



An Coimisiún um
Rialáil Cumarsáide
Commission for
Communications Regulation

Key Performance Indicators (KPI) Metrics: Physical Infrastructure Access (PIA) Document No. 24/06c Annex 3 of ComReg Document 24/06 Non-confidential Submissions to Consultation 23/41

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An Coimisiún um Rialáil Cumarsáide
Commission for Communications Regulation

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Content

Section	Page
1 ALTO	4
2 BT	6
3 Eircom	10
4 NBI	36
5 VMI.....	44

alto

alternative operators in the communications market

Consultation: Key Performance Indicator (KPI) Metrics: Physical Infrastructure Access (PIA) - Ref: 23/41 and 23/41a

Submission By ALTO

Date: June 9th 2023

ALTO is pleased to respond to Consultation: Key Performance Indicator (KPI) Metrics: Physical Infrastructure Access (PIA) – Ref: 23/41 and 23/41a.

ALTO welcomes this opportunity to comment on this important consultation.

Preliminary Remarks

ALTO welcomes and commends the work undertaken by ComReg and KPMG on this Consultation. Furthermore, we welcome the parameters by which ComReg intends to proceed save for two additional matters that we set out below in brief.

ALTO calls on ComReg to strengthen the inherent controls and ultimate enforcement in terms of what is being measured as KPIs – as is quite clear from the Consultation and its supporting documentation – to ultimate completion. By doing so that should satisfy the market and ultimately the end-user.

In order to assist with and linked to the above request, ALTO calls on ComReg to deploy the *minimum standards* approach to Service Level Agreements (SLAs) in conjunction with industry.¹ This approach should ensure the effective operation of PIA on the market.

As matters currently stand, some of the facilities made available to industry for use are manifestly manual in nature both in operation and recording and in consequence difficult to robustly measure. This is an unsatisfactory situation and one ComReg attempts to deal with through this Consultation paper.

ALTO
9 June 2023

¹ These standards are to be found in the Ofcom PIMR from 2019:
https://www.ofcom.org.uk/data/assets/pdf_file/0027/154593/volume-1-pimr-final-statement.pdf

BT Communications Ireland Ltd. [BT] Response to the ComReg Consultation:

Key performance indicator (KPI) Metrics:

Physical Infrastructure Access (PIA)

Issue 1 - 9th June 23

1.0 Introduction

We consider this an important consultation. Ireland lags far behind other countries such as Spain, Portugal, and the UK in the provision of Passive Infrastructure Access (PIA). A key issue for BT Ireland is the performance of the PIA product (provision and repair). We welcome the considerable efforts of ComReg continuing to put in place a workable regulatory regime. Now, we must reach an effective or more commonly, a fit for purpose product. We welcome this work as what 'gets measured, gets done' and PIA needs this.

It is evident to us that trying to achieve negotiated quality repair SLAs is extremely difficult in the Irish PIA market. ComReg now also urgently need to implement Minimum Standard SLAs (included in our response to the Market Review). Ofcom brought this forward and have welcomed how well it's working.

2.0 Response to the specific ComReg questions

Q. 1 Having regard to Chapters 1 and 2, do you agree with ComReg's proposal regarding the scope of PIA KPI metrics? Do you have any other observations in relation to the scope of the PIA KPI metrics? Please provide reasons for your answers.

BT Response 1

We agree with ComReg's proposal regarding the scope of PIA KPI metrics as per Chapters 1 and 2. However, ComReg must bring forward Minimum Standard SLAs as soon as possible.

Separately we welcome the categories chosen in 1.4. We consider additional sub-categories are needed such as:

1. **Time to respond to a status update request** – the process today is manual with many contacts within it. We should be able to simply log on to a system and check instantaneously on the order/repair/duct blockage clearance status. If this is available within Eircom today (it's eircom that is the legal entity and regulated) the same should be available to operators today.
2. **Metric on Completion & Tested** – Our experience with some sub-duct handovers has been poor. We consider the 'complete' metric on its own is not good enough and it should be changed to 'completed and tested ok'. BT raised CRD909 in 2021 that called for improvements in the handover process. This CRD is currently 'parked'.

3. **Transparency** – we don't know if there is equivalence between the MIP and the non-MIP order journey. We need a comparison of the MIP and non-MIP order journey and performance (delivery/repair). We welcome the ComReg suggestion to average the bulk orders as proposed.
4. **Clarity – simple and non-simple orders.** We welcome ComReg's approach to separate these orders by type so there is no risk of one masking the other.
5. **Fault Report Metrics** – A new metric is required that counts the instances where an OAO is offered an alternative route. If Eircom are permitted to do it for themselves, then this should be available to OAOs.

Q. 2 Do you agree with ComReg's proposal regarding PI order metrics? Do you have any other observations in relation to the proposed PI order? Please provide reasons for your answers

BT Response 2

We generally agree with ComReg's proposal regarding PI order metrics. As per our response to Question 1 - we have some additional suggestions to make the metrics more effective.

1. We need metrics on
 - a. Completed & Tested (as our answer to Question 1 above). It would be useful for OAOs to know what the 'tested' standards are.
 - b. The count of orders where the original forecast date met?
 - c. What is the average length from order date to original forecast date by order type?
 - d. What is the average length from order date to re-forecast date by order type? We note that Eircom are allowed to pay out on SLA's relative to the Reforecast date. We disagree with this.
 - e. What is the count of re-forecasts?
 - f. What is the count of re-forecasts by order (to identify if an order had more than 1 re-forecast)
 - g. What is the count of cancelled orders – we need a count per period by reason and count by Eircom or OAO driven
 - h. Metrics on the time to clear blockages.
2. With reference to clause 3.22 – we suggest care with SLAs that extend beyond the measuring period – 'tail issues' (drawing on our experience with PSTN). ComReg need to consider this more carefully and explain the approach to industry. It is easy to get this wrong.
3. Non-Standard – These orders are difficult in the leased line/broadband space. We support ComReg's proposal to track these. A metric is needed on the proportion of standard orders in delivery relative to non-standard orders.

Q. 3 Do you agree with ComReg's proposal regarding the process points metrics: for orders, road opening licenses, and delivery related metrics. Do you have any other observations in relation to process points metrics: for orders, road opening licenses, and delivery related metrics? Please provide reasons for your answers.

BT Response 3

We generally agree with ComReg's proposal regarding the process points metrics: for orders, road opening licenses, and delivery related metrics and would like to offer the following comments.

1. Please refer to Q1 for completed and tested.
2. ✕
3. With reference to the above and clause 3.81 of the consultation, we observe different delivery performance based on route length. We support separating the metrics to avoid short distance simple deployments masking issues on longer deployments.
4. We agree with the ComReg proposal to split out the time for the local authority licence activity to clearly identify the extent this contributes to delay. We ask ComReg to review how license can be obtained efficiently as our BT network experience does not appear to align with what we experience from Eircom on PIA orders. We suggest a metric relating to the count of orders delayed by reason(s).
5. Dark fibre – it would be very helpful to see the number of instances of dark fibre offered. We suggest the following metrics relating to DF when it is offered as an alternative to the Duct/Sub-Duct/SDSI products. These are the count of orders when DF was offered as an alternative. This will give confidence to OAOs that the product is available.
6. Direct Duct Access – it would be very helpful to see the number of instances of Direct Duct Access offered. We suggest the following metrics relating to Direct Duct Access when it is offered as an alternative to the Duct/Sub-Duct/SDSI products. These are the count of orders when it was offered as an alternative. This will give confidence to OAOs that the product is available.

Q. 4 Do you agree with ComReg’s proposal regarding the proposed PI fault metrics? Do you have any other observations in relation to the proposed PI fault metrics? Please provide reasons for your answers.

BT Response 4

We welcome that ComReg are considering the PI fault metrics but we are concerned they may just capture simple issues, not complex ones. For example – how will these metrics work where there are multiple operators impacted and on-site; and/or where large communities are impacted or where there is a risk to life. In our view a more representative set of metrics are required possibly split into simple/complex faults; including where the multiple operator scenario.

Here are our suggestions for metrics where there are multiple operators impacted. These are situations where many operators rely on the same passive infrastructure. This may happen say, at a concertation point such as a bridge over a river with many end users impacted. Hence a set of metrics would appear necessary.

1. Time to site to inspect damage.
2. Arrangements for a licence including application for etc.
3. Time set up a local control point to manage the situation.
4. Time to excavate the site.
5. Will this need temporary service set-up?
6. Time to repair?
7. Time before each operator can re-install their fibres or their sub-duct?
8. Count of orders where an alternative route is provided by Eircom
9. Time to close the incident.

We fully agree with clause 3.92 where it is possible to continue an existing licence when an existing excavation or road works damages a duct or ducts. We struggle to understand how we can repair our

own duct network in faster times than those offered by Eircom. We offer to share our practices with ComReg. We struggle to understand why a prioritised repair SLA is not offered to industry even if the operator contributed to the cost ⌘.

Fault metrics are needed similar to those noted for orders – such as timeframes to repair relative to forecast date, timeframes to delivery relative to re-forecast repair date, time to clear blocked ducts, delays by reason (especially for detail on those dependent on road opening licenses) etc. Access to real time information is critical to OAOs on the status of their fault.

With PIA as is, we cannot compete against the lead times that Eircom offer on their NGN product set. Network resilience can be designed to a point. We observe some orders where customers require complete diverse runs – they are not the norm.

Q. 5 Do you agree with ComReg’s proposal to apply the processing, reporting, and auditing requirements set out in Decision D04/22 to the PIA Metrics and the proposed implementation timelines? Please provide reasons for your answers.

BT Response 5

We agree with ComReg’s proposal to apply the processing, reporting, and auditing requirements set out in Decision D04/22 to the PIA Metrics and the proposed implementation timelines. We would like to offer the following comments.

1. We consider ComReg were correct in seeking a 2nd view from a reputable consultancy firm to review whether the metrics could be achieved and the timescale to implement. In our view this adds validity to the work of ComReg. We don’t have an issue with ComReg adding the extra month. Eircom are experienced in fulfilling metrics for other regulated services and we believe they will have the expertise to complete this. PIA order fulfilment is mostly manual today. We believe the KPI requirements should be achievable relatively quickly as there will be minimal software development.
2. At this time, we consider the metrics as essential to highlight the current performance improvements needed with the PIA product and to ensure industry is being treated with full equivalence of input.
3. As per our response to Question 2, we request that ComReg look deeply into the orders and faults that span more than one reporting period (the ‘tail’). This needs to be resolved.

End

eir

Response to ComReg Consultation:

**Key Performance Indicator (KPI) Metrics: Physical Infrastructure Access
(PIA)**

ComReg Document 23/41



9 June 2023

DOCUMENT CONTROL

Document name	eir response to ComReg 23/41
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Status	Non Confidential

The comments submitted in response to this consultation document are those of eircom Limited and Meteor Mobile Communications Limited (trading as 'eir' and 'open eir'), collectively referred to as 'eir Group' or 'eir'.

Executive Summary

1. eir is concerned that ComReg has failed to run a fair consultation process by not affording the most impacted party sufficient time to properly analyse the consultation proposals. eir reserves the right to make further submissions as analysis continues, particularly as to what KPIs may be possible taking into account current system constraints which are outlined in this response.
2. eir's response to this consultation is without prejudice to its position on ComReg's Physical Infrastructure Access (PIA) market review and proposed remedies as set out in eir's response to ComReg 23/04 (the 'PIA Consultation').
3. Even if the imposition of Significant Market Power (SMP) remedies including Key Performance Indicators (KPI) can be justified, the proposed regime is excessive and disproportionate. ComReg is proposing a very granular approach to KPIs in the commercial area where PIA demand is limited and likely to remain so, as acknowledged by ComReg in the PIA Consultation.
4. This calls into question both the statistical relevance of the KPIs proposed and the costs of the undue regulatory burden that will be imposed on eir to implement and maintain the proposed KPI regime.
5. ComReg and KPMG present so-called technical analysis to suggest that the proposed PIA KPI reporting regime could be implemented via developing a reporting system within 7 months. The analysis is extremely superficial and is based on a flawed assumption that the underlying data is available in a usable format for KPI reporting.
6. In addition, ComReg has incorrectly and contrary to the principle of technology neutrality given undue focus to eir's WOSAP system. This is a works management system which was never designed with the intention of developing a KPI reporting regime.
7. Implementing the proposed PIA KPI regime will require substantial Operating Support System (OSS) development and changes to established work processes to capture the required data points which ComReg appears to have overlooked.
8. In addition the relevance and value of a number of the proposed metrics is very questionable.

9. ComReg proposes KPIs in respect of bulk orders which are not a defined term but we assume to mean orders in the context of a Major Infrastructure Programme (MIP). Implementing KPIs for bulk orders will also take time and effort which has not been properly assessed by ComReg. It is likely that the implementation of such a KPI regime will coincide with the winding down of the delivery phase of the current MIPs, eir's Ireland's Fibre Network (IFN) programme and National Broadband Ireland's (NBI) National Broadband Plan (NBP), rendering the development effort meaningless. eir is not aware of demand for any further MIPs.
10. Consistent with its regulatory obligations, ComReg must undertake a proper proportionality assessment taking into account the perceived benefit of the proposed obligations relative to the costs of reengineering eir's systems and process, the anticipated ongoing low levels of demand for PIA outside of the NBP, and the anticipated completion dates for the enablement phases of the MIPs.
11. eir would like to work with ComReg, and assuming ComReg can justify a PIA KPI regime, continues to undertake analysis, on a without prejudice basis, as to what KPIs may be possible taking into account the current constraints.

Response to consultation

12. eir welcomes the opportunity to contribute to the consultation. However, eir is disappointed that ComReg has failed to run a fair consultation process by not affording the most impacted party sufficient time to properly analyse the consultation proposals. eir submitted an extension request to the consultation period. However, this was rejected by ComReg, despite the fact that relevant resources required to respond to this consultation were already deployed to meet other ComReg requirements. eir notes that ComReg's approach towards extension requests may operate in a biased manner. For example, ComReg appears to have effectively reopened a consultation period for one or more interested parties to make a submission as evidenced by ComReg Information Notice 23/48. This Information Notice was published on 1st June 2023 announcing that the deadline for consultation ComReg 23/14 was to be extended to the following day, 2nd June. However the deadline for responses had already been passed on 12th May per ComReg 23/37. ComReg 23/37 granted a second extension to the consultation response deadline so in effect ComReg appears to have granted three extensions to ComReg 23/14 covering a combined extension period of 1 month and 2 weeks. ComReg must ensure that it operates fair consultation processes in a consistent manner. eir reserves the right to make further submissions in respect of the current consultation, ComReg 23/41, as analysis continues, particularly as to what KPIs may be possible taking into account the current constraints which are outlined in this response.
13. ComReg is proposing the implementation of a KPI reporting regime for PIA. The imposition of such a regime is dependent on eir being designated with Significant Market Power following the conclusion of ComReg's PIA market review. eir's views in respect of ComReg's proposal to designate eir with SMP in a national PIA market are set out in eir's response to the PIA Consultation. eir's comments in this document are without prejudice to eir's position recorded in its response to the PIA Consultation.
14. It should be noted however that the current KPI consultation appears to pre-judge the outcome of the PIA market review. In that review ComReg is required to assess whether SMP arises and if so, in respect of which entities. As eir has submitted in the PIA Consultation, a number of entities are in scope in terms of their extensive use of physical infrastructure. The present KPI consultation however presupposes the outcome of the PIA Consultation, in assuming that only eir will be designated with SMP in respect of PIA. It also

presupposes that eir will have the full suite of obligations relating to PIA imposed on it, even though these obligations are the subject of an ongoing consultation.

15. eir is also disappointed to note that, as in other consultations, there is no proportionality assessment, despite ComReg's explicit obligation to assess proportionality. Proportionality requires inter alia an assessment of the necessity of the proposed measure to achieve a legitimate aim. eir notes that the Access Regulations do not in themselves entitle ComReg to impose KPI reporting obligations; such an obligation can only be imposed where it is necessary to achieve one of the statutory obligations imposed by the Access Regulations. No such assessment of necessity is carried out and a number of the 'aims' set out in the consultation, such as increasing the confidence of eir customers, are not in fact statutory obligations imposed on eir; i.e. there does not appear to be any legal basis to impose KPI reporting obligations on eir, for the purposes of improving confidence, or assisting investment, as is stated in the present consultation.
16. Proportionality also requires an assessment of whether the measure proposed is the least onerous option. There is no such assessment; as set out in more detail later in this response, the RIA only considers either imposing a full suite of extremely granular obligations, or no obligations – there is no assessment of whether a more moderate, less granular and less prescriptive approach would be more proportionate. There is also no consideration of whether the burdens imposed by the proposed regime outweigh the benefits or are excessive, despite this also being a requirement of a proportionality assessment. In particular, there is simply no consideration of the impact on competition, and eir's ability to compete, in a market where other operators such as NBI and Virgin Media are being permitted by ComReg to roll out broadband utilising extensive PIA without any regulatory restraints or reporting obligations. There is also no assessment of the negative impact of the KPI obligations on eir's ability to develop and provide its products. The risk with any KPI obligations is that it becomes a case of the 'tail wagging the dog', in that the KPI obligations are so prescriptive, and have such an impact on the software and systems that can be used, that they interfere with the company's ability to offer the most appropriate and cost effective products. eir is ultimately a private company with the right to conduct its business and to compete fairly with other operators in the same market who are not subject to these constraints. There is no consideration by ComReg of the extent to which the proposed KPIs will negatively impact eir's freedom to operate and to compete, and the consequent negative impact on competition in the market.

Q.1 Having regard to Chapters 1 and 2, do you agree with ComReg’s proposal regarding the scope of PIA KPI metrics? Do you have any other observations in relation to the scope of the PIA KPI metrics?

17. Notwithstanding that eir does not agree with the proposal in the PIA Consultation to extend the EOI obligation beyond that set out in D10/18, eir has a number of concerns in relation to the proposed metrics.
18. eir agrees that the scope for equivalence KPI Metrics may include ordering, provisioning and repair but the metrics should be meaningful and not set at such a granular level as proposed by ComReg in the consultation.
19. eir is concerned that ComReg is proposing to impose an onerous KPI regime for PI similar to that implemented for NGA. The scale of the proposed regime will add a further 662 data points requiring validation in addition to the 929 data points currently specified in D04/22. This is an astonishing number of data points in respect of PI Regulated Access Products that are consumed at very low scale outside of requirements for the National Broadband Plan.
20. eir notes ComReg’s D04/22 caters for a mechanism to request withdrawal of KPI metrics. *“Eircom is not precluded from applying to ComReg for **lifting KPI requirements** in appropriate circumstances, as Eircom sees fit. The continued requirement or otherwise for KPIs in respect of certain products and services may be determined by ComReg **in light of Eircom’s submissions including evidence as regards demand levels and implications for population parameters and/or statistical relevance and reliance**, on a case-by-case basis.”*¹ Given the granular nature of the proposed PIA KPI regime, we believe a number of the proposed KPIs will already fail a statistical significance test and therefore in the interest of proportionality ComReg should assess the statistical significance of its proposed metrics **before** mandating that eir must develop reporting capabilities.
21. eir notes in paragraph 1.3 the proposal to amend D04/22 framework to include the latest PIA metrics. Paragraph 5.3 of D04/22 states: *“eircom shall set out in full the rules, known as the “business rules”, applied to the data to arrive at the KPI Metrics, and make such business rules, in such detail as to allow replication of the KPI Metrics calculation by a party other than eircom”*. Some of the proposed PIA KPI metrics could only potentially be sourced

¹ Paragraph 3.42, ComReg 22/49. Emphasis added.

from eir internal workflow systems and information that is not available to Operators. This means that eir cannot comply with Paragraph 5.3 of D04/22.

22. Furthermore, ComReg is breaching the principle of technology neutrality with its undue focus on WOSAP. WOSAP was never designed as a reporting tool in the manner envisaged by ComReg. If the principle of paragraph 5.3 of D04/22 is to be maintained then incorporating PIA transactions within the Unified Gateway is a more consistent approach. Undue focus on WOSAP will constrain eir's ability to implement new and more efficient works management systems and processes over time.
23. Paragraph 1.4 sets out the products and services proposed to be included in the regime. eir notes that while chambers are listed as a service, access to chambers is provided as part of a duct / sub-duct / direct duct / pole access order and is not a separate order type. It is questionable what benefit Chamber based metrics add but in any event the required data is not currently recorded in a manner to facilitate KPI generation and will require significant OSS resource development which ComReg has not assessed from the perspective of proportionality, as it is required to do.
24. eir notes the proposal in paragraph 1.6 of the consultation to sub-divide the metrics into bands (distance for duct and number of poles for poles). However, the basis for the selection of these bands is not set out. It is possible that some bands will not be populated on a regular basis which would then lead to the question of statistical significance when the order volumes are low or zero. eir cannot identify this detail today without IT development to capture and label this data.
25. eir notes that the same structure of ordering metrics has been adopted as set out in D04/22 (i.e. metrics on orders recorded, accepted, rejected etc.). These metrics were somewhat applicable to the mass market access product for which the ordering process is predominately automated. However, this is not the case for these PIA products. Outside of the NBP demand for PIA from other operators is low scale as explained in detail in our response to the PIA consultation.
26. The fact that open eir has never received an order for pole access outside of requirements for the NBP and there is no evidence of strong demand emerging in the commercial area for duct or pole access further calls into question the proportionality of the proposed regime.

27. eir notes there are proposed metrics in relation to order metrics in the case of the comparative metric to the PIA products (self-supply). When an Operator (including eir retail) orders an active service they are unaware if there is any PIA requirement as part of order delivery. ComReg incorrectly assumes that all orders will result in a separate PIA order when this is required. As set out in response to PIA consultation eir does not agree that the proposed changes to a stricter interpretation are justified or required. Notwithstanding this if this approach was implemented it would require a significant IT development to re-develop all the existing products and services before it would be possible to commence the process to measure the PIA metrics for the sub-set of orders.
28. The superficial analysis presented by ComReg and KPMG regarding system development is predicated on a false assumption that the necessary data required to calculate the proposed KPIs is already captured and recorded. This is not the case and substantial OSS development will be required before the KPI reporting system can be developed. ComReg's proposal to allow 7 months for KPI reporting system development from the date a Decision is made is unreasonably short given the OSS development that will be required to record data.
29. Paragraph 1.8 of the consultation considers the order metrics category which includes forecasting, utilisation of existing sub-duct and the average repairs required per Km. In the case of reforecasting open eir provides forecast dates based on previous experience but these are estimates and there are many factors that are beyond open eir's control which suggests this is not a meaningful metric. Furthermore in the case of active service faults today there are no records of any repairs to PI that are easily identifiable. IT development would be required to be able to capture this.
30. In relation to the proposal to measure the utilisation of existing sub-duct, split between new and existing sub-duct, eir is unable to report on this as this information is not stored and therefore cannot be measured or reported on. It is not clear why ComReg considers this metric to be relevant when ComReg's position is that ✂ [xxx²] ✂

² ✂ [xxx] ✂

31. In addition eir notes the footnote to paragraph 1.8 describes the products and services that PI is an input to, one of which is VOIP. VOIP is not a standalone product and needs an underlying service such as broadband before it can be provided. Indeed open eir cannot identify if a VOIP service is provided over a broadband access line. Therefore eir does not consider that VOIP should be included in this definition.
32. eir notes that paragraphs 1.9 and 1.10 refers to elapsed time and assumes this measurement is working days i.e. elapsed working days in line with other KPI reporting.
33. eir notes that paragraph 1.10 refers to bulk orders which are called Major Infrastructure Programmes (MIP) in the published Duct and Pole product documentation. The two programmes at present are NBP and IFN rollout. eir notes both these programmes are due to be largely completed in 2025/2026 and there is little likelihood of any further significant network rollout that would meet the criteria of a MIP. ComReg's own market analysis for the PIA Consultation sets out that the market is very much self-supply. Even with the implementation of the proposed obligations in the PIA Consultation draft decision, ComReg states that it does not see any significant change in the use of PIA from open eir. Therefore eir questions the proportionality of imposing an obligation for the development of systems for the reporting of bulk order provisioning metrics. Assuming the PIA market review concludes by the end of 2023, and assuming ComReg can justify the imposition of remedies including KPIs, significant IT development will be required to meet the high standard of EOI proposed by ComReg in the PIA consultation. Adding the additional time required to develop KPI reporting systems means that a new PIA KPI reporting regime can only be implemented towards the end of 2025, around the same time the MIPs are winding down in terms of route preparation. There is no consideration of these points, or the existence of any other demand for bulk ordering by ComReg in the consultation, before proposing this very extensive new obligation.
34. eir notes that paragraph 1.11 sets out faults repair metrics of two categories, fault validation and elapsed time. eir does not consider the fault validation metric category is of any value as rejection of a fault is based on the fact that insufficient information was provided by the operator to enable open eir identify and repair the issue which is a failure by the Operator / person logging the fault to provide the information. This metric is therefore completely outside the control of eir. Such meaningless metrics must be excluded from any new KPI reporting.

35. eir notes that ComReg proposes in paragraph 1.12 that the first PIA metrics report is published 12 months after the decision. As set out above if the interpretation of EOI obligations set out in the PIA consultation is to be provided this is not an insignificant development and would take far longer than the 7 months proposed by ComReg, more likely in the region of 12 to 15 months. Even if the requirements and business rules for reporting were defined before the OSS development deployed it would not be possible to commence testing of the business rules until after the new development was deployed. eir considers that the new KPI reporting for PI could not commence until at least 7 months after the deployment of the OSS development. eir also notes that the commencement of reporting should align to the standard quarterly format i.e. if the implementation deadline was mid-quarter, reporting would start the following quarter. It is a basic principle of fairness, that ComReg must take into account submissions from the affected party, in this case eir, on the time that party will need to carry out the necessary developments; it cannot simply bypass eir entirely by relying on KPMG, especially when KPMG has no direct information about eir's requirements.

Q.2 Do you agree with ComReg's proposal regarding PI order metrics? Do you have any other observations in relation to the proposed PI order?

36. eir agrees with the principle that KPI metrics should enable comparisons between RAP PIA and the equivalent eir self-supply to demonstrate that the services are being provided in a non-discriminatory manner. However eir does not agree that the extensive KPI metrics proposed will achieve this, in particular as a number of elements are beyond eir's control and therefore provides information which is incapable of, and is not relevant to demonstrating compliance or otherwise with non-discrimination obligations.
37. eir notes that paragraph 3.2 of the consultation provides a high level description of the current operational practice for the provision of PI. As ComReg is aware eir is undergoing a significant IT transformation programme and the proposed metrics are very specific to existing system terminology. Some of these systems may be retired in the near to medium term. This transformation programme includes ordering, provisioning and fault management systems that could be used in the PI processes. Any metrics specified should be based on the generic process terminology not system specific terminology, taking into account the legislative stipulation that measures must be technology neutral. eir is of the view that similar to the development done for the access KPIs set out in D04/22, the data source for reporting should be the Unified Gateway. This then ensures that the KPI metrics can be replicated by an Operator based on the published business rules as required by D04/22. To achieve this for PI requires a significant IT transformation programme within eir.
38. As set out above, eir would need to complete significant IT development to achieve the level of EOI proposed in the consultation in order to be able to measure the proposed self-supply metrics - as it requires a complete change to all the active provisioning and repair flows to identify the subset that require PI provisioning or repair.
39. In paragraph 3.10 ComReg describes/defines order validation as to the point after the order is submitted. This does not align with the operational use of the term, once a PI order is submitted the order is acknowledge, order validation is a later stage in the process where the order is validated as standard or non-standard based on the work required to provide the service. As set out in the open eir Duct Access product Description all duct access orders greater than 500m are considered to be non-standard.

40. eir notes that in paragraph 3.11 of the consultation, ComReg proposes additional statistical calculations such as skewness, standard deviation and kurtosis. The purpose of statistical calculations such as kurtosis is to identify if the tails of a given distribution contain extreme values. eir questions the purpose of these calculations as the KPI metrics are to be based on the orders accepted in a quarter and completed (cancelled, undeliverable or completed) in that quarter as this only focusses on a narrow measurement window and potentially not reviewing the orders of very long duration. This means that great caution will be required when trying to interpret anything meaningful from the statistical calculations. From a practical perspective the imposition of the reporting on these statistical measures is not of itself an undue burden as they are defined formulae. However as we highlight throughout this response ComReg's assumption that the underlying data is readily available is fundamentally flawed.
41. In section 3.2 of the consultation, ComReg has proposed a number of metric categories specifically Order metrics, Provisioning Related Process Point Metrics, Submitted Fault metrics, Fault repair process point metrics and Bulk orders. These metrics represent a very granular measurement of each stage of an order or fault journey including some scenarios that are beyond the control of eir. Comparative performance can only be assessed on matters within the control of eir.
42. eir notes that similar to the NGA metrics in D04/22 the number of accepted orders in the period is the baseline parameter to calculate other metrics. In eir's opinion the baseline parameter should be orders completed in the period as this then provides a true reflection of the duration of orders rather than taking a snapshot across two quarters.
43. eir does not agree with the proposed metrics for rejected orders. ComReg has adopted a simplistic view that rejected orders are solely an issue with open eir. In reality orders are often rejected where insufficient information is provided to allow the order to be placed, as set out in paragraph 3.17, and once that information is provided the order is placed. eir further notes paragraph 3.18 suggests the rejected order metric is calculated by subtracting the percentage of accepted orders from one hundred percent which is taking the very simplistic view that once an order is not accepted the information is never updated and order never proceeds. Furthermore it is not possible to identify rejected orders for own use as these are orders where an Operator has requested an active service and in the course of provisioning a need for PI is identified. On this basis these metrics should be removed.

44. eir presumes that, in line with D04/22, residual order metrics are only reported for one quarter following the quarter the orders were accepted with the exception of bulk order metrics which is 2 quarters following the quarter the request was accepted. This requires clarification.
45. Similarly eir does not agree with the undeliverable order metric and in particular the obligation set out in paragraph 3.24 where the KPI business rules need to set out all reasons why a PI order may not be deliverable. As per the example set out in paragraph 3.23, the reasons why an order may be undeliverable is beyond the control of eir and eir will not be able to identify (an exhaustive list of) every potential reason for why an order becomes undeliverable. Consequently undeliverable order metrics should be removed.
46. In relation to the accepted orders that have not met the forecast date which is set out in paragraphs 3.25 to 3.28, eir questions the proportionality of these metrics. The purpose of a forecast date on the order is to give an indication of when the order may be delivered. It is not a guaranteed delivery date and it is based on the experience of similar scenarios — due to the individual circumstances of the order (e.g. local characteristics) the actual delivery date may vary. While in paragraph 3.28 ComReg does acknowledge that the reasons may be beyond eir's control it incorrectly suggests they provide transparency regarding order issues. eir questions the benefits of these metrics and notes that the provision of any commentary to these metrics will not provide any insight to the equivalence of the order journeys, i.e. it is not clear how it relates to eir's specific transparency obligation (rather than being simply information that it is interesting to know).
47. Paragraphs 3.29 and 3.30 propose further additional metrics as to the reason why the orders were re-forecasted in addition to the percentage of orders re-forecasted. Again eir questions the proportionality of these and what benefit they will provide in relation to demonstrating equivalence in particular where the re-forecast reason is beyond eir's control. Therefore these metrics should be removed.
48. eir notes that paragraphs 3.31 and 3.32 set out the rationale for the metrics relating to the number of accepted orders that are classified as non-standard for Operators compared to eir self-supply. This metric does not take into consideration, as set out in the Duct Access Product Description, that all orders greater than 500M are automatically considered as non-standard. eir does not see how this metric would demonstrate equivalence in particular as duct access orders can be significantly longer than 500m. eir notes that \propto [xxx] \propto of the

duct / sub-duct orders connected in 2022 were greater than 500m in length. Furthermore a PI activity that requires a licence would be classified as non-standard therefore eir does not see any value in this metric and these should be removed.

49. eir notes paragraph 3.33 to 3.36 set out ComReg's rationale for metrics relating to non-fluid works orders. As noted above, eir is of the view that system specific terms should not be used when describing metrics. Generic terms which are agnostic of systems should be used in order to ensure the metrics remain relevant and future proof. This is particularly valid in the context of the IT transformation programme as eir moves to refresh its legacy IT stack. Therefore the metrics, if included, should not refer to a specific system term, non-fluid, but something more generic like delays in order provisioning.
50. eir also notes that the information required to produce this metric is reliant on a work flow management system which is not available to other Operators. This means other parties will not be able to re-produce these metrics. Furthermore the system identified in the consultation is not designed to be used for retrospective reports so while it may be possible to identify works orders that were delayed, the reasons may not be identifiable.
51. eir notes that the consultation proposes some metrics in relation to use of existing sub-duct. This information cannot be identified – which eir has made ComReg aware of on a number of occasions. It is not possible to report on this metric. The distance requested on an order is not captured in a particular data field but in free text order comments which are not reliable for the purpose of automatically generating KPI metrics.
52. Paragraph 3.39 sets out ComReg's proposal for using bands (either length for sub-duct or number of poles) to provide greater transparency in metrics. eir questions the benefit in this in particular the statistical significance as the order volumes in the different bands may be low or non-existent. ComReg has provided no supporting rationale / analysis to establish why the proposed bands are relevant.
53. There are a number of metrics proposed relating to chamber access, namely number of orders, orders accepted, cancelled and undeliverable. The open eir product does not provide chamber access as a standalone product. Rather is it provided as part of the process of sub-duct, duct access, or pole access consistent with D10/18. Metrics relating to chamber access should be removed as it is not possible to measure these without a

fundamental change to the ordering process where Operators would have to order this as a separate entity.

54. eir notes a number of metrics relating to sub-duct self-install (SDSI) which are not reflective of the actual product offered by eir. The purpose of an SDSI order is for open eir to record the activity and to commence billing for the order at an agreed date. In the case of blockages these are to be resolved by open eir. Therefore metrics 158, 159 should be removed.
55. Paragraph 3.40 sets out how orders are grouped into bulk orders for convenience. ComReg has not defined the term 'bulk order'. eir assumes ComReg is referring to orders raised in the context of a MIP. If an alternative definition is being contemplated by ComReg then it must be put forward for consultation. As set out in the open eir Duct Access Product Description, MIPs are defined as a programme that contemplate a geographic footprint equivalent to approximately 10 exchange and are intended to pass 10,000 or more premises. The order volumes described in paragraph 3.40, "*access a high proportion of the available ducts and/or poles within a geographic area such as an exchange area(s) or subdivisions of an exchange area(s)*", would not be considered MIP and there is no other concept of bulk orders in the open eir product. Today there are two programmes that meet these criteria, NBI's NBP rollout and eir's IFN programme. Both these programmes are due to be substantially complete in 2025/2026 and as explained earlier in this response, given the significant amount of development required to generate these metrics eir questions the proportionality and benefit of implementing Order and Provisioning metrics for bulk orders.
56. eir again re-iterates the point that accepted orders should not be used as the baseline for all metric calculation but orders completed in the period. Using accepted orders as the baseline for the metrics results in the need for residual order metrics.
57. Paragraph 3.48 appears to categorise "Residual" as an order status which it is not, unlike cancelled, completed and undeliverable. Residual metrics is a term created by ComReg to describe the metrics reported on in a quarter whose orders were accepted in the previous quarter.
58. eir notes the proposal for change request metrics set out in paragraph 3.46 and 3.47 and questions the benefit and again proportionality of these metrics. In the context of a network rollout changes are not uncommon. This metric implies that all changes are driven by eir

not necessarily the programme owners. Furthermore, a MIP is an agreed programme with agreed deliverables or measurements which are specific to the programme in question and not necessarily the same measurement point. For example, NBI rollout is measured in metres of duct made ready and poles replaced but IFN rollout is measured in terms of premises passed. The level of granularity proposed for these metrics is not proportionate for large scale programmes.

Q.3 Do you agree with ComReg's proposal regarding the process points metrics: for orders, road opening licenses, and delivery related metrics. Do you have any other observations in relation to process points metrics: for orders, road opening licenses, and delivery related metrics?

59. eir agrees with the principle that process point metrics can be used to measure the time of the order lifecycle to demonstrate equivalence. However, as set out above, eir questions the proposed metrics in terms of using system specific terms and relying on eir workflow management systems information which means these metrics cannot be reproduced. Nor do we consider such an approach to be consistent with ComReg's duty to be technology neutral.
60. eir notes the proposed metrics relating to duct remediation and the proposal to measure the elapsed time for submission and granting of licences from local authorities including licence rejections. As ComReg acknowledges in paragraph 3.66, eir is not responsible for the processing of licence applications which are managed via the MapRoad Licensing (MRL) system maintained by the Road Management Office. For the purpose of reporting and generating KPI metrics eir does not have access to the MRL system and is not able to report on these metrics without having to develop its own systems to mirror the inputs and outputs of the MRL. Furthermore this information is not available to Operators so they would not be able to generate these metrics based on the business rules.
61. Paragraphs 3.70 to 3.74 set out ComReg's proposal to group the duct remediation metrics by duct diameter. System and process changes would be required to capture the duct diameter for each remediation job. Notwithstanding the question of proportionality of being required to make these changes, eir questions the benefit of this split in terms of what additional benefit it is perceived to provide. The diameter of a duct does not change the process required to remediate a blockage. Nor is duct diameter a differentiator of urban versus rural duct. eir does not differentiate duct diameter in the remediation of duct.
62. eir notes the proposal to measure the number of duct blockages per km as set out in paragraphs 3.75 to 3.77 and does not agree that these metrics have relevance to demonstrating equivalence. eir has no control over the number of blockages that may be encountered on a route nor could it provide any meaningful commentary as to why one had a higher number of blockages per km compared to another. The metrics also propose to report on blockages that require excavation and those that do not. In eir's experience

remediating blockages invariably means excavation is required, other than desilting activities. Notwithstanding this an IT development would be required to enable identification and recording of orders with blockages that were resolved with or without excavation. However, as stated, whether some routes have more blockages than others is irrelevant and meaningless in terms of demonstrating equivalence, nor does it provide useful comparative information on other routes.

63. While eir notes ComReg's stated concern that not separating out the longer distance orders from the shorter distance may mask issues associated with longer distance routes and vice versa, eir questions the benefit of this in particular the statistical significance as the order volumes in the different bands may be low or non-existent. ComReg presents no evidence as to why it has chosen the particular lengths for the proposed bands which suggests they are somewhat arbitrary and go beyond the current length distinction of 500m in the sub-duct access product. As with most of the proposed metrics ComReg has failed to consider the availability and usability of existing information. Currently the route distance for orders is only captured in free text comment fields which are entirely unsuitable for developing reporting metrics. ComReg must undertake a proper proportionality assessment which assesses ComReg's perceived benefit of the differentiation compared to the costs of reengineering eir's systems and process and the anticipated ongoing low levels of demand for PIA outside of the NBP.

64. eir notes the proposal to report on dark fibre provided in lieu of duct or pole access. eir questions the proportionality of requiring reporting systems to be developed when the situation where dark fibre has been offered in lieu of duct access has yet to arise and seems unlikely to arise to any material extent going forward.

Q.4 Do you agree with ComReg's proposal regarding the proposed PI fault metrics? Do you have any other observations in relation to the proposed PI fault metrics?

65. eir notes that the proposed metrics are dependent on a change to eir's ordering and fault process to ensure all PI orders and faults are separately identified. eir is not in a position to calculate KPI metrics for self-supply PIA fault remediation. eir's fault management systems and processes have been designed over many years based on remediation of active service faults e.g., following a report from a wholesale or downstream customer of an outage to a service such as broadband or a leased line. A subset of these faults may require PIA intervention but this is not currently recorded as a separate PI fault.
66. eir does not agree with the concept of rejected faults metric. In particular, eir does not agree that the purpose of such KPIs is, as stated by ComReg, for identifying process improvements. The purpose of equivalence KPI metrics is to demonstrate equivalence through metrics that show equivalent performance. A PI fault is rejected based on insufficient information being provided to enable identification of the location of the fault to enable repair. The level of information provided by an Operator is outside the remit and control of eir as set out in paragraph 3.87. Therefore any rejected fault metrics should be excluded.
67. While eir acknowledges the concept of the elapsed time to repair faults, the consultation proposal does not consider that a fault on an active service may be temporarily restored and that subsequently at a later date the repair to the PI completed allowing a permanent restoration. In such cases the elapsed time to permanent restoration could be significantly longer but the fact is that a temporary solution has been put in place such that the Operator's active service has been restored. This is in line with Industry practice preserving the integrity of active services in situations where permanent repairs of civil engineering infrastructure may take some time due to for example the need to obtain necessary licences and the appointing of specialised engineers. Furthermore the proposed metrics cannot be reported on without a significant change to eir's IT systems and working processes as the PI repairs associated with active service faults cannot be easily identified or reported on today.
68. As set out above the metrics proposed include measuring the time for licence processing which is tracked on the MRL system and information for reporting form is not available to eir.

69. eir notes the proposal set out in paragraph 3.92 for metrics where repairs can be carried out without a new licence application. Licences for duct clearance or duct remediation are location dependent and duct repair in the absence of licence is not permitted. Therefore these metrics should be removed.

Q. 5 Do you agree with ComReg's proposal to apply the processing, reporting, and auditing requirements set out in Decision D04/22 to the PIA Metrics and the proposed implementation timelines?

70. eir has no objection with the proposal set out in paragraphs 4.1 and 4.2 to align with the obligations set out in D04/22.

71. However eir does not agree with the data retention principle proposed in paragraph 4.3 of the consultation which suggests the data should be retained for 2 years from completion of an order. This is contrary to the retention policy established in D04/22 whereby quarterly KPI metric data must be retained for a period of two years, which is independent of the order completion date. The proposal in paragraph 4.3 is unnecessarily cumbersome and would require retention of a data set which is different to that used to generate the KPI report given that the baseline for all PI metrics is orders accepted in a quarter not orders completed.

72. With regard to proposed implementation timelines ComReg's proposal is extremely flawed and based on superficial analysis by ComReg's technical advisers. This shortcoming is acknowledged by KPMG itself in section 1.6 of the KPMG report (ComReg 23/41a). In section 1.6 KPMG sets out the scope limitation of the report. Notably KPMG's considerations do not include (inter alia):

- *"Any requirements or decisions to Eircom or ComReg on how the associated data could be extracted, transformed, and downloaded/stored in the Eircom IT systems to generate KPIs".*
- *"access to the IT systems mentioned in the current document. All the data have been provided to KPMG solely by ComReg. KPMG has not received any documents directly from Eircom or any third parties."*

73. The fundamental flaw in KPMG's estimate of development time is the assumption on the availability of the 'associated data'. The proposed implementation timeline is not realistic on the basis that first eir must complete a significant IT development to develop its OSS and working practices to ensure that the associated data is recorded in a fit for purpose manner. Further IT development may be required to align the ordering and fault reporting systems to the interpretation of EOI adopted by ComReg in the PIA market review Decision. Only once that functionality is launched could the KPI development commence. Based on a timeline of

12 to 15 months to re-design the IT workflows for ordering and repair it is estimated a further minimum of 7 months would be required to develop the KPI metric reporting and start collating the data with a view to report on the quarter following completion of development.

74. It is disappointing and contrary to an open and transparent consultation process that ComReg did not permit KPMG to engage with eir to discuss data availability and system capabilities. eir notes that the basis for the timeline estimate, as stated in paragraph 4.7 of the KPMG report, is that most of the data is available to compile and report on the PIA KPI. However this fundamental assumption underpinning the implementation timeline estimate is critically flawed. Recording and making available the necessary data will require significant IT development and changes to operational processes meaning that the timeline estimate to implement PIA KPI reporting is significantly understated.
75. It is notable that KPMG who claim *“In order to provide a reference solution with indicative effort requirements, KPMG has observed similar projects and leveraged prior business experience”*, KPMG are not willing to stand over their own implementation estimates with the disclaimer in section 1.7 that *“Indicative effort evaluations provided in the report should not be considered as a business offer to any interested party. Evaluations provided by KPMG should be considered for benchmark purposes only”*. In other words if eir sought to engage KPMG to undertake the implementation work they would not be willing to commit to deliver within the timelines quoted in their own report.
76. Absent constructive engagement with KPMG, eir is unable to assess the level of KPMG’s understanding of eir’s current systems or its plans to transform the legacy IT stack. In section 2 of the report KPMG present a number of system flow diagrams. It is not clear what credence these diagrams are intended to give other than acknowledging some systems are connected to other systems. It is however notable that the information provided to KPMG by ComReg contains errors. For example the reference to a system called ‘PADM’ in the report presumably refers to eir’s PDAM system.
77. As set out above, WOSAP is a workflow management system and not suitable for KPI reporting as not all data is retained for retrospective reporting. Furthermore a number of the fields are free text data which rely on a user copying and pasting the text correctly or entering it in the exact same manner which is often not the case as the system and

business processes were not designed for regulatory reporting. Direct engagement with KPMG would have helped clarify these matters.

78. eir notes, based on experience of generating and reporting KPI metrics, one of the key risks in relation to errors with a report is the manual processing of data. Some of the systems that are suggested include email and other free text data as data sources. It is not possible to reliably generate automated KPI metrics as it relies on interpretation of comments and every user applying the same free text formatting. The proposed process would require significant manual processing and would be a very cumbersome exercise.
79. eir notes the KPMG report set out at a high level the process but it is unclear as to what the exact solution being proposed is. In addition, KPMG is unwilling to commit to deliver a solution to its recommended timeline. Furthermore, the report provides an indicative effort requirement and indicative timelines, but based on experience eir would note, for example, that 2 to 4 weeks of testing is not sufficient. D04/22 set out a timeline of 7 months to develop the reporting and then a further 3 months to collate the data. As set out in the consultation response for Access KPI metrics, eir spent approximately 12 months defining business rules, reviewing data and testing. KPI reporting is very much an iterative process and testing is an ongoing element not solely carried out at the end of the report development.

Other comments

80. eir has reviewed the Regulatory Impact Assessment (RIA) in chapter 5 of the consultation. eir considers the conclusions drawn by ComReg cannot be relied upon to support the imposition of a PIA KPI regime as proposed in the consultation for two primary reasons.
81. First, the RIA leans heavily on the KPMG report to suggest that the proposed regime will not impose an onerous burden on eir. However as demonstrated throughout this response, the KPMG report is based on incorrect assumptions and cannot be relied upon for regulatory decision making. Indeed the KPMG report is also caveated in that regard and therefore there is a flawed interdependence to ComReg's consultation. In reality, ComReg has not assessed how onerous the burden will be, or its impact on eir's ability to compete with operators who are not similarly regulated, and are not constrained in the way eir is, by the obligation to only offer products which can be fitted within this KPI reporting regime.
82. Second, ComReg presents two binary options for consideration in the RIA. Option 1, not to specify metrics and Option 2, to specify metrics. This is too simplistic an approach and ComReg fails in its duty to act in a proportionate manner. There is a big difference between a regime that specifies a smaller, more proportionate number of metrics that give sufficient comfort regarding the consumption of low or no demand products and a regime that imposes hundreds of data points necessitating extensive and costly system development, many of which have no relevance to ensuring compliance with eir's regulatory obligations.
83. ComReg must undertake a proper proportionality assessment taking into account the perceived benefit of the proposed obligations relative to the extensive burdens imposed, including the costs of reengineering eir's systems and process, as well as the anticipated ongoing low levels of demand for PIA outside of the NBP, and the anticipated completion dates for the enablement phases of the MIPs. ComReg has a legal obligation to act proportionately in imposing regulatory burdens on any operator. As noted by the Court of Justice in *Fedesa*³ this requires ComReg to ensure that any measures it adopts are *'appropriate and necessary in order to achieve the objectives legitimately pursued by the legislation in question; where there is a choice between several appropriate measures recourse must be had to the least onerous, and the disadvantages caused must not be disproportionate to the aims pursued.'* eir has already set out above a number of grounds upon which ComReg's proposal is not proportionate. ComReg's proposals do not meet the

³ Case C-331/88

requirement that the measure relates to an '*objective legitimately pursued by the legislation in question.*' ComReg has also not assessed whether its measures meet the requirement that '*the disadvantages caused must not be disproportionate to the aims pursued.*' ComReg has not therefore carried out the required proportionality assessment. As set out in detail in this response, eir considers that the disadvantages caused to eir are significantly disproportionate to the aims pursued.

84. This submission must be read together with eir's response to the PIA consultation, in particular paragraphs 147 to 152 in respect of ensuring that *Regulation must be targeted, balanced and proportionate.*
85. Finally, eir notes due to the short period of time to respond to the consultation it has not had sufficient time to complete a full analysis on what KPI metric reporting is possible from the current information and is currently reviewing this. A supplemental submission for this response will be provided once it is completed.

Key Performance Indicator Metrics for Physical Infrastructure Access

Response to ComReg's Consultation
and Draft Decision 23/41

NON- CONFIDENTIAL VERSION FOR
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Table of Contents

1	INTRODUCTION	2
2	RESPONSES TO COMREG'S CONSULTATION QUESTIONS	4

1 Introduction

National Broadband Ireland (NBI) is pleased to provide its response to ComReg's consultation and draft decision on Key Performance Indicator (KPI) metrics for Physical Infrastructure Access (PIA) (the Consultation Document)¹.

In November 2019, NBI signed a Project Agreement with the Minister for the Environment, Climate and Communications committing it to roll out a full-fibre network to those areas of the country that had been identified as unserved by commercial broadband providers. NBI's Fibre to the Home (FTTH) network deployment is now well advanced – at end-May 2023 the NBI network had passed just under 150,000 premises, with over 42,000 end-users connected to the network and availing of retail high-speed fibre broadband services from a variety of Retail Service Providers (RSPs).

Under the Project Agreement, NBI has committed to completing the NBP network deployment within seven years. The deployment is now in its fourth year and NBI is on target to complete it in line with its contractual obligations.

NBI's NBP deployment plan involves extensive use of Physical Infrastructure (PI) assets, i.e. poles and ducts, under the control of Eircom Limited (Eircom). Prior to signing the Project Agreement with the Minister, NBI concluded a long-term Infrastructure Access Agreement (IAA) with Eircom, guaranteeing it timely access at scale to Eircom's regulated duct and pole products within a Major Infrastructure Programme (MIP) framework.

Pursuant to this MIP arrangement, which is essential to the viability of the NBP, NBI expects to utilise approximately 1.5 million Eircom poles and 15,000 km of duct as it rolls out its FTTH network to an estimated 565,000 premises within the NBP Intervention Area (IA). NBI is already by far the most significant user of Eircom's PI assets and this will continue to be the case into the long-term.

A well-functioning KPI regime for PIA should help to enable a meaningful comparison to be made between the access Eircom provides to third parties and the access it provides to itself. < [REDACTED]

[REDACTED].] < By obliging Eircom to report the proposed PIA KPI metrics to ComReg, it will be possible for ComReg to assess if Eircom is engaging in discriminatory behaviour in the way in which it handles PIA orders and, in particular, if Eircom is providing itself with more favourable access to its physical infrastructure vis-à-vis third-party Access Seekers. Such visibility for ComReg will, as a result, provide a powerful incentive for Eircom to comply with its Eol obligations, both in relation to PIA as well as more generally.

NBI supports ComReg's proposals for putting in place a framework under which Eircom will be obliged to report to ComReg a detailed set of KPI metrics covering ordering, provision and service assurance

¹ ComReg Consultation and Draft Decision, Document No. 23/14, 8th May 2023.

2 Responses to ComReg's consultation questions

In this Section, NBI provides its response to each of the questions posed by ComReg in its Consultation Document.

Q.1 Having regard to Chapters 1 and 2, do you agree with ComReg's proposal regarding the scope of PIA KPI metrics? Do you have any other observations in relation to the scope of the PIA KPI metrics? Please provide reasons for your answers.

NBI agrees with ComReg's proposed scope of the PIA KPI metrics. The metrics need to cover all PIA products and ComReg confirms in the consultation that this is what it plans to do.

NBI also agrees with ComReg's proposal that the KPI metrics should encompass all critical points in relation to the ordering and provisioning of PIA products, as well as service assurance.

As it noted in Section 1 above and in its response² to ComReg's previous KPI consultation³, NBI's use of Eircom's PIA products falls into two broad categories. NBI's initial focus – which remains its top priority – was on securing large-scale access to Eircom's poles and ducts on a Deployment Area⁴ basis in order to deploy the NBP FTTH network. With "make-ready" works on its pole and duct network to over 300,000 premises either completed or commenced by Eircom at end-May 2023, NBI is well on its way to successfully obtaining the access it requires in order to complete the NBP FTTH network deployment within the timelines laid down in the Project Agreement. ✂ [

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].] ✂

In NBI's view, ComReg's planned PIA KPI regime is unlikely to be of relevance in relation to NBI's PIA requirements for its network build. ComReg plans for Eircom to submit to it the initial set of KPI data twelve months after it publishes its Final Decision arising from this consultation. This means that these data are unlikely to be submitted by Eircom until early 2025, by which time NBI expects to have submitted all of its DA-level design plans to Eircom and by when it expects that Eircom will have completed the vast bulk of the required "make-ready" works on its poles and ducts. Once this point is reached, NBI will be close to securing virtually all of the PIA it requires to complete the NBP network build and so ComReg's planned PIA KPI regime will not then be a relevant consideration.

✂ [REDACTED]
[REDACTED]
[REDACTED]

² NBI response to ComReg Consultation Document No. 21/33, 2nd June 2021.

³ ComReg Consultation Document No. 21/33 dated 1st April 2021.

⁴ NBI's rollout of the NBP FTTH network has been designed and is being built on a Deployment Area (DA) basis, with each of the 227 DAs in the network arranged by reference to the location of NBI's Optical Line Terminal (OLT) equipment.

[REDACTED]

As retail and business users continue to migrate from legacy copper lines to FTTH connections in large numbers⁵, PIA works to facilitate the completion of end-user FTTH connections will grow in importance over the coming years. From NBI's perspective, Eol adherence by Eircom in relation to PIA works for connections would be the most important output from ComReg's planned PIA KPI framework.

Q. 2 Do you agree with ComReg's proposal regarding PI order metrics? Do you have any other observations in relation to the proposed PI order? Please provide reasons for your answers

NBI agrees with ComReg's proposal regarding PI order metrics. ComReg's proposal to oblige Eircom to report on PI ordering by way of accepted, rejected, cancelled, completed and residual orders should provide the required level of transparency in this area.

Metrics relating to undeliverable orders will be an important area of focus, in particular in the context of Eol, and NBI agrees with ComReg's proposal to oblige Eircom to report on the percentage of undeliverable orders, which should be broken down by Eircom's self-supply and provision to third-party Access Seekers.

✂ [REDACTED]

NBI also agrees that data on accepted orders that have met the forecasted date and orders that have met a re-forecasted date should be included within the KPI framework. In this respect, NBI agrees that data on the percentage of orders re-forecasted, combined with the reasons for why this happened, should be collected. In addition, NBI is of the view that data on the duration of time between original and re-forecasted delivery dates, broken down by Eircom self-supply and provision to third-party Access Seekers, would be a helpful addition to the proposed data set in this area.

NBI would also prefer that its orders involving PIA-related remediation works to complete connections do not automatically fall into the non-standard category. Were this to happen, then orders submitted by NBI – which, in light of the scale of NBI's usage of Pole and Duct Access generally, will only be exceeded by Eircom's own self-supply for connections to its FTTH network – might not yield data on metrics that would, in turn, help to ensure Eircom's compliance with its Eol obligations in PIA provision. In this sense, it is important that, within the PIA KPI framework, NBI's requirements for PIA-related remediation works

⁵ In ComReg's latest quarterly key data report (Q4 2022), FTTP connections exceeded 500,000 for the first time. It is expected that, when ComReg's next quarterly report (for Q1 2023) is published, FTTP will have overtaken VDSL as the main access path for broadband connections.

undertaken by Eircom to complete connections is seen as the norm (i.e. standard) rather than the exception to the norm (i.e. non- standard).

NBI agrees that ComReg's proposals for reporting on bulk orders are sensible. As explained above, however, due to timing factors NBI's view is that the KPI framework is unlikely to be of much relevance in relation to Eircom's provision of PIA services at scale to NBI for the NBP network build.

Q. 3 Do you agree with ComReg's proposal regarding the process points metrics: for orders, road opening licenses, and delivery related metrics. Do you have any other observations in relation to process points metrics: for orders, road opening licenses, and delivery related metrics? Please provide reasons for your answers.

NBI agrees with ComReg's proposal for process point metrics and supports ComReg's plan to base these data on elapsed time for the various activities.

For the provision of Duct Access, the proposed metrics on duct blockages should prove particularly useful, in light of the significance of this issue and the impact blockages can have in terms of delaying network build and in completing end-user connections. NBI agrees that collecting data broken down by the various diameter types would be disproportionate and that setting separate metrics for blockages in duct diameters greater than or less than 100mm would yield sufficient information. Collecting data on the rate of blockages encountered per kilometre of duct would clearly be extremely useful and ComReg's plan to break this metric between blockages requiring excavation works and those that do not will also provide ComReg with helpful information about blockages incidences and how, from an EoI perspective, Eircom deals with them.

Disaggregation by route length categories is also a sensible move, which NBI supports, not least given its increasing focus on PIA works associated with connections. For the most part, the access required in this instance involves solely short route lengths, typically 100 – 200 metres in length. ComReg's proposal for metrics capturing duct routes of less than 500 metres and pole routes of three poles or fewer is appropriate.

NBI in addition supports the inclusion within the KPI framework of metrics on Local Authority licensing. While this relates to a third-party activity that is outside Eircom's control, it is nonetheless important information to collect from an EoI perspective. Similarly, NBI is of the opinion that a metric covering the securing of landowner/landlord consents for PIA works on private land and property would also be useful to include within the KPI framework.

Q. 4 Do you agree with ComReg's proposal regarding the proposed PI fault metrics ? Do you have any other observations in relation to the proposed PI fault metrics? Please provide reasons for your answers.

NBI welcomes and supports ComReg's proposal to include fault metrics within the PIA KPI framework. While operators have the right to undertake emergency service restoration work and can access Eircom's poles and ducts in order to restore electronic communications services to end-users, the responsibility for repairing Eircom's physical infrastructure rests with the SMP operator. It is important that such repairs are undertaken by Eircom in a way that it ensures compliance with its EoI obligations and ComReg's proposal that Eircom should report on fault metrics based on the validation of faults and the elapsed time for the completion of repair works is sensible.

NBI has no further observations to make in relation to ComReg's proposed approach in this area.

Q. 5 Do you agree with ComReg's proposal to apply the processing, reporting, and auditing requirements set out in Decision D04/22 to the PIA Metrics and the proposed implementation timelines? Please provide reasons for your answers.

NBI agrees with ComReg's proposal to apply to the PIA KPI metrics the same processing, reporting and auditing requirements that are already in place, pursuant to ComReg's Decision D04/22, i.e. in relation to the existing KPI framework. NBI also takes the view that ComReg's proposed implementation timelines for the PIA KPI metrics are appropriate.



Virgin Media response to:

ComReg's review of Key Performance Indicator Metrics for
Physical Infrastructure Access

Non-Confidential

1 June 2023

Foreword

Virgin Media Ireland Limited ('Virgin Media') welcomes the opportunity to participate in ComReg's Review of Key Performance Indicator ('KPI') Metrics for Eircom's Physical Infrastructure Access ('PIA').

The Virgin Media response is provided below. The response is non-confidential.

Contents

Executive Summary

Response to ComReg's questions

Annex 1

Executive Summary

In its main response to ComReg's PIA Market Review consultation, Virgin Media set out several concerns regarding the Eircom PIA product.

In particular, Virgin Media argued that the Eircom PIA product was difficult to use, suffered from poor Quality of Service ('QoS'), was not scalable and had not been sufficiently developed as a product by Eircom. In consequence Virgin Media argued that the Eircom PIA product was not fit for purpose.

Virgin Media raised further concerns relating the apparent ability of Eircom's own downstream division to successfully utilise PIA at scale when this has been a struggle for other access seekers.

Given these concerns, Virgin Media called on ComReg to take a more robust 'hands-on' approach to the regulation of PIA, and that this was needed to drive the improvements to PIA that were desperately needed. Virgin Media argued that if this didn't happen, PIA would remain of marginal importance (outside of the Intervention Area, wherein National Broadband Ireland has no choice but to use the service). Virgin Media called on ComReg to intervene in order to uplift the QoS for Eircom's PIA, and to be proactive in driving compliance.

ComReg therefore has an opportunity to make the regulatory interventions that are needed to improve the Eircom PIA service to the benefit of access seekers and end customers. Until this is done the Eircom PIA product will remain not fit for purpose.

The KPI consultation needs to be viewed in this context. KPIs can play an important role in delivering improvements – including ensuring non-discrimination is fully complied with and driving better QoS by highlighting performance trends and identifying problem areas.

In its response, Virgin Media sets out what qualities the KPIs imposed by ComReg need to have to maximise their effectiveness, and which additional KPIs should be added to strengthen the proposals set out in the consultation.

The current levels of information relating to Eircom's PIA product are woefully inadequate and ComReg has an opportunity to address this. As set out in the response, it is crucial that the KPIs cover non-discrimination and QoS. The KPIs should also be made available to access seekers about how the PIA products are working for them (i.e., covering their own orders and faults), in addition to allowing them to compare this with relevant comparators.

Virgin Media sets out further detailed comments below.

Response to ComReg's questions

General Comments

ComReg is right to impose KPI obligations on Eircom for the delivery of its regulated PIA products. If well specified, KPIs can be a useful regulatory remedy by offering transparency into key aspects of how a regulated product is performing, including whether non-discrimination obligations are being met, and what levels of service are being provided to access seekers.

In Virgin Media's view, a well specified set of KPIs must:

- Provide insight into whether Eircom (as the SMP undertaking) is complying with its non-discrimination obligations. This needs to include an ability to compare performance levels between Eircom's own downstream division and other access seekers, and between non-Eircom access seekers.
- Provide insight into whether the PIA product is performing adequately or not from a QoS perspective. This should include, as a minimum, metrics that show whether Eircom is meeting its service level agreements ('SLAs') as specified in the product Reference Offer ('RO'). As discussed further below, should ComReg introduce QoS Standards on Eircom PIA, as argued for by Virgin Media in its response to the main PIA consultation,¹ then KPIs should also be imposed to track performance against those QoS Standards.
- Enable each access seeker to track performance in relation to their own organisation's orders and faults, and to compare the same with relevant industry comparator(s).
- Be comprehensive in terms of covering all the key products and processes.
- Include consideration as to what 'acceptable' levels of performance are to enable an evaluation as to whether the overall regulated product is performing as intended or not. In Virgin Media's view, Eircom's present and historic levels of performance for PIA (looking at both QoS and non-discrimination) are at unacceptable levels. In this context, KPIs can and should play an important role in incentivising Eircom to raise its performance.
- Be accurate. One live issue that Virgin Media has with the Eircom PIA product is that in numerous instances, Eircom has handed over a service as complete (from a provision perspective), when in fact it is not complete either because the provision journey remains ongoing and / or the product has been handed over in a non-functioning state. Virgin Media is concerned that such instances would be recorded by Eircom as completed jobs – when they are not. Such practice, if allowed to happen, could undermine the whole usefulness of the KPIs by creating a set of

¹ Virgin Media response to PIA consultation dated 3 March 2023. See response to Question 4.

results that could not be trusted. Virgin Media would like ComReg to address this issue ahead of the KPIs being implemented. While the issue raised above is a specific one, there is a general point here – which is that the KPIs will only be as good as the data submitted by Eircom, and so there needs to be robust quality controls in relation to this area as part of the governance procedures adopted. To note, this experience could also suggest that a further KPI is needed – i.e., provision orders that are marked as complete but that are delivered in a non-working state.

If the KPIs do not meet each of the criteria listed above, their effectiveness (and that of PIA more generally) as a regulatory remedy will be undermined, to the disbenefit of access seekers that make use of PIA, and their end customers in turn.

ComReg should also consider pulling out a short number of ‘headline KPIs’ – which can be used as a proxy to track at an overall level how PIA is performing. ComReg is proposing a large number of KPIs – which is no bad thing – but this can sometimes make it difficult to draw overall conclusions as to how the underlying service is performing if not complemented by a summary view. ComReg could, for example, develop a quarterly performance dashboard backed by a subset of certain KPIs to provide a quantitative examination on how PIA is performing. In its quarterly performance assessment, ComReg should also show quarter on quarter trends. At Annex 1 to this response Virgin Media proposes a subset of the KPIs that could be usefully drawn out to represent a high-level dashboard overview giving insight as to how the Eircom PIA product set is performing overall.

Finally, Virgin Media suggests that ComReg analyse the specific performance of PIA orders / faults for [X

[REDACTED]

X]

Q 1. *Having regard to Chapters 1 and 2, do you agree with ComReg’s proposal regarding the scope of PIA KPI metrics? Do you have any other observations in relation to the scope of the PIA KPI metrics. Please provide reasons for your answers.*

Virgin Media supports ComReg’s proposed PIA product scope for the KPIs as specified at paragraph 1.4. The proposal appears to be, at top level, comprehensive. It is also right that Dark Fibre access is included in the scope since Eircom is obligated to make this service available, where reasonable, in circumstances where it is unable to offer PIA.²

ComReg is also right to require Eircom to provide KPIs covering PI orders, PI provisioning process point interval metrics, and PI fault repairs.

² Virgin Media notes that, to date, when it has attempted to place an order for Dark Fibre, it has been advised by Eircom that the Dark Fibre product is not available.

In its response to ComReg's PIA consultation dated 3 March 2023, Virgin Media set out that ComReg should impose on Eircom a number of QoS Standard obligations, and that these additional obligations were needed to help uplift the performance of Eircom's PIA products, whose current service performance is inadequate.³ In circumstances where ComReg were to impose additional QoS Standard obligations on Eircom, the scope of the supporting KPIs would need to be expanded to ensure that the performance against the QoS Standards was tracked, in a manner that was transparent.

ComReg should also confirm that the KPIs will be made available to each access seeker purchasing PIA, and that those KPIs will include performance against the access seeker's own set of orders / repair transactions together with an ability to compare the same with relevant industry comparators (which could be, for example, KPIs showing the rest of industry combined minus those for the access seeker). This is essential such that: (i) access seekers can understand how the product is performing for them, and where improvements are needed (currently there is total absence of useful information about the product which is not acceptable); and (ii) access seekers can check whether there are any concerns raised through disparity in performance when comparing their own product performance versus industry comparator(s). For ComReg's own purpose, the comparisons would also need to include the performance levels relating solely to Eircom's own downstream division as a relevant comparator.

Q 2. *Do you agree with ComReg's proposal regarding PI order metrics? Do you have any other observations in relation to the proposed PI order? Please provide reasons for your answers.*

Virgin Media generally supports ComReg's proposals in relation to PI order metrics. It is right that Order Provisioning, Faults, Repairs and Bulk Order processes are all covered by KPI obligations.

ComReg is also right to specify the detailed obligations as set out at paragraph 3.12, and to require certain statistical evaluations to be conducted including standard deviation, skewness, and Kurtosis – this will help to identify unusual patterns that may require further investigation. It is also right to sub-divide processes into constituent parts, as this will help to provide insight into how each key process element is performing, and so identify potential problem areas.

Virgin Media considers that the ComReg proposals would be strengthened by ComReg making the following additions to the proposals as set out in the consultation document:

- KPIs should be put in place for each of the SLAs specified in the PIA RO. This is needed to help provide a view as to the degree to which Eircom is meeting its contractual commitments.

³ Virgin Media response to PIA consultation dated 3 March 2023. See response to Question 4.

- KPIs should put in place for each QoS Standard, should these be separately mandated (see comments above in the response to Question 1).
- More should be done to look at ‘tail’ type orders – i.e., orders that take the longest to deliver. In Virgin Media’s own experience, some orders take an excessive (e.g., over 6 months) time to deliver. More needs to be done to identify such orders and examine why they take so long to complete. Virgin Media therefore suggests that ComReg should include tail KPIs including what % of orders become tail orders, plus an examination of what the root causes are as to why such orders take such a long time to deliver. The overall objective here is to reduce the % of overall orders that are made up of tail circuits by providing greater transparency on them and identifying root causes, which can then be better understood and addressed. If the root causes are outside of Eircom’s ability to control, this would also be worth understanding as it could suggest other areas where improvement work is needed.
- Confirmed price. Eircom has been extremely poor with Virgin Media at providing it with a confirmed price prior to circuit delivery. Virgin Media estimates that of all the Eircom PIA circuits purchased and now delivered, less than 20% of them had a confirmed contractual price provided by Eircom during the provision process. This is not acceptable and leaves Virgin Media vulnerable to price changes late in the delivery process (by which time Virgin Media may, through necessity, have already agreed contractual commitments with its own customers). A KPI that tracked whether Eircom had provided a committed price ahead of circuit delivery, and at what stage of the order, could address this problem by providing greater visibility of a problem area.
- Major Infrastructure Projects or (‘MIPs’). As noted in its response to the PIA consultation,⁴ there have been instances where OpenEir had told Virgin Media that certain PIA features / facilities are not available on account of the job requested not being a MIP. This area is presently opaque – not only is it unclear what precisely a MIP is, or how a request qualifies to be a MIP, nor is there any accessible information as to how many orders are identified as MIPs, what proportion of the overall order population they make up, or whether certain customers (e.g., downstream Eircom) order MIPs more than others. Given that a MIP appears, on the face of it, to confer certain benefits to PIA orders that are designated as having such a status, this area needs to be better understood to help show, for example, if the presence of MIPs creates any non-discrimination concerns. KPIs can help by bringing some much-needed transparency to proceedings. The additional KPIs would be simple to design – for example, including a filter for the orders as to whether it was classified as a MIP or not (this would enable comparison of performance levels), identifying what % orders were classified as MIPs, and identifying whether there was a difference in the use of MIPs between access seekers.

Again, ComReg should also confirm that the KPIs will be made available to access seekers, and provide both performance for that access seeker’s own orders, plus overall industry

⁴ Virgin Media response to PIA consultation dated 3 March 2023. See response to Question 4.

performance, plus a relevant comparator (e.g., overall industry performance with the performance of the individual access seeker removed).

Q 3. *Do you agree with ComReg’s proposal regarding the process points metrics: for orders, road opening licenses, and delivery related metrics? Do you have any other observations in relation to process points metrics: for orders, road opening licenses, and delivery related metrics? Please provide reasons for your answers.*

Virgin Media generally supports ComReg’s proposals regarding process point metrics. It is right to sub-divide the provisioning process into key elements as doing this provides insight into areas where there may be issues and that may need further investigation. ComReg is also right to look in more detail at KPIs relating to licenses and duct remediation – these are important events that can (and do) affect circuit delivery, sometimes significantly, and so it is important that they are better understood.

While ComReg is right to specify certain KPI obligations for Dark Fibre, when Dark Fibre is used in lieu of PIA, ComReg should also impose KPIs that track how well it is performing from a provisioning and repair perspective. Without this, ComReg will have no insight into whether the Dark Fibre used in such instances works, but merely whether it is being made available or not. In Virgin Media’s view, this is not sufficient – if Dark Fibre is serving to fill a gap due to unavailability of PIA, there should be better information available to show whether it is an effective replacement or not, and this necessarily needs to include data on service performance.

Q 4. *Do you agree with ComReg’s proposal regarding the proposed PI fault metrics? Do you have any other observations in relation to the proposed PI fault metrics? Please provide reasons for your answers.*

It is essential that ComReg imposes a comprehensive set of fault KPI metrics. Virgin Media supports the fault KPIs specified in the ComReg proposal.

Virgin Media further considers that the ComReg proposals would be strengthened by ComReg making the following additions to the proposals as set out:

- ComReg should track fault performance against SLAs as specified in the PIA RO.
- KPIs should put in place for each QoS Standard, should these be separately mandated (see comments above in the response to Question 1).
- Fault KPIs should be added for Dark Fibre in circumstances where Dark Fibre is provided due to lack of availability of PIA (see comments above in response to Question 3).

Q 5. *Do you agree with ComReg’s proposal to apply the processing, reporting, and auditing requirements set out in Decision D04/22 to the PIA Metrics and the proposed implementation timelines? Please provide reasons for your answers.*

Virgin Media supports that Eircom be required to publish reports on a quarterly basis. ComReg is also right to ensure that the Eircom reports are produced in a timely fashion, in a consistent format and are comprehensive and accurate.

When ComReg publishes its quarterly reports, Virgin Media would suggest that this includes a summary dashboard of key metrics, and that the dashboard includes quarter on quarter movements to show direction of travel in relation to the measures shown.

ComReg should additionally ensure that all access seekers are provided with their own reports which show performance split by their own orders / faults, set against a relevant comparator plus overall industry performance.

As noted in the ‘General Comments’ provided above, it is critically important that the quality of the data used to create the KPIs that is inputted by Eircom is sound and accurate. If this is not the case, the KPIs themselves will be of no utility. ComReg needs to ensure, as part of the governance arrangements put in place, that there are tight controls ensuring that Eircom inputs data that is consistently accurate and of good quality. On the specific issue raised by Virgin Media on this matter (relating to orders that Eircom claimed had been delivered, which had not been delivered), Virgin Media requests that ComReg looks into this issue from a KPI quality control perspective.

Virgin Media questions whether Eircom needs the amount of time specified by ComReg to prepare the first reports. Under the current proposals, it will take one year for the first KPIs report to be produced, which is not desirable in circumstances where the present Eircom PIA products are not at adequate levels of performance. Virgin Media also notes that, in its separate report, KPMG suggests that implementation timescales should be between 3-6 months⁵. Virgin Media suggests that this, rather than the 7 months proposed by ComReg should be adopted.

⁵ KPMG report ‘PIA KPI metrics technical feasibility review,’ page 16.

Annex 1 – Suggested summary KPIs

PI Type	Metric No.	Metric Description
Sub-duct Orders	114	The number of submitted sub-duct orders
Sub-duct Orders	115	The number of accepted sub-duct orders
Sub-duct Orders	116	The number of rejected sub-duct orders
Sub-duct Orders	117	The number of cancelled sub-duct orders
Sub-duct Orders	118	The number of sub-duct orders completed
Sub-duct Orders	119	The number of sub-duct undeliverable orders
Sub-duct Orders	120	The number of sub-duct residual orders
Sub-duct Orders	121	The number of sub-duct orders re-forecasted
Sub-duct Orders	122	The number of non-fluid sub-duct orders
Sub-duct Orders	123	The number of sub-duct orders non-fluid by reason
Sub-duct Orders	124	The accepted sub-duct orders as a percentage of submitted sub-duct orders
Sub-duct Orders	125	The number of rejected sub-duct orders as a percentage of submitted sub-duct orders
Sub-duct Orders	126	The cancelled sub-duct orders as percentage of accepted sub-duct orders
Sub-duct Orders	127	The completed sub-duct orders as a percentage of accepted sub-duct orders
Sub-duct Orders	128	The undeliverable sub-duct orders as a percentage of accepted sub-duct orders