An Coimisiún um
Rialáil Cumarsáide
Commission for
Communications Regulation

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

Consultation

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Chapter 1

1 Executive Summary

PIA Consultation

1.1 On 9 January 2023, ComReg published its PIA Consultation (Document No: 23/04)[1] and draft decision on the PIA market. In the PIA Consultation, ComReg proposed to designate Eircom with SMP on the national market for Physical Infrastructure Access and to impose a number of obligations on Eircom including a requirement to publish KPI metrics in respect of the following:

(a) PI orders,

(b) PI provisioning process point intervals metrics (e.g., descriptive statistics such as the mean, the standard deviation of the elapsed time between provisioning process points), and

(c) PI fault repairs.

1.2 The present Consultation follows from the PIA Consultation where ComReg indicated that it would consult in respect of a further specification of the proposed obligation on Eircom to monitor and publish KPIs including as regards the details of the relevant performance indicators and how they should be measured. This Consultation accordingly should be read together with the PIA Consultation having regard to ComReg's proposal to require Eircom to monitor and publish KPIs for PIA ('**PIA KPI Metrics**').

The 2022 KPI Decision

1.3 In further specifying the requirement to publish PIA KPI Metrics, ComReg proposes to rely on the framework set out in its Decision D04/22 of 29 June 2022 (the '**2022 KPI Decision**').[2] The 2022 KPI Decision further specifies the KPI by which Eircom is to measure performance in respect of certain Access Products and Services, in particular wholesale broadband access products, and sets out in that context requirements as regards monitoring processes, report publication, audit and a mechanism by which KPIs can be kept current. In this Consultation, ComReg proposes to rely on ComReg Decision D04/22 to further specify the requirement proposed to be imposed on Eircom to publish KPIs in respect of PIA and amend the 2022 KPI Decision by adding to the KPI Metrics which Eircom is to use, specific KPI Metrics related to PIA as proposed in this Consultation.

[1] ComReg Consultation and Draft Decision, Physical Infrastructure Access (PIA) Market review, ComReg document 23/04, 09 January 2023.
[2] Access Products and Services: Key Performance Indicator (KPI) Metrics, ComReg Decision D04/22, dated 29 June 2022 (the '2022 KPI Decision').

Scope

1.4 ComReg proposes that KPI metrics should be reported and published in respect of the following Physical Infrastructure ('**PI**') products and services[3]:

(a) Pole access,

(b) Duct access,

(c) Sub-duct access,

(d) Direct duct access,

(e) Chambers access, and

(f) Dark fibre access where dark fibre access is reasonably available.

1.5 In order that PIA KPI Metrics provide transparency as regards the access provided to Access Seekers and Eircom's own supply ComReg proposes to specify metrics which ensure that all critical points involved in ordering, provisioning, and service assurance (fault repair) are measured.

1.6 The proposed metrics have been further disaggregated into different product categories, and where relevant and appropriate, further into route length categories, in order to reflect performance accurately. Route lengths are measured in metres for ducts (with 4 categories proposed for duct and sub-duct, less than or equal to 500m; from 500m to less than or equal to 2500m, from 2500m to less than or equal to 5000m, and over 5000m), and with 3 categories for the number of poles (0-3 poles, 4-10 poles, and over 10 poles).

Order metrics

1.7 Order metrics measure outcome of the submitted orders by reference to the percentage of orders that are accepted/rejected and final outcome (status) of orders such as completed, cancelled, or undeliverable. They also include metrics to measure the extent of deviations/exceptions from the standard provisioning process and record associated reasons for the deviations/exceptions in percentage terms.

1.8 Also included in the order metrics category are metrics relating to forecasting (monitoring the categorisation of orders and subsequent changes to the forecasted date for delivery), the utilisation of existing sub-duct (measuring the percentage split between new and existing sub-duct for Eircom controlled sub duct orders), and the average of repairs required per kilometre.

[3] ComReg notes that the PI products and service are inputs to downstream products and services such as broadband (Bitstream plus and VUA), Data Products (NGN), backhaul, fronthaul, VoIP.

Process Point metrics (elapse times)

1.9 Process point metrics measure performance throughout the end-to-end provisioning and service assurance process by reference to milestones or process points. The time taken to move from each process point to the next process point is the elapsed time for those process points. Metrics on the elapsed time between process points will provide transparency on Eircom's relative performance as between self-supplied PIA and PIA to Access Seekers.

Bulk order metrics

1.10 ComReg proposes however to provide separately for the measurement of performance where large volumes of PIA are involved, and to specify a separate volume-based metric category. Such large orders may occur for instance where an Access Seeker seeks access to a high proportion of ducts and poles within a geographic area such as an exchange area(s) or sub-divisions of an exchange area(s), and rather than submitting multiple orders for discrete PI routes or parts of PI routes, submit a type of bulk order. PIA KPI metrics reporting performance based on aggregated PI volumes consumed for that data collection period, e.g., per quarter, are more meaningful.

Fault Repair metrics

1.11 ComReg proposes two fault repair metric categories. The fault validation metric category simply measures the percentage of accepted and rejected PI faults. The second category measures the elapse time between key process points in the fault repair lifecycle.

Implementation

1.12 ComReg proposes to require that the first PIA KPI metrics report is published 12 months after ComReg's Decision thus allowing Eircom a period of 7 months to identify, document and implement any development and processes that may be required for the monitoring and reporting of KPIs, a period of 3 months for the first data collection period, and a further 2 months to gather, process and publish the PI KPI metric report.

Chapter 2

2 Introduction and Background

2.1 ComReg is the national regulatory authority ('**NRA**') for the electronic communications sector in Ireland. As the NRA under the European regulatory framework for electronic communications, ComReg is tasked with reviewing electronic communications markets and where ComReg finds that relevant markets are not competitive, ComReg is required to impose obligations on operators found to have significant market power ('**SMP**'). Obligations which ComReg may impose include obligations to meet reasonable requests for access to Regulated Access Products ('**RAPs**'), obligations of transparency and non-discrimination, obligations of price control and cost accounting and obligations of accounting separation.

2.2 On 9 January 2023, ComReg published its PIA Consultation (Document No: 23/04)[4] and draft decision on the PIA market. In the PIA Consultation, ComReg proposed to designate Eircom with SMP on the national market for Physical Infrastructure Access and to impose a number of obligations on Eircom including a requirement to publish KPI metrics in respect of the following:

(a) PI orders,

(b) PI provisioning process point intervals metrics (e.g., descriptive statistics such as the mean, the standard deviation of the elapsed time between provisioning process points), and

(c) PI fault repairs.

2.3 The present Consultation follows from the PIA Consultation where ComReg indicated that it would consult further in respect of a further specification of the proposed obligation on Eircom to monitor and publish KPIs including as regards the details of the relevant performance indicators and how they should be measured. This Consultation accordingly should be read together with the PIA Consultation having regard to ComReg's proposal to require Eircom to monitor and publish KPIs for PIA.

2.4 In further specifying the requirement to publish PIA KPI Metrics, ComReg proposes to rely on the framework set out in its Decision D04/22 of 29 June 2022 (the '**2022 KPI Decision**').[5] The 2022 KPI Decision further specifies the KPI by which Eircom is to measure performance in respect of certain Access Products

[4] ComReg Consultation and Draft Decision, Physical Infrastructure Access (PIA) Market review, ComReg document 23/04, 09 January 2023.
[5] Access Products and Services: Key Performance Indicator (KPI) Metrics, ComReg Decision D04/22, dated 29 June 2022 (the '2022 KPI Decision').

and Services, in particular wholesale broadband access products, and sets out in that context requirements as regards monitoring processes, report publication, audit and a mechanism by which KPIs can be kept current. In this Consultation, ComReg proposes to rely on ComReg Decision D04/22 to further specify the requirement proposed to be imposed on Eircom to publish KPIs in respect of PIA and amend the 2022 KPI Decision by adding to the KPI Metrics which Eircom is to use, specific to KPI Metrics related to PIA.

2.5 The KPIs proposed will allow comparison of Eircom's performance in respect of ordering, provisioning, and service assurance when providing PI to Access Seekers and itself. The publication of PIA KPIs allows for transparency and can support providing confidence in the provision of access by Eircom on a non-discriminatory basis. The PIA KPI metrics will provide both ComReg and Access Seekers with a means of identifying any equivalence concerns and take action accordingly and as appropriate.

2.6 The European Union (Electronic Communications Code) Regulations 2022, SI No. 444 of 2022 ('**the ECC Regulations**') made by the Minister for Communications for the purpose of transposing the 2018 European Electronic Communications Code ('**EECC**')[6] which set out, recast, the European regulatory framework for electronic communications, have yet, at the time of publication of this Consultation, to be commenced and the legal basis for both the PIA Consultation and this Consultation is accordingly the suite of regulations made in 2011, including in particular the Framework Regulations[7] and the Access Regulations[8]. Were transposition of the EECC to be completed prior to the adoption of ComReg's final decisions, ComReg will adopt such decisions on the basis of the transposing legislation. References to the ECC Regulations have been included accordingly.

2.7 This remainder of this Consultation is structured as follows:

- Section 3 sets out the KPI Metrics by which Eircom's performance is to be measured and reported;
- Section 4 sets out KPI processing, reporting, and auditing requirements;
- Section 5 sets out ComReg's Regulatory Impact Assessment; and

[6] Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code.
[7] European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011) (the 'Framework Regulations').
[8] European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011) (the 'Access Regulations').

- Appendix 1 contains the draft Decision Instrument amending the Decision Instrument at Appendix 1 of the 2022 KPI Decision.

2.8 ComReg invites interested parties to make submissions, providing reasons along with all relevant factual or other evidence supporting views presented, on or before **1700 hrs on June 9, 2023.** Responses received after this date will not be considered. Responses should be marked for the attention of:

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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.

Chapter 3

3 PI KPI metrics

3.1 Order lifecycle and process points

3.1 One of the objectives of the PIA KPI metrics is to enable ComReg and Access Seekers to assess whether products and services offered on a wholesale basis are being provided in a non-discriminatory manner by Eircom. To that purpose, reported KPI Metrics should provide comparisons between wholesale inputs at the appropriate points in the PIA product and service lifecycle for ordering, provisioning, and service assurance, and they should be accurate and fully transparent.

3.2 ComReg has identified 5 categories of KPI Metrics, namely Order, Provisioning, Fault, Repairs and Bulk Order, having regard to the PIA product lifecycle, with each category subdivided further having regard to potential outcomes throughout the relevant stage of the lifecycle. In proposing the Order, Provisioning and Bulk Order Metrics, ComReg has had regard to the typical order process flow for PIA. In particular, in order to procure a point-to-point or point-to-multi-point access to physical infrastructure, an operator will capture its requirements in a PI order submitted through the PI ordering channel/interface. Once the PI order has been validated, its processing will involve establishing the work order types that need to be raised on the Work Orders Module – SAP (WO-SAP) system, which is the plant maintenance module of SAP[9]).

3.3 A work order is used to identify and collect costs and to indicate/track performance statuses associated with a specific work/project. These costs are identified using services codes and the related required materials codes; in effect a Bill-of-Material. Other documents such as work instructions, detailed drawings, traffic management plans etc. are attached to the work order. In addition, a work order is used to specify the details of the tasks to be completed and to manage those tasks using transactions. Work orders have defined lifecycles that are configured in WO-SAP which is also used to as workflow controller.

3.4 Work orders have a lifecycle that includes the following: User Status: Create (New), Prepare (PREP), Check (CHCK), Approve (APPR), Fit-for-Purpose (FFPU), Field Complete (FLCP), Non-Fluid (NONF). As the work order progresses through its steps/stages the User status of the work order changes

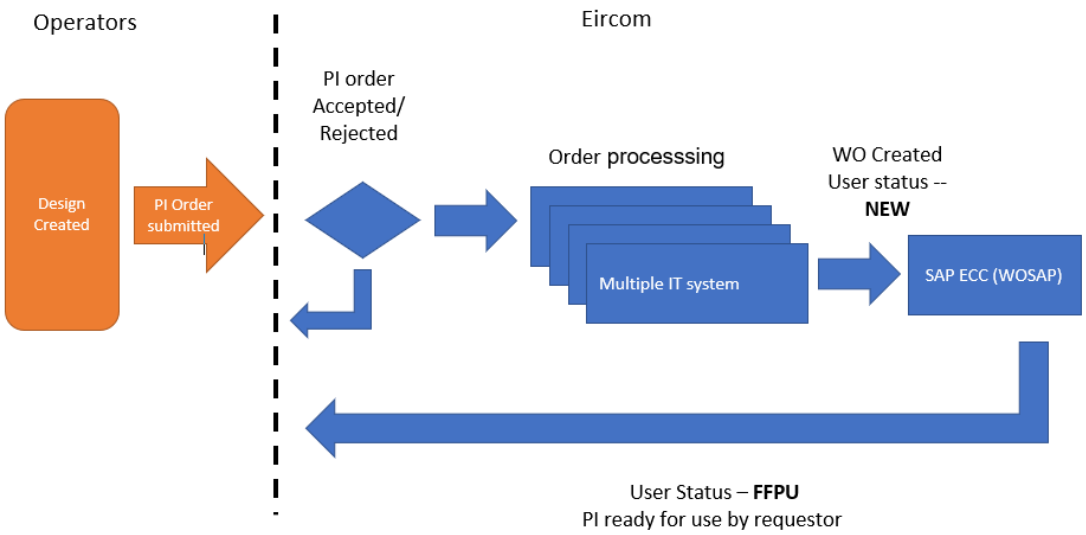
[9] SAP Plant Maintenance (SAP PM) is a component of the SAP Enterprise Resource Planning (ERP) module that is maintain physical equipment and systems e.g. Physical Infrastructure network.

to reflect its progress. Each status gate point is used to manage and to track the progress to the work order and related tasks.

3.5 All the steps/stages in the work order lifecycle provides important information on the progress of work orders and the related tasks. The User Status of New, FFPU, and FLCP are of particular importance for the proposed PIA KPI metrics. New means a work order is created; FFPU means that the PI is ready to host cables and equipment, and FLCP means that the formal documentation associated with the infrastructure is submitted by the contractor/field staff.

3.6 A typical order process flow is depicted in diagram 1.

Diagram 1

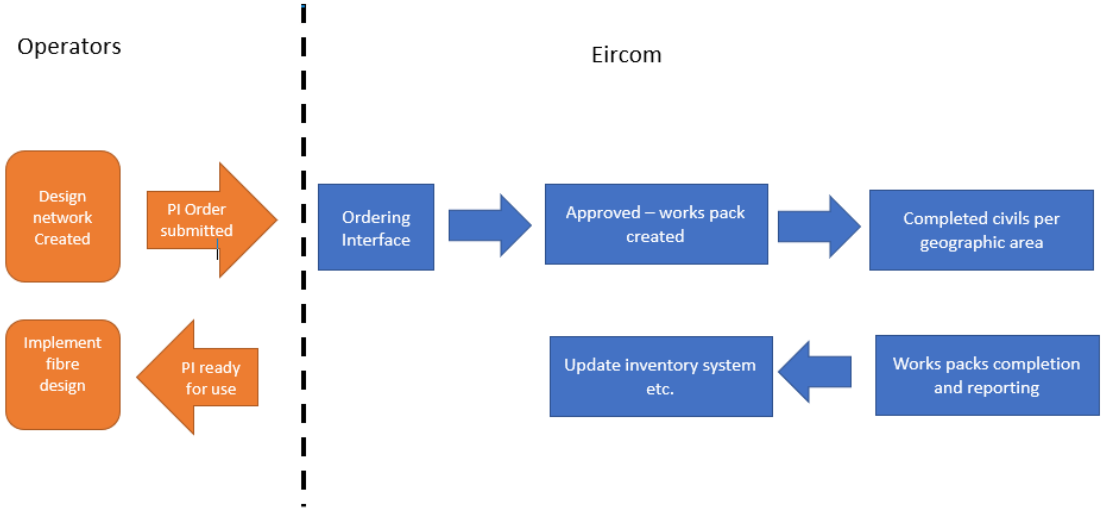


3.7 Insofar as Bulk orders are concerned, they may be required where operators require access throughout a geographic area. Although the design and build processes are fundamentally similar to those used for a single order, implementation may differ. In that case, once the operator completes the network design process for a geographic area(s) the PI inputs necessary to implement the design are identified. Next the PI inputs necessary to implement the design are ordered, and then work packs related to the PI orders are created and necessary tasks are assigned to the field staff to provide the PI access ordered.

3.8 The civil engineering work is completed in order to provide the PI access. The field staff provide evidence that the civils tasks have been completed and complete other administrative tasks which typically includes updating physical inventory system records, recording material usage, closing off road opening licences (e.g. T5 notifications). The combination of these is tasks referred to as the completion civils work pack for the geographic area.

3.9 A typical order process flow is depicted in diagram 2.

Diagram 2



3.10 ComReg also notes that additional transparency will be obtained by measuring elapsed time between various process points, e.g., from when an order is submitted to when the order is validated, and from PI order validation to when the work orders are created, or from when the work order is created to when infrastructure is ready to be used. ComReg proposes in this regard to use a number of descriptive statistics to monitor elapsed time between certain process points related to the provisioning and assurance service, based on the mean, mode and median of the datasets. For ease of reference, mean, mode and median refer to the following:

i. **Mean,** which represents the average value of a set of data and is calculated by adding up values in the data set and dividing them by the total number of values. The mean provides an appropriate representation of the "typical" value in the set of data. However, it can be heavily influenced by extreme values in the dataset, which can skew the result, and for this reason, should be complemented by median or mode as other measures of central tendency.

ii. **Mode**, which is the value that appears most often in the dataset. The mode is particularly useful when dealing with nominal or categorical data. However, it may not be unique or may not exist if all values in the dataset occur with the same frequency, and it may not be representative of the entire dataset if it is skewed or has outliers.

iii. **Median**, which is the middle value in a set of ordered data points. The median is not affected by extreme values (outliers) in the data set, unlike the mean.

3.11 The descriptive statistics proposed by ComReg in respect of the above categories of metrics include the standard deviation, skewness and Kurtosis:

i. The **standard deviation** measures the amount of variation or dispersion from the mean in a set of data values. The standard deviation provides useful information about how much the data is spread out from the mean. A low standard deviation indicates that the data points tend to be very close to the mean, while a high standard deviation indicates that the data points are spread out over a large range of values. It is calculated using the formula **(σ) =** $\sqrt{(\sum(\mathbf{x} - \mu)^2/\mathbf{N})}$**,** where x is the data value in the set; μ is the mean of the data set and N is the total number of data values in the set.

ii. **Skewness** measures the asymmetry of a distribution. It indicates whether the distribution is symmetric (where the mean, median, and mode are equal) or skewed (where the mean, median, and mode are different).

Distributions can exhibit right (positive) skewness or left (negative) skewness to varying degrees. A normal distribution (bell curve) exhibits zero skewness.

Skewness shows the direction of outliers. In a positive skew, the tail of a distribution curve is longer on the right side. This means the outliers of the distribution curve are further out towards the right and closer to the mean on the left. However, skewness does not inform on the number of outliers; it only communicates the direction of outliers.

$$\text{Peason's median skewness} = 3 \text{ x } \frac{(Mean - Median)}{\text{Standard deviation}}$$

iii. **Kurtosis** refers to the sharpness of the peak or flatness of a probability distribution curve. It measures how much of the data is concentrated around the mean of the distribution, and how much is spread out in the tails. It is calculated using the formula $\mathbf{Kurtosis} = \frac{\mu 4}{\sigma^4}$, where μ4 is the unstandardized central fourth moment and σ^4 – the standard deviation.

3.2 Categories of metrics

3.12 In light of the above, ComReg proposes the following 5 categories of KPI Metrics:

Order metrics

(a) Accepted orders

(b) Rejected orders

(c) Cancelled orders

(d) Completed orders

(e) Residual orders

(f) Undeliverable orders/request

(g) Accepted orders that meet forecasted date

(h) Accepted orders that were re-forecasted and the reforecast reasons

(i) Accepted orders that are classified as non-standard

(j) Accepted orders that became Non-Fluid

(k) Non-Fluid works orders by categories of reason type

(l) Utilisation of existing physical infrastructure (sub-duct)

Provisioning related process points metrics

(a) The elapse time descriptive statistics from Request Submitted -- to Request Acceptance.

(b) The elapse time descriptive statistics from Request Acceptance to new Works Order.

(c) The elapse time descriptive statistics from Request Rejection to new Works Order.

(d) The elapse time descriptive statistics from New Works Order to Works Order Fit for Purpose i.e. SAP Works order User Status FFPU (Fit-For-Purpose).

(e) The descriptive statistics for the elapse time from the identification of the duct network remediation requirement to submission of the licence application to the licencing authority by licence type (e.g. T2[10] and T3[11]).

(f) The descriptive statistics for the elapse time from the granting of the licence by the licencing authority to the completion of the duct network remediation.

[10] T2 Licence is an application to carry out works on a public road of moderate impact due to the location, extent, amount or duration of the work.
[11] T3 Licence is an application to carry out works on a public of low impact due to the location, extent, amount or duration of the work.

(g) The descriptive statistics for the elapse time from the identification of the duct network remediation requirement to completion of the duct network remediation.

(h) The average number of blockages per kilometres.

(i) The percentage of license applications rejected by the licensing authority.

Submitted fault metrics

(a) Accepted faults.

(b) Rejected faults.

Fault repair process point metrics

(a) The descriptive statistics for the elapse time from Log PI fault to PI fault validated.

(b) The descriptive statistics for the elapse time from PI fault validated to Request for PI repair.

(c) The descriptive statistics for the elapse time from Request for PI repair to completion of repair (i.e. declared fit-for-purpose by Eircom).

Bulk order

(a) Elapsed time descriptive statistics for order validation.

(b) Elapsed time descriptive statistics from civils work pack creation to civils 'work pack completion'[12].

(c) The total number of change requests.

(d) % Volume of submitted PI orders that require change requests as a percentage of submitted orders.

(e) % Volume of submitted PI orders completed as a percentage of submitted orders.

(f) % Volume of submitted PI orders cancelled as a percentage of submitted orders.

(g) % Volume submitted PI orders undeliverable as a percentage of submitted orders.

(h) % Volume of submitted PI orders residual as a percentage of submitted orders.

[12] Work pack completion is a report confirming that the necessary tasks required to facilitate access in a geographic area(s) has been completed. The report includes the supporting documentation that demonstrates that the required tasks are complete.

3.13 The categories of PIA KPI Metrics listed in paragraph 3.12 above represent the full suite of PIA KPI Metrics. However, not all metrics apply in respect of each PI access product and service. For example, forecast and non-fluid KPIs are not applicable in the case of Direct Duct access. The definitive list of PIA KPI metrics for each of the PI access products and services are provided in Schedule 1 to the draft Decision Instrument.

3.3 Order metrics

3.14 PI order metrics are a group of related metrics that provide comparable information on the outcome of the PI delivery processes and information on the classification of PI orders. Each metric will provide information on the PI orders outcomes and their classification as they progress through the order processing and service delivery processes.

3.15 Below is an overview of the proposed metrics. The definitions of the PIA KPI metrics, related terms and the formulas for calculating the relevant metrics for each PI product and service are outlined in Schedules 1 and 2 to the draft Decision Instrument.

Accepted and Rejected order metrics

3.16 When PI orders are submitted, they are validated with one of two outcomes, namely the submitted order is either accepted or rejected.

3.17 An accepted order status means that an Access Seeker has provided an order containing all the required mandatory information. A rejected order means that the order has not been accepted due to validation failing e.g. there is missing or inaccurate data.

3.18 The accepted orders metric measures accepted orders as a percentage of submitted orders. Once the ‘accept’ order metric is calculated the ‘reject’ orders metric can be easily determined by subtracting the percentage of accepted orders from one hundred percent.

Cancelled orders metric

3.19 A cancelled order is an order that an operator has requested to be cancelled prior to reaching a final status. The cancelled metric measures the total number of orders cancelled as a percentage of accepted orders.

Completed orders metric

3.20 The completed order metric measures the percentage of accepted orders that were successfully completed. This metric measures the percentage completed orders as a percentage of the accepted orders.

Residual orders

3.21 The residual order metric measures the number of accepted orders that have not reached a final status (e.g. cancelled, completed, or undeliverable) within the current data collection period as a percentage of accepted orders within the current period. The outstanding orders at the end of each current data collection are the residual orders which will be measured with this metric.

3.22 PIA orders will typically require field activity, or civil engineering tasks to be completed. These tasks can be time consuming. Therefore, orders received towards the end of the current data collection period may not have been completed within the current data collection period. In such circumstances, it is important to track the percentage of outstanding accepted orders at the end of each data collection period and to track the outcome of those orders.

Undeliverable orders metric

3.23 An undeliverable order is an order that cannot be delivered but was not rejected. For example, a duct or a segment of duct may have been inadvertently filled with concrete during construction activity. Therefore, an order for that specific duct route would be classified as an undeliverable order because it is no longer possible to install a sub-duct into the duct to host cables in that segment of duct. The undeliverable order metric will measure the undeliverable orders as a percentage of accepted orders.

3.24 The example provided in paragraph 3.23 is for illustration purposes only. ComReg notes there may be several legitimate reasons why PI orders may not be deliverable, which will be documented in Eircom's PIA KPI business rules document.

Accepted orders that have met the forecasted date

3.25 The proposed metric (met forecasted date) measures the percentage of orders that have met the original forecasted due delivery date.

3.26 During the order validation process Eircom will assess the order to determine what civil engineering tasks are required to deliver the service requested. Based on this assessment, Eircom provides a forecasted due delivery date for the product i.e. the forecast date. If the PI order is not competed on the forecasted date the order will not have met the forecasted date.

3.27 The purpose of this metric is to measure the percentage of orders that are not completed on the forecasted date rather than the reason(s) why the forecasted date has not been met.

3.28 It is accepted that the reasons why an order may not have been completed on the forecasted date may, in certain circumstances, be beyond Eircom's direct

control. Nonetheless, the proposed metric provides transparency regarding issues that have delayed the delivery process.

Accepted orders that meet the re-forecasted date

3.29 As explained in paragraph 3.26 accepted orders have a forecasted due delivery date. However, when Eircom's field operations team or Eircom's contractors are in the process of delivering the PI product, they may encounter an unforeseen circumstance that necessitates a change to planned work or extra work to deliver the product. As a result of the unforeseen circumstances the forecasted due delivery date may need to change. When this occurs, Eircom will need to advise the relevant operator that the order or that part of the order cannot be delivered on the original forecasted date. Consequently, the order will have a new delivery date (i.e. re-forecasted date) based on the available information.

3.30 However, the percentage of orders that were re-forecasted will provide basic information, but not the full picture. A more comprehensive understanding of the reasons that caused the order to be re-forecasted requires additional information, namely the reasons why orders were re-forecasted. The combination of the simple percentage of orders that were re-forecasted and the percentage of re-forecasted orders by reason type will provide the necessary information for transparency purposes.

Accepted orders that are classified as non-standard

3.31 The purpose of the proposed non-standard order metric is to measure the percentage of accepted orders that are classified as non-standard deliveries. In some circumstances PI orders may be deemed standard and delivered within the target timeframe that is specified in the related Service Level Agreement. In other circumstances, the PI order may be deemed as non-standard, so the order will be delivered based on a forecasted due delivery date.

3.32 This metric measures the relative number of PI orders that are deemed standard versus non-standard for Eircom and Access Seekers. This metric helps to provide transparency regarding the categorisation of PI orders as standard and non-standard orders.

Non-Fluid Works Orders

3.33 The proposed non-fluid order metric measures the percentage of accepted orders that became non-fluid during the delivery process.

3.34 Some accepted PI orders can become non-fluid during the delivery process and non-fluid is the term used to denote an issue(s) preventing planned tasks from completing, which in turn can delay the order from completing.

Non-Fluid Works Orders by reason type

3.35 There are several reasons why orders become non-fluid, such as wayleave/licence, awaiting stores, etc. The Non-fluid work orders by reason type measures the percentage of non-fluid orders by non-fluid reason type by reference to the total number of non-fluid orders. Using the total number of non-fluid occurrences in the data collection period to calculate the metrics should make the metrics clearer.

3.36 To illustrate using a hypothetical example, if there are in total 100 occurrences of non-fluid works orders in a data collection period which breaks down as follows: 50 instances of Awaiting Deviation from Estimate ('**DFE**')[13] Approval, 30 instances Wayleave/Licence, and 20 instances Private wayleaves. The resulting metrics will be 50% Awaiting DFE Approval, 30% Wayleave/Licence, and 20% Private wayleaves.

Existing sub-duct utilisation

3.37 This metric measures the utilisation of existing sub-duct for accepted sub-duct orders. In the case of sub-duct access, an Access Seeker specifies the ingress and egress locations for the duct route(s) in the request for access. The route between the ingress and egress locations can be provided by using a combination of existing sub-duct capacity, installing new sub-duct, or a combination of existing sub-duct capacity and new sub-duct.

3.38 The available PI (sub-duct) and the PI chosen by the Eircom designer/planner to meet the access request could impact the delivery timeline for the PI order. For instance, installing a new sub-duct requires more effort (i.e., time to deliver the route) in comparison to reusing existing sub-duct capacity on the route(s) or on parts of the route(s).

3.39 ComReg notes that by aggregating the delivery of sub-ducts orders containing different route lengths into a single existing sub-duct utilisation metric means that the sub-duct utilisation metric may not provide sufficient transparency on the utilisation of existing sub-ducts between Access Seekers and Eircom. To provide the necessary transparency, the sub-duct utilisation metric needs to be sub-divided into route length categories (e.g. route length bands 1, 2, 3). The concept of route length bands is explained in more detail in paragraphs 3.78 to 3.81.

Bulk Orders

3.40 In certain circumstances orders may be grouped into bulk orders for convenience. For example, if an Access Seeker wants to access a high proportion of the available ducts and/or poles within a geographic area such as an exchange area(s) or sub-divisions of an exchange area(s), rather than

[13] DFE means Deviation From Estimate occurs during the provisioning process where additional work is identified requiring additional expenditure that requires approval.

submitting multiple orders for discrete PI routes or sections of PI routes, the Access Seeker may submit a type of bulk order.

3.41 In these circumstances, it would be more appropriate to measure performance by reference to a bulk order metric based on the aggregated PI volumes consumed for the data collection period, e.g. per quarter.

3.42 ComReg proposes two sub-categories within bulk metrics: elapsed time and order volume related metrics.

3.43 In terms of elapsed time bulk order metrics, ComReg proposes through the order validation elapsed time metric to measure the elapsed time from when an order is submitted to when the orders are accepted using a set of descriptive statistics which measures the relative performance between Access Seekers and Eircom's self-supply.

3.44 In addition, ComReg proposes with the civil work packs creation to civil work pack completion elapsed time metric to measure the elapsed time from when the civils work packs are created to when the civil works element of the design is completed e.g. has reached an in-service status on Eircom's physical inventory system.

3.45 Performance in respect of bulk orders will be affected by those circumstances where the requested PI access cannot be delivered for unforeseen reasons. This situation can occur typically for a small percentage of the PI access requested. When this situation occurs, Eircom informs the operator that the access cannot be delivered. The operator can change the request and select an alternative PI through a change request, if necessary.

3.46 ComReg considers that two change request metrics are required. The first change request metric measures the total number of change requests and the second change request metric measures volume of PI affected by the change requests.

3.47 For example, one change could relate to ten chambers and another change request could relate just to one chamber. By counting only the total number of change requests, the detail relating to scale of the change would not be recorded. ComReg therefore considers that two metrics change request are necessary and appropriate.

3.48 In the context of bulk orders the concepts of cancelled, completed, residual and undeliverable metrics are measured cumulatively over multiple data collection periods.

3.49 The bulk order metrics is explained below by way of hypothetical example.

3.50 In quarter one 2023, an Access Seeker submits two bulk orders requesting access to 20,000M of sub-duct and 600 pole replacements, and 15,000M of sub-duct and 400 pole replacements.

3.51 Cumulatively this equates to 35,000M of sub-duct and 1,000 pole replacements. At the end of quarter one 2023, 32,500M of sub-duct were completed and 800 poles were replaced. In percentage terms 92% (i.e. 32,500/35,000 X100%) of the sub-duct access requested was completed and 80% (i.e. 800/1,000 X100%) of the requested pole replacements were completed. Therefore, the residual (i.e. the outstanding) sub-duct and pole replacements are 8% and 20% respectively of the requested PI access.

3.52 The quarter one residual bulk orders metrics is calculated in quarter two of 2023 as follows: at the end of quarter one there was 2,500M and 200 pole replacements that did not have a final status, so the baseline for the metric calculations in quarter two 2023 is 2,500M of sub-duct and 200 poles. In quarter two 2023, hypothetically, an additional 2,000M of sub-duct were delivered and additional 180 poles were replaced.

3.53 In percentage terms at the end of quarter two cumulatively 98.58% (i.e. 34,500/35,000 X100) of the sub-duct were delivered and cumulatively 98% (i.e. 980/1,000 X100) of the requested pole replacements were completed. This means that at the end of quarter two 2023, the residual sub-duct and pole replacements for quarter one 2023 is 1.42% and 2% respectively.

3.54 ComReg proposes that each PI bulk order metric is reported cumulatively for three quarters. In practice this means that PI components ordered with a bulk order, for instance in quarter one, that reach their final status in quarter one will have their metrics reported in quarter one. The PI components ordered in quarter one that reach their final status in quarter two will be added to the PI metrics of the orders that reached that final status in quarter one. Similarly, the PI components that reach their final status in quarter three will be added to the final status metrics for quarter one or two (Table 1 below illustrates).

3.55 The cycle explained in paragraph 3.54 will be repeated for the PI bulk orders submitted in quarter two and so on.

3.56 The same methodology and cycle will be used to calculate the percentage for completed, cancelled¸ undeliverable and residual metrics for bulk PI orders.

3.57 Below are examples of bulk PI order metrics using hypothetical data for illustrative purposes. Two sets of tables are required, that is, one set of tables for Access Seekers and one set of tables for Eircom.

Table 1

PI Type	% Change requests as a percentage submitted orders by volume	% Completed orders as a percentage submitted orders by volume	% Cancelled orders as a percentage submitted orders by volume	% Undeliverable orders as a percentage submitted orders by volume	% In final status at the end of data collection period i.e. the sum of Completed, Cancelled, and Undeliverable	% Volume of requested access that has not reached a final status at the end of the data collection periods i.e. residual
Duct	0%(Q1)	97%	2%	1%	(97+2+1)=100%(Q1)	0% (Q1)
Sub-duct	3%(Q1)	65%	3%	2%	(65+3+2)=70%(Q1)	30% (Q1)
Pole	2%(Q1)	80%	1%	1%	(80+1+1)=82%(Q1)	18% (Q1)
Chambers	0.5%(Q1)	75%	1%	2%	(75+1+2)=78%(Q1)	22% (Q1)
Duct	0%(Q1)+0%(Q2)=0%	0%	0%	0%	100%(Q1)+ (0+0+0) 0%(Q2)=100%	0% (Q2)
Sub-duct	3%(Q1)+1%(Q2)= 4%	13%	3%	3%	70%(Q1)+ (13+3+3) 16%(Q2)=86%	14% (Q2)
Pole	2%(Q1)+2%(Q2)=4%	10%	0%	0%	82% (Q1)+ (10+0+0) 10%(Q2)=92%	8% (Q2)
Chambers	0.5(Q1)+2%(Q2)=2.5%	10%	1%	2%	78% (Q1)+ (10+1+1) 12%(Q2)=90%	10% (Q2)
Duct	0%(Q1)+0%(Q2) +0%(Q3)=0%	0%	0%	0%	100%(Q1)+ (0+0+0) 0%(Q2)=100%	0% (Q3)
Sub-duct	3%(Q1)+1%(Q2) +0%(Q3)= 4%	12%	0%	2%	70%(Q1)+16%(Q2)+(12+0+2) 14%Q3=100%	0% (Q3)
Pole	2%(Q1)+2%(Q2) +0%(Q3)=4%	7%	0%	1%	82% (Q1)+10%(Q2)+(7+0+1) 8%Q3=100%	0% (Q3)
Chambers	2%(Q1)+0.5%(Q2) +0%(Q3)=2.5%	10%	0%	0%	78% (Q1)+12%(Q2)+(10+0+0) 10%=100%	0% (Q3)

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

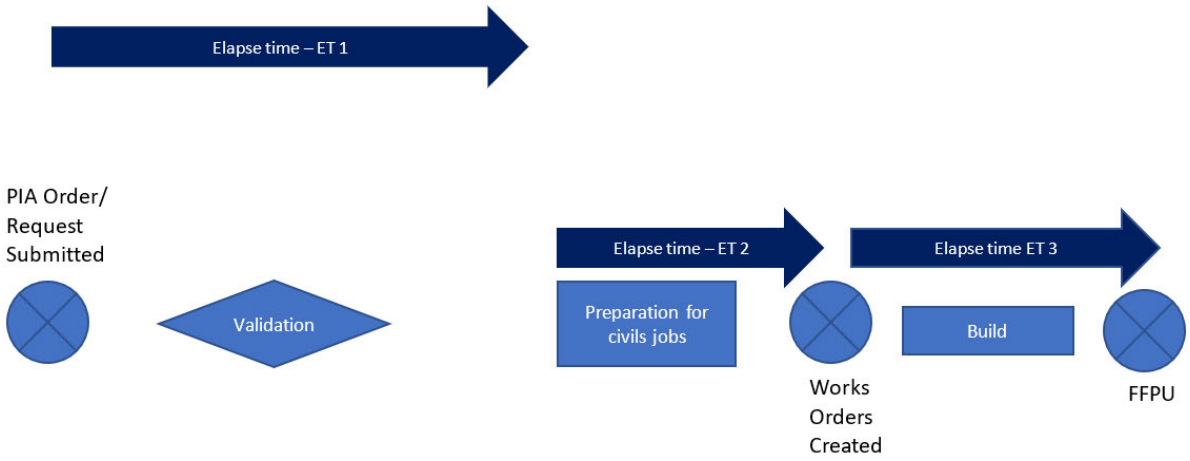
3.4 Process points metrics: for orders, road opening licences, and delivery related metrics

3.58 The process points metric provides descriptive statistics (the mean, mode, median, standard deviation, skewness, and kurtosis) regarding the elapse time between a set of process points.

3.59 PIA orders have a lifecycle that starts when the PIA order is submitted and ends when accepted orders reach a final status (e.g. the completed status).

3.60 The diagram below depicts at a high-level the PI order end-to-end life cycle with each of the main process points.

Diagram 3



3.61 ComReg proposes that the time elapsed is measured between each of the process points listed:

(a) from order submitted -- to acceptance (ET1)

(b) from acceptance -- to "NEW" Works Order (ET2)

(c) from Works Order "New" -- to Works Order Fit for Purpose i.e. SAP Works order User Status FFPU (ET3).

Duct remediation (clearances excavation, and duct remediation) metrics

3.62 Underground duct routes over time can become damaged for various reasons such as ingress of tree roots into the duct, crushing of the duct, or subsidence. If a duct is damaged, access to that duct can be impeded and may need to be remediated. At some point the requirement to remediate the duct will be identified, normally during the rod, rope and test process.

3.63 To remediate an underground duct route, excavation will be required to expose the damaged section(s) of duct. To excavate a carriageway, a footway, or a verge requires permission from the relevant licensing authority, e.g. a local authority. The local authority may grant the licence with or without conditions, or not grant the licence.

3.64 Where excavation is required, the time taken to make the licence application and the time taken to remediate the duct once the licence is granted affect the delivery of the PI products and services. Monitoring the elapses time prior to the licence application and after licence has been granted provides transparency as regards delays arising in those circumstances.

3.65 ComReg proposes three metrics to monitor the licence application process and the related remediation after the licence has been granted as follows:

(a) from duct remediation identification to the road opening licence application,

(b) from road opening licence grant to completion of the duct remediation, including excavation [14], and

(c) from duct remediation identification to completion of the remediation.

3.66 As Eircom is not responsible for the processing of the licence applications ComReg proposes further that performance is measured using two sets of metrics. The first set of metrics will measure the full elapse time without any time periods excluded; the second set of metrics will be adjusted for third party delay i.e. local authority processing time.

3.67 This will quantify third party processing delays on the overall cycle time and the cycle times for the intermediatory process steps.

[14] ComReg notes that the “completion of the duct remediation” is not the completion of the T5 notification on the MapRoad Licensing system corresponds to the point when the field staff have completed the repair.

The percentage of license applications rejected by the licensing authority

3.68 When a licence application is submitted to the licensing authority it may not be processed and returned because of, for example, an error or because information is missing from the licence application.

3.69 The purpose of this metric is measure relative difference in the percentage of licence application rejections for Access Seekers and for Eircom itself both for T2 and T3 licence applications.

Duct remediation metrics grouped by duct diameter

3.70 As explained in paragraph 3.62 ducts can be damaged for a variety of reasons, which can prevent the installation of sub-ducts or cables into the duct unless it is remediated. The proposed elapse time metrics relating to remediation are explained in paragraphs 3.63 to 3.67

3.71 ComReg notes that there are three surface types namely verge, footway and carriageway. Considering the differences in surface types it is likely that a remediation cycle time where excavation is required will be influenced by the surface type; for instance the remediation of a duct on a main urban road compared with the remediation of duct in the grass verge on a country road, or the remediation of the duct on footway in a suburban housing estate.

3.72 ComReg also notes that Eircom's duct network uses a variety of duct diameters (e.g. 100mm, 50mm, 25 mm) depending on the application of urban versus rural use. Reporting PIA KPIs metric for each surface type by diameter would result in total number metrics being equal to the number of surface types multiplied by duct diameters. Providing separate metrics for the remediation elapse time by surface type and per duct diameter, in ComReg's preliminary view, would be disproportionate.

3.73 Consequently, ComReg is proposing two sets of duct remediation metrics; grouped by diameter. The first set of duct remediation metrics will be for ducts that have an outer diameter less than 100 mm, and the second set will be for ducts that have an outer diameter equal to or greater than 100 mm.

3.74 ComReg considers that the proposed grouping of the duct remediation metrics based on the duct diameter provides sufficient transparency on duct remediation performance for Access Seekers and Eircom.

The average number of blockages per kilometre

3.75 When PI orders are validated, and the order is accepted, the PI delivery process can begin. One of the necessary service delivery tasks for duct and sub-duct access is a Rod, Rope and Test ("RRT"). RRT requires a rod to be pushed

between two access points (e.g. chambers) in order to demonstrate that the duct segments between the access points are clear i.e. not blocked.

3.76 Some duct blockages can be cleared without excavation whereas other duct blockages require excavation and repair of the duct. Generally speaking, the higher the number of blockages per kilometre of duct, the longer it will take to make the duct ready to host either new sub-ducts or to install cables into the sub-ducts, which will impact on the order completion timescales.

3.77 Clearing duct blockages that require excavation and repair will naturally take longer to complete than clearing duct blockages that do not require excavation and repair of the duct. As there are two types of blockages, ComReg proposes one metric for each blockage type, namely a metric measuring the average number per kilometre of blockages that require excavation and the average number per kilometre of blockages that can be resolved without excavation.

Route Length Categories

3.78 In order to ensure that the proposed PIA KPI metrics provide meaningful information, ComReg believes that it is necessary to disaggregate process point metrics into route length categories so that any issues relating to short routes are not masked/hidden by issues relating to longer routes and *vice versa*, thereby minimising the risk that incorrect conclusions are drawn from published metrics regarding the performance of PI products and services.

3.79 This can be explained by two scenarios. In scenario 1, an Access Seeker requires access to 250 metres of new sub-duct, and in scenario 2, an Access Seeker requires access to 4,000 metres of new sub-duct. The effort required to provide access to 250 metres of new sub-duct is less than the effort associated with providing access to 4,000 metres of new sub-duct (i.e. longer timescale for a longer route). Combining the elapsed time for both scenarios in a single metric would say little, if anything, on the elapsed time on either route. In other words, potential issues relating to short routes may be masked/hidden by issues relating to longer routes or vice versa, which could lead to false conclusions regarding the performance of PI products and services from the published metrics.

3.80 To help minimise the impact of aggregating different route lengths[15] into a single set of metrics, ComReg proposes to categorise/group the metrics into bands according to the route length of the sub-ducts, and for poles, according to the number of poles per order.

[15] For the purposes of the KPI PIA metrics, route length is the distance between the requested ingress and egress locations consisting of one or more route segments.

3.81 In particular ComReg proposes four bands, band **1** for all orders less than or equal to 500 metres, band **2** for all orders from 500 metres to less than or equal to 2500 metres, band **3** for all orders from 2500 metres to less than or equal to 5000 metres, and band **4** for all orders greater than 5000 metres.

3.82 For poles, ComReg proposes 3 pole route length categories as follows: band **1,** up to and including 3 pole replacements, band **2,** from 4 to 10 pole replacements, and band **3,** orders with more than 10 pole replacements.

Dark fibre metrics

3.83 In the PIA Consultation, ComReg proposed to require Eircom to offer access to its Dark Fibre (where reasonably available), where Access to PI is not available. Access to a particular duct or pole route may not be available because a particular portion of a duct or pole route may be full (no usable space), or the duct infrastructure may be extensively damaged.

3.84 In order to provide transparency as regards the circumstances where Dark Fibre is offered in place of duct or pole access, ComReg proposes to require Eircom to monitor performance by reference to the following:

(a) The number of instances dark fibre was offered to Access Seekers in lieu of PI access;

(b) The number of dark fibre offers accepted by Access Seekers;

(c) The average length of dark fibre requested by Access Seekers;

(d) Cancelled dark fibre requests as a percentage of dark fibre offers accepted; and

(e) Undeliverable offered dark fibre as a percentage of dark fibre offers accepted.

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.

3.5 Fault Metrics

Fault validation metric (Accepted and Rejected)

3.85 When PI faults are identified by an operator, they are logged using the appropriate processes and channels. The logged faults are validated by Eircom. Eircom can either accept or reject the logged fault. Once a fault is accepted, the fault localisation and repair processes can commence.

3.86 The fault validation metric measures the percentage of submitted PI faults that are accepted and rejected.

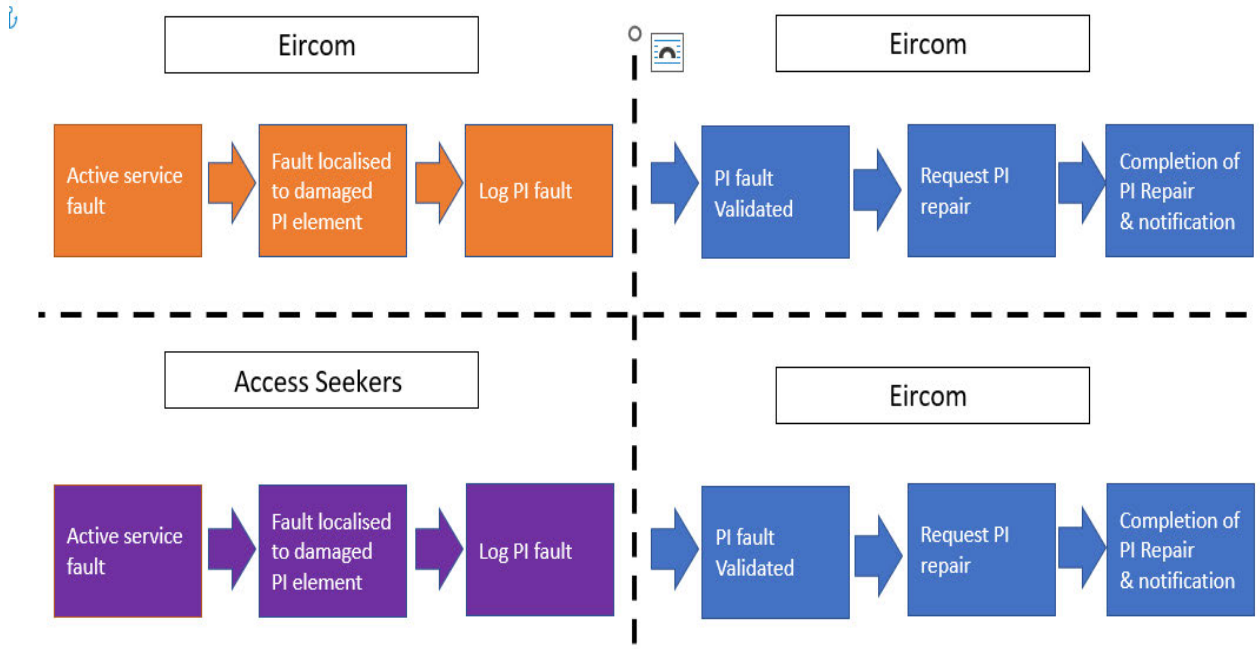
3.87 ComReg accepts that faults may be rejected for reasons outside of Eircom's control. However, irrespective of the root cause reason for the fault rejection, the fault rejection metric will provide transparency that may help to identify process improvements should they be required either by Eircom or by Access Seeker(s).

Fault metric elapse time metrics

3.88 In addition to the basic PI fault validation metrics, another important set of metrics are the fault repair process point elapse time metrics.

3.89 Diagram 4 below provides a high-level overview of the PI fault related process flow. When a fault is identified with an active service, in cases where the fault diagnosis process identifies that the root cause of the active service fault is damage to a PI component(s), the operator (Eircom or the Access Seekers) logs a PI fault report. Eircom validates the fault. If the fault is accepted, then the PI fault repair process is triggered (i.e. request to fault issued to the relevant team). When the PI component is repaired/replaced, the operator that raised the passive access fault is informed. At that point, the operator can start the process of replacing its damaged fibre cable(s).

Diagram 4



3.90 The proposed metrics measure the elapse time between key milestones in the fault repair lifecycle. The proposed process point milestones are as follows.

(a) Elapse time from Log PI fault to PI fault validated.

(b) Elapse time from PI fault validated to Request for PI repair.

(c) Elapse time from Request for PI repair to Completion of repair and notification that the PI has been repaired (i.e. declared fit-for-purpose by Eircom).

3.91 ComReg appreciates that there may be dependencies on third parties in order to complete PI repairs and that these may impact the overall cycle time. For example, whilst Eircom is responsible for requesting the relevant licence from the relevant local authority, Eircom is not responsible for the actual processing of the license applications, which is the responsibility of the relevant local authority. ComReg proposes accordingly two sets of metrics. The first set of metrics measure performance using the full elapse time without any time periods excluded, and the second set of metrics is adjusted for third party delay e.g. local authority processing time, allowing quantification of third-party processing delays on the overall cycle time.

3.92 In addition, a separate metric is required for those circumstances where a PI repair may be implemented without the need for a new licence application to the local authority, for example, where a third-party damages a duct, notifies Eircom and leaves the excavation open. In these circumstances, the damage duct/sub-duct could be repaired without the need for a new licence. A 'no-new-licence required' metric will provide transparency regarding the PI repair cycle-time when a new license is not required to repair PI.

3.93 ComReg also considers that it is necessary that stakeholders can fully understand the reasons for the excluded time periods. Therefore, all excluded periods shall be explained and justified in the PIA KPI business rules documentation, which shall be published at least 5 working days in advance of the publication of the first PIA KPI Report to provide transparency.

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.

Chapter 4

4 KPI processing, reporting and auditing requirements

4.1 Application of the requirements set out in Decision D04/22

4.1 The 2022 KPI Decision sets out a range of requirements in respect of KPI processing, reporting and auditing. In particular, and in summary, Eircom is required to:

i. Publish a KPI Metrics Report on a quarterly basis, two months after the end of each reporting quarter, including (i) a confidential version for submission to ComReg, containing the numerical data values, i.e., the actual values (for example the number of provisioning orders accepted and calculations such as percentage values), and (ii) a non-confidential version, excluding numerical data and calculations, as appropriate, for publication on Eircom's publicly available website with no restrictions in accessing either current or historical non-confidential versions of the reports, such as password-controlled access or similar;

ii. In order to facilitate reporting and enhance consistency, comparison and readability of metrics, use a standardised format for the reporting tables;

iii. Not to delay publication where Eircom has identified an issue(s) or potential issue(s) with its validation checks that may require a process change or similar to remediate/resolve, and instead include in the report an advisory note explaining which metrics are subject to further analysis and accordingly, subject to change following the completion of the internal investigation, together with the expected timeline for the conclusion of its analysis, to be followed by progress updates to ComReg on Eircom's internal investigation/analysis at least every 10 working days;

iv. Retain or be able to reproduce the underlying data set it used to prepare the PIA KPI metrics contained in the KPIs reports for a period of not less than two years and to provide the data to ComReg upon request, in the format requested, within 15 working days;

v. Publish and maintain on its publicly available website the business processes used by Eircom for the preparation and reporting of the KPI metrics for the products in scope;

vi. To keep PIA KPIs current, in terms both of the metrics and the products and services concerned, apply and include in the KPI report KPI Metrics (order, provisioning and service assurance) from launch in respect of new regulated PI product or service.

4.2 ComReg believes that those same requirements as set out in Decision D04/22, and more generally, all procedural provisions made in Decision D04/22, should apply in respect of the new metrics set out for PIA. ComReg in particular sees no reason why current requirements would not be appropriate for PIA.

4.3 ComReg proposes to add to Schedule 3 of the 2022 KPI Decision Instrument, the metrics to be used to measure PIA performance as set out in Schedule 1 of the draft Decision Instrument set out in Appendix 1, and to add to Schedule 4 of the KPI Decision Instrument, the tables that Eircom will be required to use to report on PIA KPIs, as set out in Schedule 2 of the draft Decision Instrument. Insofar as Eircom's obligation to retain data for two years is concerned, this should be understood to run from the completion of a PI Order insofar as PIA KPIs are concerned.

4.2 Implementation Timelines

4.4 ComReg allowed Eircom a period of 7 months following the KPI Decision for its implementation. ComReg proposes that the same period be allowed to Eircom to prepare for extending the application of those requirements to PIA KPI. More particularly, in order that Eircom has sufficient time to put in place monitoring and reporting processes, ComReg proposes that the first PIA KPI metrics report is published 12 months after ComReg's Decision thus allowing Eircom a period of 7 months to identify, document and implement any development and processes that may be required for the monitoring and reporting of KPIs, a period of 3 months for the first data collection period, and a further 2 months to gather, process and publish the PI KPI metric report.

4.5 ComReg considers that 2 months after each quarter is a sufficient period of time to run validation checks, identify any potential anomalies and conduct an initial investigation of root cause(s), if required.

4.6 ComReg understands that most of the data necessary to compile and report the PIA KPI metrics is readily available to Eircom from a variety of Eircom's Operation Support Systems and a third-party system(s). However, where additional data is necessary to complete the metric set then the additional data can be gathered/collected by Eircom.

4.7 ComReg also understands that the data sets could be linked using common data fields (references) that already exist between the data sets or that links could be created between the data sets. These links will facilitate the gathering, calculating and reporting of the required metrics.

4.8 To assess the feasibility and the effort required to develop a reference solution for reporting the PIA KPI metrics, and to document the PIA KPI business rules, ComReg engaged technical advisors, KPMG Ireland Consulting (**'KPMG'**), to carry out an independent assessment. Using information already available to ComReg, plus information in the public domain, and additional information gathered using statutory information requests, KPMG analysed the feasibility effort that would be required to implement the proposed PIA KPI requirements.

4.9 Based on KPMG's analysis, a period of six months is sufficient to allow Eircom to implement a KPI metrics solution to gather the data, calculate and report on the PIA KPI metrics. Although KPMG's analysis concludes that it is technically feasible to implement a PIA KPI metric reporting solution within 6 months, ComReg has proposed a 7 months implementation period. The additional time to implement the PIA KPI reporting solution provides an implementation buffer for Eircom.

4.10 The detail of KPMG's assessment is included in Annex 1 to this Consultation, document reference 23/41a

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.

Chapter 5

5 Regulatory Impact Assessment

5.1 The Regulatory Impact Assessment ('RIA') is an analysis of the likely effect of proposed new regulation or regulatory change. The purpose of a RIA is to establish whether regulation is actually necessary, to identify any possible negative effects which might result from imposing a regulatory obligation and to consider any alternatives. The RIA should help identify regulatory options and should establish whether proposed regulation is likely to have the desired impact. It is a structured approach to the development of policy and analyses the impact of regulatory options on different stakeholders. Appropriate use of the RIA should ensure that the most effective approach to regulation is adopted.

5.2 ComReg's approach to RIA follows five steps:

Step 1: Describe the policy issue and identify the objectives.

Step 2: Identify and describe the regulatory options.

Step 3: Determine the impacts on stakeholders.

Step 4: Determine the impacts on competition.

Step 5: Assess the impacts and choose the best option.

Step 1: Describe the policy issue and identify the objectives

5.3 A key ComReg objective is to ensure that transparency exists in the provision by Eircom of wholesale PI products and services. Transparency is intended to promote competition in the interest of End Users of electronic communications services by ensuring that all Access Seekers, End Users and ComReg can observe the price and non-price terms which underpin important investment decisions concerning entry and expansion in markets where Eircom has been designated with SMP. Transparency obligations are also, in part, designed to allow ComReg to determine whether an SMP operator is meeting its non-discrimination obligations. Non-discrimination obligations require the SMP operator, *inter alia*, to supply wholesale products and services to all Access Seekers to an equivalent quality, including to its own downstream arm. Effective non-discrimination obligations are thus critical in promoting undistorted competition in the best interests of End Users.

5.4 The PIA KPI regime set out in the Consultation and draft Decision is designed to ensure that a complete set of relevant, accurate, performance data is made available to Access Seekers and ComReg, on a regular basis.

5.5 The PIA KPI metrics will provide an objective data source for ComReg for monitoring compliance with non-discrimination obligations, while further equipping Eircom with a means to more effectively verify its own performance, thereby contributing to effective regulatory processes for handling potential complaints or disputes.

Step 2: Identify and describe the regulatory options

5.6 ComReg has identified two options:

(a) **Option 1**: To leave the obligation to monitor performance and publish KPIs set out in the PIA Consultation at a high level without specifying further what metrics should be used and how publication should be carried out; or

(b) **Option 2**: To further specify the proposed high-level PIA KPI metrics obligation in more granular detail and amend the 2022 KPI Decision to reflect this further specification, as follows:

i. Order, Provisioning and Service Assurance KPI metrics;

ii. Setting up a mechanism in order to keep KPI metrics current;

iii. Providing for Verification and Audit;

iv. Providing for Statistical Verification of KPIs; and

v. Requiring the publication of Eircom's KPI business rules.

Step 3: Determine the impact on stakeholders

Option 1: Do not specify further the detail of the PIA KPI metrics

5.7 This option involves no further specification of the proposed PIA KPI metrics obligations beyond the current requirements as set out in the PIA Consultation.

Option 2: Further specify Eircom's transparency obligations

5.8 This option involves further specifying the proposed transparency obligations with respect to the scope and content of PIA KPI metrics to be published.

5.9 Without further specification, the obligation set out in the PIA Consultation is unlikely to deliver the level of transparency needed to effectively monitor Eircom's compliance with its non-discrimination obligation, and to provide a useful basis for ComReg (and other stakeholders) to monitor Eircom's performance or compliance with its obligations.

Impact on Eircom

5.10 ComReg acknowledges that effort will be necessary for Eircom to produce the set of PIA KPI metrics associated with the proposed PIA products and services. However, ComReg considers that the additional effort not to be overly burdensome for Eircom for the reasons outlined below.

5.11 As set out in KPMG's report in Annex 1 to this Consultation (document reference 23/41a), KPMG have assessed the feasibility and effort required to implement the PIA KPI metric solution which included the gathering of data and the processing of the data required to produce the suite of PIA KPI metrics for publication.

5.12 To complete their assessment, KPMG analysed the systems, data flows, and data sets related to ordering, provisioning, and service assurance (fault repair).

5.13 For example, diagram 5 depicts systems and data flows relating to PI for ordering, provisioning (non-bulk). A similar system and data flow analysis was completed for the bulk orders and for service assurance.

5.14 The PIA KPI metric feasibility assessment was based on a detailed understanding of Eircom's systems, data sets, and processes. This understanding was built up through the analysis of information provided to ComReg by Eircom, and analysis of information that is in the public domain.

Diagram 5 -- System and data flow

[✂

✂]

5.15 KPMG also considered how the data could be gathered from various IT systems and processes, the relationships/links that exist between data sets from the IT systems and processes, how new relationships/links could be created between the data sets, how new data sets could be created, and how new relationships/ links could be established. For example, how the circuit IDs and appropriation codes (e.g. CBFXXXX) could be used as keys to link data sets to facilitate the reporting of the PIA KPI metrics was considered during the analysis.

5.16 To estimate the effort and resources required to implement the proposed PIA KPI Metrics, KPMG used a reference solution implementation, which is how KPMG could implement a PIA KPI metric solution themselves.

5.17 ComReg notes that there are potentially several implementation options for a PIA KPI Metric solution. The objective of the PIA KPI assessment is to demonstrate that a solution could be implemented to provide the required PIA KPI metrics within a reasonable timescale with the appropriate resources.

5.18 The conclusion of KPMG's analysis is that a PIA KPI metric solution could be implemented within a six-month timeframe.

5.19 In ComReg's preliminary view, a PIA KPI reporting solution could be implemented that would not be overly burdensome on Eircom.

Impact on Access Seekers

5.20 Implementing Option 2 will, having regard to the proposals in the PIA Consultation, improve the ability of wholesale customers to compare the performance of Eircom's regulated wholesale inputs with that of Eircom's self-supplied wholesale inputs. This transparency would instil wholesale customers with greater confidence in Eircom's regulated wholesale products, by offering greater knowledge on the performance of Eircom's wholesale product suite. Increased visibility of Eircom's ongoing wholesale performance supports Access Seekers in making investment decisions which in turn, promotes competition in the associated downstream markets.

Impact on End Users

5.21 The proposed PIA KPI metrics will provide a mechanism that allows ComReg to effectively and efficiently monitor Eircom's compliance with its non-discrimination obligations in the PIA market facilitating ComReg's ultimate strategic objective of promoting competition in the market for the benefit of End Users.

Step 4: Determine impact on competition

5.22 ComReg's objective in regulating a market is to prevent the restriction or distortion of competition and to promote effective competition in downstream and related markets.

5.23 The imposition of appropriate and specific *ex-ante* remedies to address such competition problems in the PIA market was discussed and justified in ComReg's PIA Consultation and draft Decisions.

5.24 The further specification of the transparency obligations to publish PIA KPI metrics in this Consultation is specifically aimed at addressing vertical leveraging (i.e. quality discrimination) competition problems in a more targeted manner than those currently proposed in the PIA consultation.

5.25 Without the proposed PIA KPI metrics important process points in the ordering, provisioning and fault repairing processes would not be monitored or could not be effectively monitored.

Step 5: assess the impacts and choose the best option

5.26 Having assessed the potential burden to Eircom versus the benefits arising from having a robust, and granular set of PIA KPIs that monitors the ordering, process points elapse times for provisioning and faults repairs of interest to stakeholders, ComReg considers that the requirements are justified, reasonable and proportionate for the following reasons:

(a) The effort incurred in implementing the proposed measures is not considered overly burdensome, taking into account the analysis in the KPMG report[16].

(b) The publication of product performance metrics helps Eircom to demonstrate the performance of its wholesale products to existing and potential wholesale Access Seekers, as well as compliance with regulatory obligations imposed by ComReg;

(c) The benefits of the proposed PIA KPIs would be substantial in terms of enhancing investor and consumer confidence in Irish telecommunications markets and the resulting promotion of competition and reduction of ongoing regulation costs. The benefits accrue across the board to Eircom, Access Seekers, End Users and to ComReg.

(d) The PIA KPIs can be used by Eircom as a form of control to help identify issues and mitigate the potential risk of non-compliance.

5.27 On the basis of the foregoing, the anticipated benefits associated with implementing PIA KPI metrics, namely a strengthened regulatory and competitive process capable of delivering important pricing and product innovations to End Users, mean that, overall, ComReg considers the benefits to exceed the burden involved. ComReg therefore considers that it is justified, reasonable and proportionate to further specify PIA KPI metrics in relation to the PIA Market.

[16] PIA KPI metrics technical feasibility review

Appendix: 1 – Decision Instrument

Please note: The Regulations made by the Minister for Communications for the purpose of transposing the European Electronic Communications Code, namely the European Union (Electronic Communications Code) Regulations 2022, SI No. 444 of 2022, have yet, at the time of publication of this Consultation, to be commenced and the legal basis for this Consultation is accordingly the suite of regulations made in 2011 including, in particular, the Framework Regulations and the Access Regulations. Were the Electronic Communications Code Regulations to be commenced prior to the adoption of ComReg's final decision, ComReg will adopt its final decision including this Decision Instrument referring to the relevant Regulations as appropriate. For the purpose of this Consultation, references to both the 2011 set of Regulations and to the Electronic Communications Code Regulations have been included.

1 STATUTORY POWERS GIVING RISE TO THIS DECISION INSTRUMENT

1.1 This Decision Instrument ("Decision Instrument") is made by the Commission for Communications Regulation ("ComReg"):

(i) Pursuant to and having regard to sections 10 and 12 of the Communications Regulation Act 2002 (as amended); Regulation 6(1) of the Access Regulations and Regulation 16 of the Framework Regulations/Regulation 4 and Regulation 42 of the ECC Regulations;

(ii) Pursuant to Regulation 18 of the Access Regulations/Regulation 104 of the ECC Regulations;

(iii) Pursuant to Regulation 18(1)(a) of the Authorisation Regulations/Regulation 99(1)(a) of the ECC Regulations;

(iv) Having regard to Regulations 8, 9 and 10 of the Access Regulations/ Regulations 50, 51 and 52 of the ECC Regulations;

(v) Having regard to Regulation 10(13) of the Framework Regulations/Regulation 98(15) of the ECC Regulations;

(vi) Having, where applicable, pursuant to Section 13 of the Communications Regulation Act 2002, complied with Ministerial Policy Directions;

(vii) Having had regard to the analysis and reasoning set out in ComReg Decision D04/22;

(viii) Having regard to ComReg Decision DXX/XX [*the PIA Response to Consultation and Final Decision*] and to the analysis and reasoning set out in ComReg Document No. 23/NN [*the PIA Response to Consultation and Final Decision document*];

(ix) Having consulted with, and taken into account the submissions received from interested parties, pursuant to Regulations 12(3) of the Framework Regulations/Regulation 17 of the ECC Regulations;

(x) Having notified the decision and the reasoning on which it is based to the European Commission, BEREC and the national regulatory authorities of other EU Member States pursuant to Regulation 27 of the Framework Regulations/Regulation 49 of the ECC Regulations and at the same time published the proposed final decision in accordance with Article 32 of the EECC by way of Information Notice ●/●;

(xi) Having regard to the analysis and reasons set out in ComReg Document ●/● *[the final decision document to which the Decision Instrument is an annex];*

(xii) Having taken the utmost account of the comments received from the European Commission.

1.2 This Decision Instrument shall be construed consistently with the provisions of ComReg Decision DXX/XX and ComReg Document No. XX/XX [*this PIA KPI Decision and Document Number*].

PART I – GENERAL PROVISIONS

2 DEFINITIONS

2.1 In this Decision Instrument, unless the context otherwise requires:

"Access Regulations" means the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2011 (S.I. No. 334 of 2011);

"Authorisation Regulations" means the European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations 2011 (S.I. No. 335 of 2011;

"BEREC" means the Body of European Regulators for Electronic Communications, as established pursuant to Regulation (EU) 2018/1971 of the European Parliament and of the Council of 11 December 2018 amending Regulation (EU) 2015/2120 and repealing Regulation (EC) No. 1211/2009;

"Communications Regulation Act 2002" means the Communications Regulation Act 2002 (No. 20 of 2002), as amended;

"ComReg" means the Commission for Communications Regulation, established under Section 6 of the Communications Regulation Act 2002;

"ComReg Decision D04/22" means the "Access Products and Services; Key Performance Indicator (KPI) Metrics" Response to Consultation and Final Decision, dated 29 June 2022;

"ComReg Decision DXX/XX (ComReg YY/YY) means [*the PIA Final Decision*];

"Decision Instrument" means this decision instrument;

"Effective Date" means the date set out in Section 11 of this Decision Instrument;

"Eircom" means Eircom Limited, a company incorporated in Jersey (Number 116389), registered as a Branch in Ireland (Number 907674), with an Irish registered Branch Office at 2022 Bianconi Avenue, Citywest Business Campus, Dublin 24, D24 HX03;

"European Electronic Communications Code" or **"the Code"** means Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code;

"Framework Regulations" means the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011);

"KPI DI" means the decision instrument set out in Appendix 1 of ComReg Decision D04/22;

"Ministerial Policy Directions" means the policy directions made by Dermot Ahern TD, then Minister for Communications, Marine and Natural Resources, dated 21 February 2003 and 26 March 2004;

"PIA" stands for Physical Infrastructure Access;

3 SCOPE AND APPLICATION

3.1 This Decision Instrument amends the decision instrument set out in Appendix 1 of ComReg Decision D04/22 (ComReg 22/49) for the purpose of specifying further requirements relating to Eircom's obligation to publish KPIs under Section XX of the Decision Instrument annexed to ComReg Decision DXX/XX [*the PIA Final Decision*], adding more particularly to Schedule 3 to the KPI DI, metrics designed to measure performance in respect of the provision of PIA.

3.2 Eircom (and its subsidiaries and any related companies within the meaning ascribed to these terms in the Companies Act 2014, and any entity which it owns or controls, and any entity which owns or controls Eircom, and its successors and assigns) shall comply with the requirements set out in the KPI

DI insofar as they concern PIA from the Effective Date of this Decision Instrument and to that purpose, references to Effective Date in the KPI DI shall be understood as a reference to the Effective Date of this Decision Instrument, and first KPI Report and Implementation Date understood accordingly.

4 DATA RETENTION UNDER SECTION 8.1 OF THE KPI DI

4.1 Notwithstanding the provisions of Section 8.1 of the KPI DI, Eircom shall ensure that all Quarterly Data in respect of a PIA Order is retained for so long as the PIA Order is not completed and for a period of two years following its completion.

PART II – AMENDMENTS TO THE KPI DI

5 AMENDMENTS TO SCHEDULE 1 OF THE KPI DI

Paragraph 1 of Schedule 1 of the KPI DI is hereby amended by adding the following:

5.1 Paragraph 2 of Schedule 1 to the KPI DI is hereby amended as follows:

5.1.1 By substituting the definition of "**completed order"** with the following:

"Completed Order" means the order status used by Eircom to indicate that all tasks relating to the order are finished;

"**Rejected order"** means an order which has failed validation;

5.1.2 By adding the following definitions inserted in alphabetical orders:

"Acceptance" means an order which is deemed to contain all the necessary valid data required to process the order;

"**Completion of repair**" means that all necessary permanent repairs have been completed to enable restoration of service(s).

"Fault Cleared" means the issue has been conclusively resolved and the trouble ticket has been closed;

"FFPU" stands for Fit-for-Purpose and means the status of that name in the Work Order lifecycle;

"Kurtosis" means the sharpness of the peak or flatness of a probability distribution curve calculated using the formula $\mathbf{Kurtosis} = \frac{\mu 4}{\sigma^4}$, where μ4 is the unstandardized central fourth moment and σ, the standard deviation

"Licence application" means a request to the relevant licensing authority for a road opening licence;

"New" means the status of that name in the Work Order lifecycle;

"Non-fluid status" means the status of that name in the Work Order lifecycle and refers to the situation where completion of an order is halted owing to operational issues preventing field work from proceeding;

"Re-forecast" refers to an order which has not been, or will not be, provisioned by the date forecasted and communicated to the Access Seeker and for which a new date for completion has been set and communicated to the Access Seeker.

"**Remediation"** means completing the tasks necessary to ensure that the physical infrastructure can host cables and equipment.

"Residual" means an order placed during a data collection period which has yet to reach final status;

"Route length" means, in respect of duct and sub-duct, the total length in metres of the duct and sub-duct that are accessed and, in respect of poles, means the total number of poles being accessed on a route.

"**Route length band 1**" means in respect of duct and sub-duct, a route length of less than or equal to 500m and for pole, a route length of up to and including 3 poles;

"Route length band 2" means in respect of duct and sub-duct, a route length from 500m to less than or equal to 2,500m and for pole, a route length comprising between 4 and 10 poles;

"Route length band 3" means in respect of duct and sub-duct, a route length from 2,500m to less than or equal to 5,000m and for pole, a route length comprising in excess of 10 poles;

"Route length band 4" means in respect of duct and sub-duct, a route length greater than 5,000m;

"Skewness" means the symmetry or otherwise of a distribution in a Quarterly Data set and is measured using the formula

$$\textbf{Peason's median skewness} = 3 \text{ x } \frac{(\text{Mean} - \text{Median})}{\text{Standard deviation}}$$

"Standard deviation" means the amount of variation or dispersion from the mean in a Quarterly Data set measured using the formula **(σ) =** $\sqrt{(\sum(\mathbf{x} - \mu)^2/\mathbf{N})}$**,** where x is the data value in the set; μ is the mean of the data set and N is the total number of data values in the set.

"Submission" refers to the first registration by reference to the date and time of an order on the order handling system or equivalent.

"T2" means the category of road opening licences permitting works of moderate impact having regard to their location, extent, amount or duration;

"T3" means the category of road opening licences permitting works of low impact having regard to their location, extent, amount or duration;

"Work Order" refers to the functionality in an Operational Support System (WO-SAP) used for the planning and execution monitoring of tasks in detail with regard to type, scope, dates, resources, and costs.

6 AMENDMENTS TO SCHEDULE 3 AND SCHEDULE 4 OF THE KPI DI

6.1 Schedule 3 of the KPI DI is hereby amended by adding the paragraphs set out in Schedule 1 of this Decision Instrument.

6.2 Schedule 4 of the KPI DI is hereby amended by adding the tables set out in Schedule 2 of this Decision Instrument.

PART III – OPERATION AND EFFECTIVE DATE

7 STATUTORY POWERS NOT AFFECTED

7.1 Nothing in this Decision Instrument and these Directions shall operate to limit ComReg in the exercise and performance of its statutory powers or duties conferred on it under any primary or secondary legislation in force prior to or after the Effective Date of this Decision Instrument.

8 MAINTENANCE OF OBLIGATIONS AND WITHDRAWAL

8.1 Unless expressly stated otherwise in this Decision Instrument, all obligations and requirements contained in Decision Notices and Directions made by ComReg applying to Eircom and in force immediately prior to the Effective Date, including all obligations specified in ComReg Decision DXX/XX [*the PIA Response to Consultation and Final Decision*], and ComReg Decision D04/22 continue in force and Eircom shall comply with same.

9 CONFLICT

9.1 For the avoidance of doubt, to the extent that there is any conflict between a ComReg Decision Instrument or ComReg document dated prior to the Effective Date and Eircom's obligations now set out herein, this Decision Instrument shall prevail.

10 SEVERANCE

10.1 If any Section(s), clause(s) or provision(s), or portion(s) thereof, contained in this Decision Instrument, is(are) found to be invalid or prohibited by the Constitution, by any other law or judged by a court to be unlawful, void or unenforceable, that(those) Section(s), clause(s) or provision(s), or portion(s) thereof, shall, to the extent required, be severed from this Decision Instrument and rendered ineffective as far as possible without modifying the remaining Section(s), clause(s) or provision(s), or portion(s) thereof, of this Decision Instrument, and shall not in any way affect the validity or enforcement of this Decision Instrument or other Decision Instruments.

11 PUBLICATION, NOTIFICATION AND EFFECTIVE DATE

11.1 This Decision Instrument shall be published on ComReg's website (www.comreg.ie) and notified to Eircom.

11.2 The Effective Date of this Decision Instrument shall be the date of its notification to Eircom.

11.3 This Decision Instrument shall remain in force until further notice by ComReg.

ROBERT MOURIK
CHAIRPERSON
THE COMMISSION FOR COMMUNICATIONS REGULATION
THE […]TH DAY OF […] 2023

SCHEDULE 1

DEFINITION AND CALCULATION OF KPI METRICS

12. **Sub-duct orders**

12.1. In each Data Collection Period, Eircom shall collect data and calculate the following metrics on a quarterly basis, in respect of sub-duct:

METRIC 114. The number of submitted sub-duct orders

METRIC 115. The number of accepted sub-duct orders

METRIC 116. The number of rejected sub-duct orders

METRIC 117. The number of cancelled sub-duct orders

METRIC 118. The number of sub-duct orders completed

METRIC 119. The number of sub-duct undeliverable orders

METRIC 120. The number of sub-duct residual orders

METRIC 121. The number of sub-duct orders re-forecasted

METRIC 122. The number of non-fluid sub-duct orders

METRIC 123. The number of sub-duct orders non-fluid by reason

METRIC 124. The accepted sub-duct orders as a percentage of submitted sub-duct orders, calculated as follows:

(Number of orders accepted x100) /(Number of orders submitted)

METRIC 125. The number of rejected sub-duct orders as a percentage of submitted sub-duct orders, calculated as follows:

(Number of rejected orders x100)/ (Number of submitted orders)

METRIC 126. The cancelled sub-duct orders as a percentage of accepted sub-duct orders calculated as follows:

(Number of cancelled sub-duct orders x 100)/ (Number of sub-duct orders accepted)

METRIC 127. The completed sub-duct orders as a percentage of accepted sub-duct orders, calculated as follows:

(Number of sub-duct orders completed x 100)/ (Number of sub-duct orders accepted)

METRIC 128. The undeliverable sub-duct orders as a percentage of accepted sub-duct orders, calculated as follows:

(Number of undeliverable sub-duct orders x 100) / (Number of sub-duct orders accepted)

METRIC 129. The residual sub-duct orders as a percentage of accepted sub-duct orders, calculated as follows:

(Number of residual sub-duct orders x 100) / (Number of accepted sub-duct orders)

METRIC 130. The re-forecasted sub-duct orders as a percentage of accepted sub-duct orders, calculated as follows:

(Number of re-forecasted sub-duct orders x 100) / (Number of accepted sub-duct orders)

METRIC 131. The Non-fluid sub-duct orders as a percentage of accepted sub-duct orders, calculated as follows:

(Number of non-fluid sub-duct orders x 100) / (Number of accepted sub-duct orders)

METRIC 132. The Non-fluid sub-duct orders by reason type as a percentage of accepted sub-duct orders, calculated as follows:

(Number of non-fluid sub-duct orders by reason type x 100) / (Number of accepted of non-fluid sub-duct orders)

METRIC 133. The utilisation of existing sub-duct as a percentage of total sub-duct requested, calculated as follows for each route length band (bands 1, 2, 3 and 4):

(The length of existing sub-duct used orders x 100) / (Number of total length of sub-duct ordered

12.2. Metrics 114 to 123 shall be reported to ComReg only; they shall be kept confidential and shall not be published.

13. **Sub-Duct Provisioning**

13.1. In each Data Collection Period, Eircom shall collect data and calculate the following metrics on a quarterly basis, in respect of sub-duct:

METRIC 134. **The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time between Order submitted to Order rejected for each of the route length bands (bands 1, 2, 3 and 4).**

METRIC 135. **The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time between Order accepted to New Works Order created for each route length band (bands 1, 2, 3 and 4).**

METRIC 136. **The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time between Works Order New and Works Order FFPU for each route length band (bands 1, 2, 3 and 4).**

METRIC 137. **The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of duct network remediation requirement to submission of the licence application (for both T2 and T3) to the licensing authority.**

METRIC 138. **The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the granting of the licence by the licencing authority to the completion of the duct network remediation.**

METRIC 139. **The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of duct network remediation requirement to submission to the licence application (for both T2 and T3) to the licensing authority excluding third party delays.**

METRIC 140. **The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the granting of the licence (for both T2 and T3) by the licensing authority to the completion of the network duct remediation.**

METRIC 141. **The number of blockages cleared per kilometre that did not require excavation.**

METRIC 142. **The number of blockages cleared per kilometre that required excavation where the duct diameter is greater than 100 millimetres.**

METRIC 143. The number of blockages cleared per kilometre that required excavation where the duct diameter is less than or equal to 100 millimetres.

METRIC 144. The percentage of licence applications rejected by the licensing authority as a percentage of licence applications submitted (T2 and T3).

(Number of licence application rejected x 100) / (Number license applications submitted to the licencing authority)

14. **Sub-Duct fault metrics**

14.1. In each Data Collection Period, Eircom shall collect data and calculate the following metrics on a quarterly basis in respect of sub-duct:

METRIC 145. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging sub-duct fault to sub-duct fault accepted.

METRIC 146. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging sub-duct fault to sub-duct fault rejected.

METRIC 147. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from sub-duct fault validation to request for repair of the sub-duct.

METRIC 148. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from initiation of the repair process for sub-duct repair to completion of repair (i.e. declared fit-for-purpose) of the sub-duct.

METRIC 149. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from initiation of the repair process for sub-duct repair to completion of repair of the sub-duct (i.e. declared fit-for-purpose) excluding third party delays.

METRIC 150. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from request for the sub-duct repair to completion of repair of the sub-duct (i.e. declared fit-for-purpose) without the need to request a new licence from the local authority.

15. **Sub-Duct Self Install Orders**

15.1. In each Data Collection Period, Eircom shall collect data, and calculate the following metrics on a quarterly basis, in respect of Sub-Duct Self Install:

METRIC 151. The number of submitted duct orders

METRIC 152. The number of accepted duct orders

METRIC 153. The number of rejected duct orders

METRIC 154. The number of cancelled duct orders

METRIC 155. The accepted duct orders as a percentage of submitted duct orders, calculated as follows:

(Number of orders accepted x100) /(Number of orders submitted)

METRIC 156. The rejected duct orders as a percentage of accepted duct orders, calculated for as follows:

(Number of rejected orders x100)/ (Number of submitted orders)

METRIC 157. The cancelled duct orders as percentage of accepted duct orders calculated as follows:

(Number of cancelled duct orders x 100)/ (Number of duct orders accepted)

15.2. Metrics 151 to 154 shall be reported to ComReg only; they shall be kept confidential and shall not be published.

16. **Sub-Duct Self Install provisioning process point metrics**

16.1. In each Data Collection Period, Eircom shall collect data and calculate the following metrics on a quarterly basis in respect of Sub-Duct Self Install:

METRIC 158. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from order Submitted to order Acceptance for each of the route length bands (bands 1, 2, 3 and 4).

METRIC 159. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from order Submission to order Rejected for each of the route length bands (bands 1, 2 , 3 and 4).

METRIC 160. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of the duct network remediation requirement to submission of both T2 and T3 licence applications to the licensing authority.

METRIC 161. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the granting of the licence by the licensing authority to the completion of the duct network remediation.

METRIC 162. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of the duct network remediation requirement to completion of the remediation.

METRIC 163. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of the duct network remediation requirement to submission of a T2 or T3 licence application to the licensing authority, excluding third party delays.

METRIC 164. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the granting of the licence by the licensing authority to the completion of the duct network remediation excluding third party delays.

METRIC 165. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of the duct network remediation requirement to completion of the duct network remediation excluding third party delays.

METRIC 166. The number of blockages cleared per kilometre that did not require excavation.

METRIC 167. The number of blockages cleared per kilometre that required excavation with duct diameter greater than 100 millimetres.

METRIC 168. The number of blockages cleared per kilometre that required excavation with duct diameter less than or equal to 100 millimetres.

17. **Sub-Duct Self Install (SDSI) fault metrics**

17.1. In each Data Collection Period, Eircom shall collect data and calculate the following metrics on a quarterly basis in respect of SDSI faults:

METRIC 169. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging a SDSI fault to SDSI fault accepted.

METRIC 170. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging a SDSI fault to SDSI fault rejected.

METRIC 171. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from SDSI fault validation to the initiation of the repair process of the SDSI repair.

METRIC 172. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the initiation of the repair process for SDSI to the completion of repair (i.e. declared fit-for-purpose).

METRIC 173. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from request for the SDSI repair to the completion of repair (i.e. declared fit-for-purpose) excluding third party delays.

METRIC 174. The mean, mode, median, standard deviation, skewness and kurtosis of for the elapsed time from request for the SDSI repair to the completion of repair (i.e. declared fit-for-purpose) for those repairs which did not require a licence from a licensing authority by Eircom.

18. **Direct Duct Access Orders**

18.1. In each Data Collection Period, Eircom shall collect data and calculate the following metrics on a quarterly basis in respect of Direct Duct Access:

METRIC 175. The number of submitted direct duct access orders.

METRIC 176. The number of cancelled direct duct access orders.

METRIC 177. The cancelled direct duct access orders as percentage of accepted direct duct access orders calculated as follows:

(Number of cancelled direct duct access orders x 100)/ (Number of direct duct access orders accepted)

18.2. Metrics 175 and 176 shall be reported to ComReg only; they shall be kept confidential and shall not be published.

19. **Pole Orders**

19.1. In each Data Collection Period, Eircom shall collect data and calculate the following metrics on a quarterly basis in respect of Pole Orders:

METRIC 178. The number of submitted pole orders.

METRIC 179. The number of accepted pole orders.

METRIC 180. The number of rejected pole orders.

METRIC 181. The number of cancelled pole orders.

METRIC 182. The number of pole orders completed.

METRIC 183. The number of pole undeliverable orders.

METRIC 184. The number of pole residual orders.

METRIC 185. The number of pole orders re-forecasted.

METRIC 186. The number of non-fluid pole orders.

METRIC 187. The number of pole orders non-fluid by reason.

METRIC 188. The accepted pole orders as a percentage of submitted pole orders, calculated as follows:

(Number of orders accepted x100) /(Number of orders submitted)

METRIC 189. The rejected pole orders as a percentage of submitted pole orders, calculated as follows:

(Number of rejected orders x100)/ (Number of submitted orders)

METRIC 190. The cancelled pole orders as a percentage of accepted pole orders, calculated as follows:

(Number of cancelled pole orders x 100)/ (Number of pole orders accepted)

METRIC 191. The completed pole orders as a percentage of accepted pole orders, calculated as follows:

(Number of pole orders completed x 100)/ (Number of pole orders accepted)

METRIC 192. The undeliverable pole orders as a percentage of accepted pole orders, calculated as follows:

(Number of undeliverable pole orders x 100) / (Number of pole orders accepted)

METRIC 193. The residual pole orders as a percentage of accepted pole orders, calculated as follows:

(Number of residual pole orders x 100) / (Number of accepted pole orders)

METRIC 194. The re-forecasted pole orders as a percentage of accepted pole orders, calculated as follows:

(Number of re-forecasted pole orders x 100) / (Number of accepted pole orders)

METRIC 195. The non-fluid pole orders as a percentage of accepted pole orders, calculated as follows:

(Number of non-fluid pole orders x 100) / (Number of accepted pole orders)

METRIC 196. The non-fluid pole orders by reason type as a percentage of accepted pole orders, calculated as follows:

(Number of non-fluid pole orders by reason type x 100) / (Number of total number of non-fluid pole orders)

19.2. Metrics 178 and 187 shall be reported to ComReg only; they shall be kept confidential and shall not be published.

20. Pole Provisioning process point metrics

20.1. In each Data Collection Period, Eircom shall collect data and calculate the following metrics on a quarterly basis in respect of Poles:

METRIC 197. The mean, mode, median, standard deviation, skewness and kurtosis of elapsed time from order Submitted to order Acceptance for each of the pole route length bands (bands 1, 2 and 3).

METRIC 198. The mean, mode, median, standard deviation, skewness and kurtosis of elapsed time from order Submitted to order Rejected for each of the pole route length bands (bands 1, 2 and 3).

METRIC 199. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from order Accepted to New Works Order for each of the pole route length bands (bands 1, 2 and 3).

METRIC 200. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from Works Order New to Works Order FFPU for each of the pole route length bands (bands 1, 2 and 3).

METRIC 201. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of pole remediation requirement to submission of licence application to the licensing authority.

METRIC 202. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the granting of the licence by the licensing authority to the completion of the pole remediation.

METRIC 203. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of the remediation requirement to completion of the pole remediation.

METRIC 204. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of pole remediation requirement to submission of the licence application to the licensing authority excluding third party delays.

METRIC 205. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the granting of the licence by the licencing authority to the completion of the pole remediation.

21. Pole fault metrics

21.1. In each Data Collection Period, Eircom shall collect data and calculate the following metrics on a quarterly basis in respect of Pole Faults:

METRIC 206. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed from logging a Pole fault to Pole fault accepted.

METRIC 207. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from Pole fault Accepted to the request for Pole repair.

METRIC 208. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from request for Pole repair to the completion of the Pole repair (i.e. declared fit-for-purpose).

METRIC 209. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from request for Pole repair to the completion of the Pole repair (i.e. declared fit-for-purpose) with third party delays excluded.

METRIC 210. The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from request for Pole repair to the completion of the Pole repair (i.e. declared fit-for-purpose) without the need to request a new licence from the local licencing authority.

22. **Dark Fibre Orders**

22.1. In each Data Collection Period, Eircom shall collect data and calculate the following metrics on a quarterly basis in respect of Dark Fibre:

METRIC 211. The number of Dark Fibre offers issued to Access Seekers in lieu of PI Access.

METRIC 212. The number of Dark Fibre offers accepted by Access Seekers in lieu of PI Access.

METRIC 213. The average length of Dark Fibre ordered by Access Seekers in lieu of PI Access.

METRIC 214. The number of Cancelled Dark Fibre orders as a percentage of Dark Fibre orders in lieu of PI Access.

METRIC 215. The number of Undeliverable Dark Fibre orders as a percentage of Dark Fibre orders in lieu of PI Access.

23. **Chamber Orders**

23.1. In each Data Collection Period, Eircom shall collect data and calculate the following metrics on a quarterly basis in respect of Chambers:

METRIC 216. The number of Chamber orders submitted.

METRIC 217. The number of Chamber orders submitted that are accepted.

METRIC 218. Chamber orders as a percentage of submitted Chambers orders, calculated as follows:

(Number of Chambers orders accepted x 100) / (Total number of chamber orders submitted)

METRIC 219. Chamber orders cancelled as a percentage of Chambers orders, calculated as follows:

(Number of Chambers orders cancelled x 100) / (Total number of chamber orders accepted)

METRIC 220. Chamber orders that are undeliverable as a percentage of Chambers orders

(Number of Chamber orders undeliverable x 100) / (Total number of Chamber orders)

23.2. Metrics 216 and 217 shall be reported to ComReg only; they shall be kept confidential and shall not be published.

24. Bulk PI Orders

24.1. In each Data Collection Period, Eircom shall collect data and calculate the following metrics on a quarterly basis in respect of Bulk PI orders:

METRIC 221. The total length of duct access ordered in metres, the total length sub-duct access ordered in metres, the number of pole access ordered, and number of chamber access ordered.

METRIC 222. The mean, mode, median, standard deviation, skewness and kurtosis of elapsed time from order submission to when the order is accepted.

METRIC 223. The mean, mode, median, standard deviation, skewness and kurtosis of elapsed time from civil work pack creation to civils work pack completion.

METRIC 224. The total number of PI (duct, sub-duct, pole and chamber) change requests submitted.

METRIC 225. The total volume of PI change requests as a percentage of submitted orders

(Total of volume of PI (duct, sub-duct, poles and chamber) change requests x 100) / (total number volume of submitted orders by PI (duct, sub-duct, pole and chamber) type)

METRIC 226. The percentage volume of submitted PI (duct, sub-duct, pole and chamber) orders that have reached a final status (completed, cancelled, undeliverable) as a percentage of PI (duct, sub-duct, pole and chamber)submitted orders, calculated as follows:

(Total of completed PI **(duct, sub-duct, poles and chamber)** orders by PI (**duct, sub-duct, pole and chamber)**x 100) / (total number volume of submitted orders by PI (**duct, sub-duct, pole and chamber)** type)

METRIC 227. The percentage volume of submitted PI (duct, sub-duct, pole and chamber) orders cancelled as a percentage of submitted orders, calculated as follows:

(Total of cancelled PI **(duct, sub-duct, poles and chambers)** orders by PI **(duct, sub-duct, poles and chambers)**x 100) / (total number of submitted orders by PI type)

METRIC 228. The percentage volume of submitted PI (duct, sub-duct, poles and chambers) orders undeliverable as a percentage of submitted orders, calculated as follows:

(Total of undeliverable PI orders by PI type x 100) / (total number submitted orders by PI type)

METRIC 229. The percentage volume of residual PI (duct, sub-duct, poles and chambers) orders as a percentage of submitted orders, calculated as follows:

(Total of residual PI **(duct, sub-duct, poles and chambers)**orders by PI **(duct, sub-duct, poles and chambers)** x 100) / (total number submitted orders by PI **(duct, sub-duct, poles and chambers)**)

24.2. Metrics 221 shall be reported to ComReg only; they shall be kept confidential and shall not be published.

SCHEDULE 2

KPI REPORTS [TABLES]

Table 9

PI Sub-duct Order Metrics				
Metric No.	**Metric Description**	**Access Seeker**	**Eircom**	**ComReg only Y/N**
114	The number of submitted sub-duct orders			Y
115	The number of accepted sub-duct orders			Y
116	The number of rejected sub-duct orders			Y
117	The number of cancelled sub-duct orders			Y
118	The number of sub-duct orders completed			Y
119	The number of sub-duct undeliverable orders			Y
120	The number of sub-duct residual orders			Y
121	The number of sub-duct orders re-forecasted			Y
122	The number of non-fluid sub-duct orders			Y

123	The number of sub-duct orders non-fluid by reason			Y
124	The accepted sub-duct orders as a percentage of submitted sub-duct orders			N
125	The number of rejected sub-duct orders as a percentage of submitted sub-duct orders			N
126	The cancelled sub-duct orders as percentage of accepted sub-duct orders			N
127	The completed sub-duct orders as a percentage of accepted sub-duct orders			N
128	The undeliverable sub-duct orders as a percentage of accepted sub-duct orders			N
129	The residual sub-duct orders as a percentage of accepted sub-duct orders			N
130	The re-forecasted sub-duct orders as a percentage of accepted sub-duct orders			N
131	The Non-fluid sub-duct orders as a percentage			N

	of accepted sub-duct orders			
132	The Non-fluid sub-duct orders by reason type as a percentage of accepted sub-duct orders			N
133	The percentage utilisation of existing sub-duct as a percentage of total sub-duct requested			N

Table 10

Sub-duct Provisioning Metrics				
Metric No.	**Metric Description**	**Access Seeker**	**Eircom**	**ComReg only Y/N**
134	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time between Order submitted to Order rejected for each of the route length bands (bands 1, 2, 3 and 4).			N
135	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time between Order accepted to New Works Order			N

	created for each route length band (bands 1, 2, 3 and 4).			
136	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time between Works Order New and Works Order FFPU for each route length band (bands 1, 2, 3 and 4).			N
137	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of duct network remediation requirement to submission of the licence application (for both T2 and T3) to the licensing authority.			N
138	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the granting of the licence by the licencing authority to the completion of the duct network remediation.			N
139	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of duct			N

	network remediation requirement to submission to the licence application (for both T2 and T3) to the licensing authority excluding third party delays.			
140	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the granting of the licence (for both T2 and T3) by the licensing authority to the completion of the network duct remediation.			N
141	The number of blockages cleared per kilometre that did not require excavation.			N
142	The number of blockages cleared per kilometre that required excavation where the duct diameter is greater than 100 millimetres.			N
143	The number of blockages cleared per kilometre that required excavation where the duct diameter is less than or equal to 100 millimetres.			N
144	The percentage of licence applications			N

	rejected by the licensing authority as a percentage of licence applications submitted (T2 and T3).			

Table 11

PI Sub-duct Fault Metrics				
Metric No.	**Metric Description**	**Access Seeker**	**Eircom**	**ComReg only Y/N**
145	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging sub-duct fault to sub-duct fault accepted.			N
146	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging sub-duct fault to sub-duct fault rejected.			N
147	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from sub-duct fault validation to request for repair of the sub-duct.			
148	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from			N

	initiation of the repair process for sub-duct repair to completion of repair (i.e. declared fit-for-purpose) of the sub-duct.			
149	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from initiation of the repair process for sub-duct repair to completion of repair of the sub-duct (i.e. declared fit-for-purpose) excluding third party delays.			N
150	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from request for the sub-duct repair to completion of repair of the sub-duct (i.e. declared fit-for-purpose) without the need to request a new licence from the local authority.			N

Table 12

PI Sub-duct Self Install Orders				
Metric No.	**Metric Description**	**Access Seeker**	**Eircom**	**ComReg only Y/N**
151	The number of submitted duct orders			Y

152	The number of accepted duct orders			Y
153	The number of rejected duct orders			Y
154	The number of cancelled duct orders			Y
155	The accepted duct orders as a percentage of submitted duct orders			N
156	The rejected duct orders as a percentage of accepted duct orders			N
157	The cancelled duct orders as a percentage of recorded duct orders			N

Table 13

PI Sub-Duct Self Install provisioning process point metrics				
Metric No.	**Metric Description**	**Access Seeker**	**Eircom**	**ComReg only Y/N**
158	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from order Submitted to order Acceptance for each of the route length bands (bands 1, 2, 3 and 4).			N

159	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from order Submission to order Rejected for each of the route length bands (bands 1, 2 , 3 and 4).			N
160	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of the duct network remediation requirement to submission of both T2 and T3 licence applications to the licensing authority.			N
161	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the granting of the licence by the licensing authority to the completion of the duct network remediation.			N
162	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of the duct network remediation requirement to completion of the remediation.			N

163	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of the duct network remediation requirement to submission of a T2 or T3 licence application to the licensing authority, excluding third party delays.			N
164	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the granting of the licence by the licensing authority to the completion of the duct network remediation excluding third party delays.			N
165	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of the duct network remediation requirement to completion of the duct network remediation excluding third party delays			N
166	The number of blockages cleared per kilometre that did not require excavation			N

167	The number of blockages cleared per kilometre that required excavation with duct diameter greater than 100 millimetres			N
168	The number of blockages cleared per kilometre that required excavation with duct diameter less than or equal to 100 millimetres			N

Table 14

PI Sub-duct Self Install Fault Metrics				
Metric No.	**Metric Description**	**Access Seeker**	**Eircom**	**ComReg only Y/N**
169	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging a SDSI fault to SDSI fault accepted.			N
170	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging a SDSI fault to SDSI fault rejected.			N
171	The mean, mode, median, standard			N

	deviation, skewness and kurtosis of the elapsed time from SDSI fault validation to the initiation of the repair process of the SDSI repair.			
172	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the initiation of the repair process for SDSI to the completion of repair (i.e. declared fit-for-purpose).			N
173	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from request for the SDSI repair to the completion of repair (i.e. declared fit-for-purpose) excluding third party delays.			N
174	The mean, mode, median, standard deviation, skewness and kurtosis of for the elapsed time from request for the SDSI repair to the completion of repair (i.e. declared fit-for-purpose) for those repairs which did not require a licence from a licensing authority by Eircom.			N

Table 15

PI Direct Duct Access				
Metric No.	**Metric Description**	**Access Seeker**	**Eircom**	**ComReg only Y/N**
175	The number of submitted direct duct access orders			Y
176	The number of cancelled direct duct access orders			Y
177	The cancelled direct duct access orders as percentage of accepted direct duct access orders			N

Table 16

Pole Ordering Metrics				
Metric No.	**Metric Description**	**Access Seeker**	**Eircom**	**ComReg only Y/N**
178	The number of submitted pole orders			Y
179	The number of accepted pole orders			Y
180	The number of rejected pole orders			Y
181	The number of cancelled pole orders			Y

182	The number of pole orders completed			Y
183	The number of pole undeliverable orders			Y
184	The number of pole residual orders			Y
185	The number of pole orders re-forecasted			Y
186	The number of non-fluid pole orders			Y
187	The number of pole orders non-fluid by reason			Y
188	The accepted pole orders as a percentage of submitted pole orders			N
189	The rejected pole orders as a percentage of submitted pole orders			N
190	The cancelled pole orders as percentage of accepted pole orders			N
191	The completed pole orders as a percentage of accepted pole orders			N
192	The undeliverable pole orders as a percentage of accepted pole orders			N
193	The residual pole orders as a percentage of accepted pole orders			N
194	The re-forecasted pole orders as a percentage of accepted pole orders			N

195	The non-fluid pole orders as a percentage of accepted pole orders			N
196	The non-fluid pole orders by reason type as a percentage of accepted pole orders			N

Table 17

PI Pole Provisioning Process Point Metrics				
Metric No.	**Metric Description**	**Access Seeker**	**Eircom**	**ComReg only Y/N**
197	The mean, mode, median, standard deviation, skewness and kurtosis of elapsed time from order Submitted to order Acceptance for each of the pole route length bands (bands 1, 2 and 3).			N
198	The mean, mode, median, standard deviation, skewness and kurtosis of elapsed time from order Submitted to order Rejected for each of the pole route length bands (bands 1, 2 and 3).			N
199	The mean, mode, median, standard			N

	deviation, skewness and kurtosis of the elapsed time from order Accepted to New Works Order for each of the pole route length bands (bands 1, 2 and 3).			
200	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from Works Order New to Works Order FFPU for each of the pole route length bands (bands 1, 2 and 3).			N
201	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of pole remediation requirement to submission of licence application to the licensing authority.			N
202	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the granting of the licence by the licensing authority to the completion of the pole remediation.			N
203	The mean, mode, median, standard			N

	deviation, skewness and kurtosis of the elapsed time from the identification of the remediation requirement to completion of the pole remediation.			
204	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the identification of pole remediation requirement to submission of the licence application to the licensing authority excluding third party delays.			N
205	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from the granting of the licence by the licencing authority to the completion of the pole remediation.			N

Table 18

PIA Pole Fault Metrics

Metric No.	Metric Description	Access Seeker	Eircom	ComReg only Y/N
206	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed from logging a Pole fault to Pole fault accepted.			N
207	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from Pole fault Accepted to the request for Pole repair.			N
208	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from request for Pole repair to the completion of the Pole repair (i.e. declared fit-for-purpose).			N
209	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from request for Pole repair to the completion of the Pole repair (i.e. declared fit-for-purpose) with third party delays excluded.			N
210	The mean, mode, median, standard deviation, skewness			N

	and kurtosis of the elapsed time from request for Pole repair to the completion of the Pole repair (i.e. declared fit-for-purpose) without the need to request a new licence from the local licencing authority.			

Table 19

PI Dark Fibre Orders				
Metric No.	**Metric Description**	**Access Seeker**	**Eircom**	**ComReg only Y/N**
211	The number of Dark Fibre offers issued to Access Seekers in lieu of PI Access			N
212	The number of Dark Fibre offers accepted by Access Seekers in lieu of PI Access			N
213	The average length of Dark Fibre ordered by Access Seekers in lieu of PI Access			N
214	The number of Cancelled Dark Fibre orders as a percentage of Dark Fibre orders in lieu of PI Access.			N
215	The number of Undeliverable Dark Fibre orders as a			N

	percentage of Dark Fibre orders in lieu of PI Access.			

Table 20

PI Chambers Orders				
Metric No.	**Metric Description**	**Access Seeker**	**Eircom**	**ComReg only Y/N**
216	The number of Chamber orders submitted			Y
217	The number of Chamber orders submitted that are accepted			Y
218	Chamber orders as a percentage of submitted Chambers orders			N
219	Chamber orders cancelled as a percentage of Chambers orders			N
220	Chamber orders that are undeliverable as a percentage of Chambers orders			N

Table 21

Bulk PI				
Metric No.	**Metric Description**	**Access Seeker**	**Eircom**	**ComReg only Y/N**

221	The total length of duct access ordered in metres, the total length sub-duct access ordered in metres, the number of pole access ordered, and number of chamber access ordered.			Y
222	The mean, mode, median, standard deviation, skewness and kurtosis of elapsed time from order submission to when the order is accepted.			N
223	The mean, mode, median, standard deviation, skewness and kurtosis of elapsed time from civil work pack creation to civils work pack completion.			N
224	The total number of PI (duct, sub-duct, pole and chamber) change requests submitted.			N
225	The total volume of PI change requests as a percentage of submitted orders			N
226	The percentage volume of submitted PI (duct, sub-duct, pole and chamber) orders that have reached a final status (completed, cancelled, undeliverable) as a percentage of PI (duct,			N

	sub-duct, pole and chamber)submitted orders			
227	The percentage volume of submitted PI (duct, sub-duct, pole and chamber) orders cancelled as a percentage of submitted orders			N
228	The percentage volume of submitted PI (duct, sub-duct, poles and chambers) orders undeliverable as a percentage of submitted orders			N
229	The percentage volume of residual PI (duct, sub-duct, poles and chambers) orders as a percentage of submitted orders			N