⁸ However, we recommend that the **indicators and the methodologies to calculate them should be specified by the Commission in advance of the implementation of the DMA** rather than, for example, waiting until the first compliance reports are produced or data is published. This may allow gatekeepers to take their output indicator reporting obligations into account when designing the processes to ensure compliance and, perhaps more importantly, it will provide a baseline reading prior to implementation against which subsequent measurements can then be compared. However, the **list of indicators may need to be revised in light of experience** of their application or as changes are made to obligations, although it is also important that indicators remain consistent and relatively stable over time and are not subject to regular change.

It should also be noted that, for a number of obligations, no appropriate quantitative indicator may exist, or outputs may be better assessed using other evidence. Output indicators are intended to be informative about a relevant aspect of the obligation in question and to contribute to an assessment of compliance, as well as being capable of being produced by the gatekeeper based on data that we expect it to collect and to hold.

It would also be desirable if the **initial set of output indicators were to be adopted following a process that involves participation by all stakeholders**. This is particularly important because some indicators may not be collected by some gatekeepers in the ordinary course of business. During the consultation with the Commission, gatekeepers will have the opportunity to make representations to the Commission as to any additional costs they expect to incur in producing particular indicators and the practicality of doing so. We also recognise that the consultation of the Commission will not avoid disputes about how a particular set of measurements should be interpreted later, what conclusions should be drawn from them, or how much weight should be attached to them relative to other evidence.

In order to enable comparability and ensure early implementation, we recommend that **gatekeepers are required to adopt the same output indicator for each obligation** under Articles 5, 6, and 7.

It is also important that the **methodologies to calculate the data are made transparent and that the data is sufficiently disaggregated** to be informative and to allow third parties to understand whether their own experience may differ from that of the market as a whole.

At the same time information that is published should **not reveal commercially sensitive information to the material detriment of either the gatekeeper or any third party**. In particular, a question arises

⁸ This raises a question of when the relevant time period should start from, since some gatekeepers may begin to implement their obligations, and the effects may be observed, in advance of the deadlines set by the DMA. Our recommendation is that gatekeepers should be expected to collect data for indicators in the month *before* they take steps to comply so as to provide a baseline measure against which subsequent measures can be compared. We are also aware that some outputs may be subject to seasonal variation and would expect gatekeepers to indicate this, if relevant, when publishing the data.



as to whether requiring gatekeepers to report against certain output indicators⁹ would require them to have access to information about the functioning of third-party applications and services which they would otherwise not be expected to have access to in the normal course of business and which may be of commercial value. It would not be desirable if a requirement to produce output indicators to assess compliance were to lead to the gatekeeper obtaining access to such information. We recommend the Commission assess each indicator to ensure that its production does not require disclosure of commercially sensitive information to the gatekeeper which would not otherwise occur.

3.2 Implementation

While the establishment of the output indicators are not explicitly foreseen by the DMA, we think **these indicators are in the interest all the stakeholders (gatekeepers and business users alike) as well as the Commission and the national authorities** because they will contribute to an objective and better informed discussion on DMA compliance and effects, and will help the Commission to focus its attention on where additional evidence may be required to determine DMA compliance or non-compliance.

Because these indicators are not explicitly provided by the DMA, **the legal basis to require the production of the indicators may be controversial, but we think that the Commission may impose them as part of the compliance report foreseen in Article 11 DMA.**¹⁰ In addition, Article 21(1) gives the Commission broad rights to request information from the gatekeepers while those rights should be exercised in a proportionate manner.

We recommend that the output indicator reports be **reviewed and approved prior to publication by the Compliance Officer of the gatekeeper** as part of their function under Article 28(5) (as the Commission envisages for the annual compliance report). The report should explain the methodology adopted by the gatekeeper in its production and highlight any changes in methodology from the previous relevant period.

In circumstances where the Commission has reasonable grounds for thinking that the gatekeeper had failed to produce an output indicator in the manner specified by the Commission (has interpreted the measure in a different or more favourable way without seeking guidance from the Commission, for instance) then the Commission should consider requiring an **independent audit** of the output indicator report before it is supplied to the Commission, exercising its powers under Article 26(2) to do so.

We further recommend that the output indicators are **reported by the gatekeeper to the Commission on a country by country basis but published on an aggregated EU-wide basis.**¹¹

Moreover, the **output indicators that refer to third-party apps should be reported by the gatekeeper to the Commission on a disaggregated basis** (that is, by reference to each third-party app provider subject to some minimum threshold) but the data is published on an aggregated ('all third-party apps')

⁹ For instance, Art 6(4) indicator relating to third party apps downloaded from a third-party app store.

¹⁰ Under Art 46(1)(f), the Commission may adopt an implementing act laying down the content of the compliance report.

¹¹ We recognise there may be some issues with end users who interact with the gatekeeper whilst roaming, but do not consider these are likely to have a material effect on the results however treated in the report



basis. **If the Commission finds it appropriate and proportionate, each third-party provider should receive the output indicator data applicable to its own services** from the gatekeeper (on a confidential basis) at the same time as the aggregated data is published.

We have also considered whether output indicators should be disaggregated by reference to the platform over which the CPS is consumed (smartphone vs PC vs digital assistant, for instance). Whilst there may be legitimate reasons (such as security or other technical considerations) for the implementation of the obligations to differ between, for example, the smartphone and PC environment, we have concluded that it would be useful to compare output indicators relating to the same CPS and gatekeeper and obligation as applied on different platforms. We, therefore, recommend **that output indicators are reported by the gatekeeper to the Commission on a platform-specific basis (smartphone, PC, TV, and so on)** and that they are published by the gatekeeper on this basis while respecting business secrets and confidentiality.

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