An Coimisiún um
Rialáil Cumarsáide
Commission for
Communications Regulation

Key Performance Indicator (KPI) Metrics: Physical Infrastructure Access (PIA)
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Non-confidential PIA KPI metrics technical feasibility review

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KPMG

Commission for Communications Regulation

PIA KPI metrics technical feasibility review

Private and confidential

Final

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Contents

1 Introduction

1.1 Background to the review

The Commission for Communications Regulation (ComReg) issued their Consultation in relation to Physical Infrastructure Access market review. As part of this Consultation ComReg set out in Section 12 high-level obligations relating to a suite of "Physical Infrastructure Access" ('PIA') related "Key Performance Indicators" ('KPIs') which Eircom need to publish, subject to ComReg's final Decision.

1.2 Scope of the report

The scope of the project is to prepare a report in respect of the implementation of a suite of PIA KPIs.

ComReg are looking for KPMG to comment on the technical feasibility of generating these KPIs and quantify the effort involved in performing them.

Specifically, as per the ComReg requirements to the extent possible, KPMG was requested to:

1. assess technical feasibility of the proposed KPI PIA metrics;
2. assist with understanding the (ETD) process; and,
3. analyse an indicative effort required to implement the proposed PIA KPI metric.

Also, we have been required to assess descriptive statistical measures appropriate for KPI purposes.

1.3 Approach to the Review

Our approach to the engagement consisted of the following:

1. To support in gathering the relevant information necessary for our analysis;
2. To analyse the technical feasibility and to estimate the indicative effort required to implement a solution to gather the necessary data for the metrics, to calculate the metrics and to report the required metrics;
3. To provide our analysis in a summary report regarding technical feasibility and the estimated efforts required to implement the proposed KPI metrics.

1.4 Restriction on circulation of the Report

This report may not be copied, reproduced, circulated, distributed, or disclosed in whole or in part to any third parties save as expressly permitted by KPMG in writing.

This report can only be relied upon by our client (ComReg) on the terms and conditions agreed and recorded in the Contract between the ComReg and KPMG. This firm's work and the report were not planned or prepared in contemplation, or for the purpose, of the interests or needs of anyone other than our client. Therefore, items of possible interest to other recipients may not have been addressed by us. The use of professional judgement, and the assessment of issues or their relevance (as appropriate) by this firm would or might have been used and assessed differently by other recipients for their purposes. This firm does not warrant or represent that any facts or matters in the report or that information or explanations (if any) provided orally by this firm in relation to the report, are suitable or appropriate for other recipients' purposes.

For the avoidance of doubt, any party or persons who are the recipients of this report shall not be deemed to be clients of KPMG and KPMG shall accordingly not be responsible to such recipients for providing advice or recommendations in relation to the subject matter as referred to herein.

1.5 Abbreviations and definitions

The following are a list of key abbreviation used within this Report:

Abbreviation	Area	Definition
ETD	Data	Extract, Transform, Download
FTE	Business	Full Time Equivalent
IT	Business	Information Technology
KPI	Business	Key Performance Indicator
PIA	Business	Physical Infrastructure Access
WO	Business	Work Order
Attributes	Data	The quality of a characteristic of data
Operational data	Data	A form of strategic data that captures information on the internal functions and processes of a business
Transactional data	Data	Information that is captured from transactions. E.g., the time of the transaction, the place where it occurred, the price points of the items bought, the payment method employed

1.6 Scope Limitations

The services provided by KPMG are limited to the matter set out in the scope and accordingly do not include, for the avoidance of doubt, any of the following:

- A methodology used for PIA metrics calculations;
- Any requirements or decisions to Eircom or ComReg on how the associated data could be extracted, transformed, and downloaded/stored in the Eircom IT systems to generate KPIs;
- A detailed assessment of the appropriateness of the KPI's as reviewed;
- A detailed compliance review against legislative or regulatory guidelines; or,
- KPMG does not have access to the IT systems mentioned in the current document. All the data have been provided to KPMG solely by ComReg. KPMG has not received any documents directly from Eircom or any third parties.

Additionally, specific to the scope outlined above KPMG will not:

- Provide an opinion or view on the stakeholders' assurance requirements. The review and advice will be based solely on the information as provided to KPMG by ComReg. The extent to which the above scope areas can be fulfilled will be limited to the information provided to KPMG.

1.7 Key assumptions

Key assumptions which have been used to build a methodology outlined below:

- KPMG assumes that operational and transactional data is stored in the format which allows business users to extract it, transform it if appropriate and download it upon requests to any data storage used by Eircom;
- The indicative effort estimates were based on KPMG assumptions;
- Indicative effort evaluations provided in the report should not be considered as a business offer to any interested party. Evaluations provided by KPMG should be considered for benchmark purposes only; and,
- Data available in published documents on Eircom's website (https://openeir.ie) has been considered as available for reference for the purpose of this report.

1.8 Status of work

The status of this report is **Final** as of the 26 April 2023**.**

2 KPMG approach overview

In this section KPMG presents our structured approach, in which KPMG initially built up a general understanding of PIA KPI metrics and their technical feasibility, business processes associated, data availability and indicative efforts required for implementation. The approach below provides a high-level summary of the steps taken by KPMG.

The primary activities are summarised below.

Step 1 Review the list of proposed metrics:

In the first phase ComReg PIA KPIs were reviewed. The final list of PIA KPIs is in the **Appendix 1**.

Step 2 Review the business processes:

During this stage of the project, the process flows for ordering, provisioning and service assurance have been developed and analysed. The diagrams are presented in **Section 2.1** of the current document.

Step 3 Review IT architecture based on IT systems implemented by Eircom and identify data flows and process points associated with PIA KPIs calculations.

During this stage of the project, data flow charts were developed and critical process points for metrics calculation purposes were identified. These diagrams are presented in **Section 2.1**.

Step 4 Verify the list of indicative attributes required to calculate the proposed metrics.

At this stage of the project, a list of the metrics proposed were reviewed and an indicative list of attributes required to manage the calculation was developed. These findings are presented in **Appendix 3**.

Step 5 Identify attribute availability within Eircom's IT systems.

During this stage the documents related to IT systems implemented by Eircom were reviewed, data extraction files from specific Eircom IT systems have been also reviewed to determine whether the specific attributes are available for metrics calculation purposes. Detailed information related to attributes' status is presented in **Appendix 3**.

2.1 PIA processes and data flows

In this section we gathered information related to major IT systems involved in the PIA processes outlined below, and the data flows between them.

The PIA processes which have been reviewed by KPMG are:

1. PIA order process;
2. PIA provisioning process; and
3. PIA fault repairs process.

Our general understanding on data flows and major IT systems and software applications participating in the mentioned PIA processes is presented in **Diagram 1**.

Diagram 1 – **PIA related IT systems data flows** *(indicative example).*

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2.1.1 PIA orders process and data flows

In this section we gathered information related to PIA order data flows and identified the main process points where the data could be extracted, downloaded, or transformed.

Hypothetic/suppositive data flows between Eircom's major IT systems involved in the PIA order processes and the main process points essential to it are shown in **Diagram 2**.

Diagram 2 – Data flows and process points for the PIA order process (*indicative example).*

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The detailed information related to attributes, data flows and systems in use referring to orders metrics proposed by ComReg is reflected in **Appendix 3**.

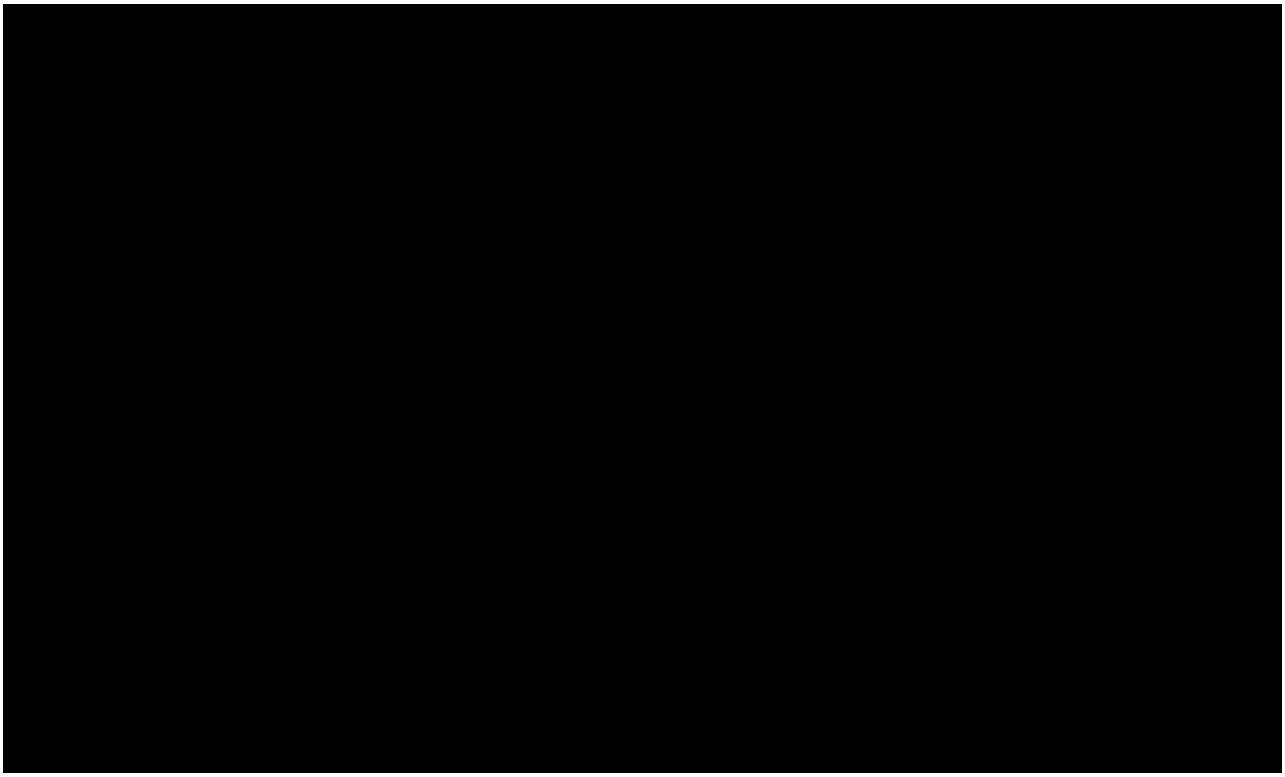
2.1.2 PIA provisioning process and data flows

In this section we gathered information related to the PIA provisioning process data flows and identified the main process points where the data could be extracted, downloaded, or transformed.

The data flows between Eircom's main IT systems involved in the PIA provisioning process and the main process points essential for ETD process are shown in **Diagram 3** below.

Diagram 3 – Data flows and process points for PIA provisioning (Bulk orders) *(Indicative example)*

[✂ PIA provisioning process points and data flows (Bulk orders)



✂]

The detailed information related to attributes, data flows and systems in use referring to the provisioning metrics proposed by ComReg is reflected in **Appendix 3**.

Diagram 4 – **Data flows and process points for PIA provisioning (***Indicative example)*

[✂

✂]

2.1.3 PIA fault metrics

In this section we gathered information related to the PIA faults process data flows and identified the main process points from where the data could be extracted, downloaded, or transformed.

The data flows between Eircom's main IT systems involved in the PIA faults process and the main process points essential for the ETD process are shown on the **Diagram 5** below.

Diagram 5 – **Data flows and process points for PIA faults** *(Indicative example)*

[✂

✂]

2.2 Descriptive statistic methods overview

ComReg proposed a number of descriptive statistics for the elapsed time between certain process points related to the provisioning and assurance service.

The list of descriptive statistic KPIs is presented in **Appendix 1**.

The main statistics measures proposed by ComReg are listed below:

1. Mean;
2. Mode;
3. Median;
4. Standard deviation;
5. Skewness; and,
6. Kurtosis.

Below we provide a general description of these statistics measures of central tendency, calculation formulas and calculation examples.

2.2.1 Mean description

As a measure of central tendency that represents the average value of a set of data, the mean is calculated by adding up values in the data set and dividing them by the total number of values.

The formula used to calculate the mean is shown below:

"Mean = Sum of all values in the dataset / Total number of the values in the dataset"

For example, for the following set of data [2,4,6,8,10], the mean should be calculated as follows: Mean = (2+4+6+8+10)/5 = 30/5 = 6;

The mean is commonly used in statistical analysis as a measure of central tendency because it provides an appropriate representation of the “typical” value in the set of data. It is useful for both numerical and non-numerical data but is most commonly used with numerical data.

The main limitation of the mean is that it can be heavily influenced by extreme values in the dataset, which can skew the result. For example, in the dataset [2,4,6,8,50], the mean is 14 and it not representative of the majority of values in the dataset because of the extreme value of 50. In such cases, the median or mode may be more appropriate measures of central tendency.

2.2.2 Mode description

The mode is one of the measures of central tendency used in statistical analysis, along with the mean and median.

To calculate the mode, it is necessary to find the value that appears most often in the dataset. For example, if we have a set of data [1,2,2,3,3,3,4,4,4,4,5,5] the mode is 4 as it appears four times, which is more than any other value in the dataset. There can be more than one mode in a dataset if two or more values have the same frequency. For example, if we have a set of data [1,2,2,3,3,3,4,4,4,5], both 3 and 4 appear twice, so dataset has two modes: 3 and 4.

The mode is particularly useful when dealing with nominal or categorical data, where the values represent categories or groups rather than numerical values. In such cases, the mode provides a way to identify the most common category or group.

However, the mode has some limitations as a measure of central tendency. It may not be unique or may not exist if all values in the dataset occur with the same frequency. Additionally, the mode may not be representative of the entire dataset if it is skewed or has outliers.

Therefore, it is often used in conjunction with other measures of central tendency to provide a more complete understanding of the data.

2.2.3 Median description

A measure of central tendency in statistics. It could be identified as the middle value in a set of ordered data points.

To find the median, the data should be arranged first from smallest to largest (or vice versa). Then, if the number of data points is odd, the median is the middle value. If the number of data points is even, the median is the average of the two middle values.

The median is useful because it is not affected by extreme values (outliers) in the data set, unlike the mean.

2.2.4 Standard deviation description

Standard deviation is a measure of the amount of variation or dispersion from the mean in a set of data values. It is commonly used to measure the spread or variability of a data set.

Standard deviation (σ) = $\sqrt{(\sum(\mathbf{x} - \mu)^2/\mathbf{N})}$**,** where

x – data value in the set;

μ - the mean of the data set;

N – the total number of data values in the set.

In other words, we take the difference between each data value and the mean of the data set, square each difference, add them up, divide by the total number of values, and then take the square root of the result to get the standard deviation.

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.

2.2.5 Skewness description

Skewness is a measure of 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.

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

2.2.6 Kurtosis description

Kurtosis is a term that 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.

$\textbf{Kurtosis} = \frac{\mu 4}{\sigma^4}$, where

μ_4 – the unstandardized central fourth moment;

σ – the standard deviation.

A positive excess kurtosis indicates a distribution that is more peaked than a normal distribution, with heavier tails, while a negative excess kurtosis indicates a distribution that is less peaked than a normal distribution, with lighter tails. A value of zero indicates that the peak of the distribution has the same sharpness as a normal distribution.

Kurtosis is important as it helps to understand the shape of data distribution and can be used to detect outliers or deviations from normal. However, it should be used in conjunction with other measures of central tendency and dispersion, such as the mean, median, and standard deviation, to get a more complete picture of the data.

2.3 Indicative efforts

Based on the industrial experience and projects delivered by KPMG which have comparable requirements in methodology, implementation, systems and process evaluation, an estimate of indicative efforts required for implementation of a reference solution has been developed.

In **Section 4** KPMG will provide an indicative evaluation of the efforts needed to implement a reference solution related to PIA KPI metrics based on the limitations and assumptions listed in **Sections 1.6 - 1.7**.

High level effort evaluation includes the following:

1. FTE required to perform PIA KPI metrics calculation; and,
2. Time required to perform PIA KPI metrics calculation.

KPMG's evaluation will be given based on KPMG project execution best practices, standards, and requirements for project performance.

3 Summary conclusions

Based upon our analysis of PIA KPI metrics proposed by ComReg, we have provided the following conclusion.

The analysis performed was carried out to determine whether the PIA metrics proposed by ComReg are technically feasible to generate, and to evaluate of the indicative effort and resources required to implement the PIA metrics reference solution.

The analysis was based on the following:

1. The documents provided by ComReg;
2. The methodology mentioned in **Section 2**; and,
3. The limitations and assumptions in **Sections 1.6 - 1.7** of this document.

The analysis covered the following business areas:

1. PI Ordering processes;
2. PI Provisioning processes; and,
3. PI Service assurance processes.

KMPG have considered the documents and the data associated with the following systems:

1. [✂ [redacted] ; ✂]
5. WOSAP;
6. Unified Gateway Service Portal;
7. MRL;
8. MS Outlook; and ,
9. Eircom CEI and NGN product documentation.

In addition, KPMG expects the majority of data required for metrics calculation should be technically available in the IT systems mentioned above. KPMG understands that data gaps between the initial data available in the systems and the data required for metrics calculations could exist. The gaps could be resolved depending on Eircom's methodology for metrics execution.

The following key parameters were used to review each system:

1. Basic functionality; and,
2. Data held in the systems.

KPMG has not reviewed data transfer methods between existing Eircom systems which could be organised automatically, semi-automatically or manually. An initial process of organizing the data transfer between the systems should have minor effect on metrics calculation.

Based on the analysis KPMG have concluded that the metrics proposed by ComReg to measure and evaluate performance of the business processes mentioned above are technically feasible and a solution could be implemented in a timeframe of less than six months. An analysis of the indicative efforts required to implement a solution is outlined in more detail in **Section 4**.

The detailed information of the work performed, and the results generated is included in **Appendix 3** of this document.

3.1 Detailed PIA KPIs order conclusion

This section outlines KPMG's detailed conclusion related to the specific business area mentioned in **Section 2.1**.

As part of the review, we have observed and evaluated the processes related to the Physical Infrastructure Orders and the IT systems involved in this process.

The following processes have been reviewed by KPMG:

1. Sub-duct Orders;
2. Sub-Duct Self Install Orders;
3. Direct Duct Access Orders;
4. Pole Orders;
5. Chambers Orders, and
6. Dark fibre Access in lieu of PI access.

The main IT systems involved in the orders process execution for metrics calculation purposes were identified, which included systems as such: Microsoft Outlook, Unified Gateway Service Portal, [✂ [redacted], ✂] WOSAP SAP [✂ [redacted] ✂] and SmallWorld.

Based on the documents reviewed by KPMG (Appendix 2) and a high-level functional evaluation of systems and processes (order process, provisioning process, fault repair process), we have concluded that the metrics proposed by ComReg to measure and evaluate performance of order processes are technically feasible.

We noted that the UG Service Portal system is currently only used for the active network such as NGN Ethernet products. However, it has been concluded that this system could also be taken into consideration to perform metrics calculations for physical infrastructure processes, if necessary.

3.2 Detailed PIA KPIs provisioning process points intervals conclusion

This section specifies KPMG's overall conclusion related to the specific business area mentioned in **Section 2.1**.

We have reviewed and evaluated the process related to the Physical Infrastructure Provisioning process and the IT systems involved in this process.

The following processes have been reviewed by KPMG:

1. Sub-Duct Provisioning process;
2. Sub-Duct Self Install provisioning process; and,
3. Pole Provisioning process.

The main of IT systems involved in the provisioning process for metric calculation purposes have been identified as such: Microsoft Outlook, SAP [✂ [redacted] ✂] , SmallWorld and MRL.

Based on the documents reviewed by KPMG (Appendix 2) and a high-level functional evaluation of these systems and provisioning process, we have concluded that the metrics proposed by ComReg to measure performance of the process mentioned above, are technically feasible.

The conclusion related to the descriptive statistics measures proposed by ComReg is covered in **Section 3.4** of the current document.

3.3 Detailed PIA KPIs fault metrics conclusion

This section outlines KPMG's detailed conclusion related to the specific business area mentioned in **Section 2.1**.

We have reviewed and evaluated the process related to the Physical Infrastructure faults and the IT systems involved in this process. The main IT systems involved in the fault process execution for metrics calculation purposes have been identified as such: Microsoft Outlook, SAP [✂ [redacted] ✂] and MRL.

Based on the evaluation of these systems and a fault repair process, we have concluded that the metrics proposed by ComReg to measure performance of the process mentioned above are technically feasible.

We noted that the UG Service Portal system is currently used for such as NGN Ethernet products and services. However, it has been concluded that this system could also be taken into consideration to perform metrics calculations for physical infrastructure processes, if necessary.

3.4 Descriptive statistic metrics conclusion

KPMG has reviewed the list of metrics proposed by ComReg (**Appendix 1**) relating to the descriptive statistical measures and have made a conclusion regarding their calculation feasibility for PIA KPI purposes.

ComReg proposes to monitor the elapsed time between key milestones in the service assurance and provisioning lifecycles described in **Section 2.2** of this document by way of descriptive statistics.

The data sets which will be measured are represented as time ranges (days, weeks, months etc.). KPMG evaluated if the measures proposed by ComReg for monitoring the process' performance from a comparative perspective.

Based on the information given above, KPMG has made the overall conclusion that the use of the mean, mode and median is appropriate to report on the relevant metrics. In the context of time ranges, the mean can be used to determine the average duration of an event or the average time between events.

The median can be used to determine the typical duration of an event or the typical time between events, and the mode can be used to determine the most common duration of an event or the most common time between events.

The use of standard deviation, skewness, and kurtosis – while they are less typically used in the market to monitor process performance, are appropriate for calculating variances in this instance.

Skewness and kurtosis are two statistical measures which can also be used in business process performance analysis to assess the distribution of data and identify any potential outliers or anomalies. Skewness measures the asymmetry of a distribution. If a distribution is symmetric, the skewness is zero. If the distribution has a long tail to the right, the skewness is positive. If the distribution has a long tail to the left, the skewness is negative. In business process performance analysis, skewness can be used to identify whether a process is consistently performing above or below expectations, or if there are any unexpected spikes or drops in performance.

Kurtosis measures the degree of sharpness of the peak and flatness of a distribution. In business process performance analysis, kurtosis can be used to identify whether a process has a consistently high level of performance or whether there are significant variations in performance over time.

Together, skewness and kurtosis can provide insights into the behaviour of business processes and help identify potential areas for improvement.

Thus, KPMG has observed that it is both common practice as well as appropriate to use the descriptive statistical measures mentioned above, to evaluate and compare various business process performance levels.

4 Indicative effort requirements

In order to provide a reference solution with indicative effort requirements, KPMG has observed similar projects and leveraged prior business experience.

Based on our analysis and taking into consideration the core assumptions and limitations defined in **Sections 1.6 - 1.7**, a reference solution was produced and is outlined below.

- A reference solution for team size evaluation; and,
- A reference solution for project timeline (**Table 1**, **Diagram 6**).

KMPG has provided the below indicative team structure for illustrative purposes only:

1. **2 to 4 FTE**, in the following areas: ERP implementation, methodology, process design, data analysis;
2. **1 FTE** system architecture experience of system implementation or data migration experience in SAP, relational database, etc; and,
3. **1 FTE** project manager.

Thus, we expect an approximate team size for a similar project would be from **4** to **6 FTE**.

Table 1 presents estimated high-level project phases and time required. It should be taken into consideration that the proposed stages could be executed in parallel during the project.

Table 1 – **Project phases and time required** *(Indicative example)*

Phase No.	Indicative project phases	Indicative time range
1	Metrics review	1 to 2 weeks
2	IT system review and evaluation	1 to 2 months
3	Business processes maps design “As Is”	1 to 2 months
4	PIA KPI metrics calculation methodology including detailed design of the process flows, data flows, ETD process design “To Be”, mapping	1 to 3 months
5	Gaps analysis, system, processes, and raw data requirements “To Be”	2 to 4 weeks
6	Production (Testing)	2 to 4 weeks

Based on the consideration mentioned above, KPMG has suggested the following indicative project planning timeline displayed on Diagram 6.

Diagram 6 – Project timeline *(Indicative example)*

Stages/Period	Month 1				Month 2				Month 3				Month 4				Month 5				Month 6			
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*
Stage 1 Metrics review																								
Stage 2 IT system review and evaluation																								
Stage 3 Business processes maps design "As Is"																								
Stage 4 PIA KPI metrics calculation methodology including detailed design of the process flows, data flows, ETD process design To Be, mapping																								
Stage 5 Gaps analysis, system, processes, and raw data requirements "To Be"																								
Stage 6 Production (Testing)																								

Based on the Diagram 6 KPMG expects that the implementation time for the similar type of projects could be extended up to 6 months. Stated otherwise, the minimum required implementation time is 3 months, and the maximum implementation time needed is 6 months based on our assumptions.

Appendix 1 PIA KPIs metrics' list

PI Type	Metric No.	Metric Description
Sub-duct Orders	114	The number of submitted sub-duct orders
Sub-duct Orders	115	The number of accepted sub-duct orders
Sub-duct Orders	116	The number of rejected sub-duct orders
Sub-duct Orders	117	The number of cancelled sub-duct orders
Sub-duct Orders	118	The number of sub-duct orders completed
Sub-duct Orders	119	The number of sub-duct undeliverable orders
Sub-duct Orders	120	The number of sub-duct residual orders
Sub-duct Orders	121	The number of sub-duct orders re-forecasted
Sub-duct Orders	122	The number of non-fluid sub-duct orders
Sub-duct Orders	123	The number of sub-duct orders non-fluid by reason
Sub-duct Orders	124	The accepted sub-duct orders as a percentage of submitted sub-duct orders
Sub-duct Orders	125	The number of rejected sub-duct orders as a percentage of submitted sub-duct orders
Sub-duct Orders	126	The cancelled sub-duct orders as percentage of accepted sub-duct orders
Sub-duct Orders	127	The completed sub-duct orders as a percentage of accepted sub-duct orders
Sub-duct Orders	128	The undeliverable sub-duct orders as a percentage of accepted sub-duct orders
Sub-duct Orders	129	The residual sub-duct orders as a percentage of accepted sub-duct orders
Sub-duct Orders	130	The re-forecasted sub-duct orders as a percentage of accepted sub-duct orders
Sub-duct Orders	131	The Non-fluid sub-duct orders as a percentage of accepted sub-duct orders
Sub-duct Orders	132	The Non-fluid sub-duct orders by reason type as a percentage of accepted sub-duct orders
Sub-duct Orders	133	The percentage utilisation of existing sub-duct as a percentage of total sub-duct requested
Sub-duct Provisioning Metrics	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).
Sub-duct Provisioning Metrics	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).
Sub-duct Provisioning Metrics	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).
Sub-duct Provisioning Metrics	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.
Sub-duct Provisioning Metrics	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.
Sub-duct Provisioning Metrics	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.
Sub-duct Provisioning Metrics	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.
Sub-duct Provisioning Metrics	141	The number of blockages cleared per kilometre that did not require excavation.
Sub-duct Provisioning Metrics	142	The number of blockages cleared per kilometre that required excavation where the duct diameter is greater than 100 millimetres.
Sub-duct Provisioning Metrics	143	The number of blockages cleared per kilometre that required excavation where the duct diameter is less than or equal to 100 millimetres.
Sub-duct Provisioning Metrics	144	The percentage of licence applications rejected by the licensing authority as a percentage of licence applications submitted (T2 and T3).
PI Sub-duct Fault Metrics	145	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging sub-duct fault to sub-duct fault accepted.
PI Sub-duct Fault Metrics	146	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging sub-duct fault to sub-duct fault rejected.
PI Sub-duct Fault Metrics	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.
PI Sub-duct Fault Metrics	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.
PI Sub-duct Fault Metrics	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.
PI Sub-duct Fault Metrics	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.
PI Sub-duct Self Install Orders	151	The number of submitted duct orders
PI Sub-duct Self Install Orders	152	The number of accepted duct orders
PI Sub-duct Self Install Orders	153	The number of rejected duct orders
PI Sub-duct Self Install Orders	154	The number of cancelled duct orders
PI Sub-duct Self Install Orders	155	The accepted duct orders as a percentage of submitted duct orders
PI Sub-duct Self Install Orders	156	The rejected duct orders as a percentage of accepted duct orders
PI Sub-duct Self Install Orders	157	The cancelled duct orders as a percentage of recorded duct orders
PI Sub-Duct Self Install provisioning	158	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from order Submitted to order

process point metrics		Acceptance for each of the route length bands (bands 1, 2, 3 and 4).
PI Sub-Duct Self Install provisioning process point metrics	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).
PI Sub-Duct Self Install provisioning process point metrics	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.
PI Sub-Duct Self Install provisioning process point metrics	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.
PI Sub-Duct Self Install provisioning process point metrics	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.
PI Sub-Duct Self Install provisioning process point metrics	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.
PI Sub-Duct Self Install provisioning process point metrics	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.
PI Sub-Duct Self Install provisioning process point metrics	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
PI Sub-Duct Self Install provisioning process point metrics	166	The number of blockages cleared per kilometre that did not require excavation
PI Sub-Duct Self Install provisioning process point metrics	167	The number of blockages cleared per kilometre that required excavation with duct diameter greater than 100 millimetres
PI Sub-Duct Self Install provisioning process point metrics	168	The number of blockages cleared per kilometre that required excavation with duct diameter less than or equal to 100 millimetres
PI Sub-duct Self Install Fault Metrics	169	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging a SDSI fault to SDSI fault accepted.
PI Sub-duct Self Install Fault Metrics	170	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging a SDSI fault to SDSI fault rejected.
PI Sub-duct Self Install Fault Metrics	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.
PI Sub-duct Self Install Fault Metrics	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).

PI Sub-duct Self Install Fault Metrics	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.
PI Sub-duct Self Install Fault Metrics	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.
PI Direct Duct Access	175	The number of submitted direct duct access orders
PI Direct Duct Access	176	The number of cancelled direct duct access orders
PI Direct Duct Access	177	The cancelled direct duct access orders as percentage of accepted direct duct access orders
Pole Ordering Metrics	178	The number of submitted pole orders
Pole Ordering Metrics	179	The number of accepted pole orders
Pole Ordering Metrics	180	The number of rejected pole orders
Pole Ordering Metrics	181	The number of cancelled pole orders
Pole Ordering Metrics	182	The number of pole orders completed
Pole Ordering Metrics	183	The number of pole undeliverable orders
Pole Ordering Metrics	184	The number of pole residual orders
Pole Ordering Metrics	185	The number of pole orders re-forecasted
Pole Ordering Metrics	186	The number of non-fluid pole orders
Pole Ordering Metrics	187	The number of pole orders non-fluid by reason
Pole Ordering Metrics	188	The accepted pole orders as a percentage of submitted pole orders
Pole Ordering Metrics	189	The rejected pole orders as a percentage of submitted pole orders
Pole Ordering Metrics	190	The cancelled pole orders as percentage of accepted pole orders
Pole Ordering Metrics	191	The completed pole orders as a percentage of accepted pole orders
Pole Ordering Metrics	192	The undeliverable pole orders as a percentage of accepted pole orders
Pole Ordering Metrics	193	The residual pole orders as a percentage of accepted pole orders
Pole Ordering Metrics	194	The re-forecasted pole orders as a percentage of accepted pole orders
Pole Ordering Metrics	195	The non-fluid pole orders as a percentage of accepted pole orders
Pole Ordering Metrics	196	The non-fluid pole orders by reason type as a percentage of accepted pole orders
PI Pole Provisioning Process Point Metrics	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).
PI Pole Provisioning Process Point Metrics	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).
PI Pole Provisioning Process Point Metrics	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).
PI Pole Provisioning Process Point Metrics	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).
PI Pole Provisioning Process Point Metrics	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.
PI Pole Provisioning Process Point Metrics	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.
PI Pole Provisioning Process Point Metrics	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.
PI Pole Provisioning Process Point Metrics	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.
PI Pole Provisioning Process Point Metrics	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.
PIA Pole Fault Metrics	206	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed from logging a Pole fault to Pole fault accepted.
PIA Pole Fault Metrics	207	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from Pole fault Accepted to the request for Pole repair.
PIA Pole Fault Metrics	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).
PIA Pole Fault Metrics	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.
PIA Pole Fault Metrics	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.
PI Dark Fibre Orders	211	The number of Dark Fibre offers issued to Access Seekers in lieu of PI Access
PI Dark Fibre Orders	212	The number of Dark Fibre offers accepted by Access Seekers in lieu of PI Access
PI Dark Fibre Orders	213	The average length of Dark Fibre ordered by Access Seekers in lieu of PI Access
PI Dark Fibre Orders	214	The number of Cancelled Dark Fibre orders as a percentage of Dark Fibre orders in lieu of PI Access.
PI Dark Fibre Orders	215	The number of Undeliverable Dark Fibre orders as a percentage of Dark Fibre orders in lieu of PI Access.

PI Chambers Orders	216	The number of Chamber orders submitted
PI Chambers Orders	217	The number of Chamber orders submitted that are accepted
PI Chambers Orders	218	Chamber orders as a percentage of submitted Chambers orders
PI Chambers Orders	219	Chamber orders cancelled as a percentage of Chambers orders
PI Chambers Orders	220	Chamber orders that are undeliverable as a percentage of Chambers orders
Bulk PI	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.
Bulk PI	222	The mean, mode, median, standard deviation, skewness and kurtosis of elapsed time from order submission to when the order is accepted.
Bulk PI	223	The mean, mode, median, standard deviation, skewness and kurtosis of elapsed time from civil work pack creation to civils work pack completion.
Bulk PI	224	The total number of PI (duct, sub-duct, pole and chamber) change requests submitted.
Bulk PI	225	The total volume of PI change requests as a percentage of submitted orders
Bulk PI	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
Bulk PI	227	The percentage volume of submitted PI (duct, sub-duct, pole and chamber) orders cancelled as a percentage of submitted orders
Bulk PI	228	The percentage volume of submitted PI (duct, sub-duct, poles and chambers) orders undeliverable as a percentage of submitted orders
Bulk PI	229	The percentage volume of residual PI (duct, sub-duct, poles and chambers) orders as a percentage of submitted orders

Appendix 2 References

No.	Document Name	Document Number	Document Date	Document Format	Issued by	Confidential Status	Link
1	DATAPlusProv.pdf	NA	NA	.pdf	NA	Confidential	
2	Civil Engineering Infrastructure (CEI) (Duct Access & Sub-Duct Self Install (S.D.S.I) & Pole Access	NA	30/12/2022	.pdf	Eircom	Non-confidential	
3	MRL tutorial	NA	NA	mp4	Road Management Office	Non-confidential	MRL Authority User Tutorials - Road Management Office (rmo.ie)
4	[redacted]						

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[redacted]	[redacted] ✂]	NA	NA	.pdf	NA	Confidential	

44	ComReg-2133	ComReg21/33	01/04/2021	.pdf	ComReg	Non-confidential	

Appendix 3 PIA KPIs metrics specification with attributes lists

Appendix 3 "PIA KPIs metrics specification with attributes lists"
to the report "PIA KPI metrics technical feasibility review"
26.04.2023

KPMG

Content

01 Metrics Data >>>

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Appendix 3 "PIA KPIs metrics specification with attributes lists"
to the report "PIA KPI metrics technical feasibility review"
26.04.2023

x	Applicable to attributes/systems
–	Not applicable to attributes/systems

KPI PI Metrics Specification

"The attributes presented for indicative purposes only. The limitations and the assumptions stated in the report "PIA KPI metrics technical feasibility review" should be considered

			Attribute specification"											Systems Involved								
Metric number	PI Type	Metric description	Order ID/number	Order Creation Date	Order Type	Order Status	Route Length Band Type	Licence Type	Remediation request indication/mark	Excavation indication/ mark	Duct diameter/ type	Blockage indication /mark	Fault status	Unified Gateway Service Portal	Microsoft Outlook	[redacted]		SmallWorld	MRL	[redacted]		
114	Sub-duct Orders	The number of submitted sub-duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
115	Sub-duct Orders	The number of accepted sub-duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
116	Sub-duct Orders	The number of rejected sub-duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
117	Sub-duct Orders	The number of cancelled sub-duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
118	Sub-duct Orders	The number of sub-duct orders completed	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
119	Sub-duct Orders	The number of sub-duct undeliverable orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
120	Sub-duct Orders	The number of sub-duct residual orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
121	Sub-duct Orders	The number of sub-duct orders re-forecasted	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
122	Sub-duct Orders	The number of non-fluid sub-duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
123	Sub-duct Orders	The number of sub-duct orders non-fluid by reason	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
124	Sub-duct Orders	The accepted sub-duct orders as a percentage of submitted sub-duct orders	–	–	–	–	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
125	Sub-duct Orders	The number of rejected sub-duct orders as a percentage of submitted sub-duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
126	Sub-duct Orders	The cancelled sub-duct orders as percentage of accepted sub-duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
127	Sub-duct Orders	The completed sub-duct orders as a percentage of accepted sub-duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
128	Sub-duct Orders	The undeliverable sub-duct orders as a percentage of accepted sub-duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
129	Sub-duct Orders	The residual sub-duct orders as a percentage of accepted sub-duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
130	Sub-duct Orders	The re-forecasted sub-duct orders as a percentage of accepted sub-duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
131	Sub-duct Orders	The Non-fluid sub-duct orders as a percentage of accepted sub-duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
132	Sub-duct Orders	The Non-fluid sub-duct orders by reason type as a percentage of accepted sub-duct ord	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
133	Sub-duct Orders	The percentage utilisation of existing sub-duct as a percentage of total sub-duct requeste	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
134	Sub-duct Provisioning M	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).	x	x	x	x	x	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
135	Sub-duct Provisioning Metrics	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).	x	x	x	x	x	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
136	Sub-duct Provisioning Metrics	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).	x	x	x	x	x	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
137	Sub-duct Provisioning Metrics	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.	x	x	x	x	–	x	–	–	–	–	–	x	x	x	x	–	x	–	–	–
138	Sub-duct Provisioning Metrics	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.	x	x	x	x	–	x	–	–	–	–	–	x	x	x	x	–	x	–	–	–
139	Sub-duct Provisioning Metrics	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	x	x	x	x	–	x	x	–	–	–	–	x	x	x	x	–	x	–	–	–

140	Sub-duct Provisioning Metrics	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.	x	x	x	x	–	x	x	–	–	–	–	x	x	x	x	–	x	–	–	–
141	Sub-duct Provisioning Metrics	The number of blockages cleared per kilometre that did not require excavation.	x	x	x	x	–	–	x	x	–	x	–	x	x	x	x	–	–	–	–	–
142	Sub-duct Provisioning Metrics	The number of blockages cleared per kilometre that required excavation where the duct d	x	x	x	x	–	–	x	x	x	x	–	x	x	x	x	–	–	–	–	–
143	Sub-duct Provisioning Metrics	The number of blockages cleared per kilometre that required excavation where the duct diameter is less than or equal to 100 millimetres.	x	x	x	x	–	–	x	x	x	x	–	x	x	x	x	–	–	–	–	–
144	Sub-duct Provisioning Metrics	The percentage of licence applications rejected by the licensing authority as a percentage of licence applications submitted (T2 and T3).	x	x	x	x	–	x	–	–	–	–	–	x	x	x	x	–	x	–	–	–
145	PI Sub-duct Fault Metrics	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging sub-duct fault to sub-duct fault accepted.	x	x	x	x	–	–	–	–	–	–	x	–	x	x	–	–	–	–	–	–
146	PI Sub-duct Fault Metrics	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging sub-duct fault to sub-duct fault rejected.	x	x	x	x	–	–	–	–	–	–	x	–	x	x	–	–	–	–	–	–
147	PI Sub-duct Fault Metrics	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.	x	x	x	x	–	–	–	–	–	–	x	–	x	x	–	–	–	–	–	–
148	PI Sub-duct Fault Metrics	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.	x	x	x	x	–	–	–	–	–	–	–	–	x	x	–	–	–	–	–	–
149	PI Sub-duct Fault Metrics	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.	x	x	x	x	–	–	–	–	–	–	–	–	x	x	–	–	–	–	–	–
150	PI Sub-duct Fault Metrics	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.	x	x	x	x	–	x	–	–	–	–	–	–	x	x	–	–	–	–	–	–
151	PI Sub-duct Self Install Orders	The number of submitted duct orders	x	x	–	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
152	PI Sub-duct Self Install Orders	The number of accepted duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
153	PI Sub-duct Self Install Orders	The number of rejected duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
154	PI Sub-duct Self Install Orders	The number of cancelled duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
155	PI Sub-duct Self Install Orders	The accepted duct orders as a percentage of submitted duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
156	PI Sub-duct Self Install Orders	The rejected duct orders as a percentage of accepted duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
157	PI Sub-duct Self Install Orders	The cancelled duct orders as a percentage of recorded duct orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
158	PI Sub-Duct Self Install provisioning process point metrics	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).	x	x	x	x	x	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
159	PI Sub-Duct Self Install provisioning process point metrics	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).	x	x	x	x	x	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
160	PI Sub-Duct Self Install provisioning process point metrics	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.	x	x	x	x	–	x	x	–	–	–	–	x	x	x	x	–	x	–	–	–

161	PI Sub-Duct Self Install provisioning process point metrics	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.	x	x	x	x	-	x	x	-	-	-	-	x	x	x	x	-	x	-	-	-
162	PI Sub-Duct Self Install provisioning process point metrics	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.	x	x	x	x	-	-	x	-	-	-	-	x	x	x	x	-	-	-	-	-
163	PI Sub-Duct Self Install provisioning process point metrics	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.	x	x	x	x	-	x	x	-	-	-	-	x	x	x	x	-	x	-	-	-
164	PI Sub-Duct Self Install provisioning process point metrics	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.	x	x	x	x	-	x	x	-	-	-	-	x	x	x	x	-	x	-	-	-
165	PI Sub-Duct Self Install provisioning process point metrics	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	x	x	x	x	-	-	x	-	-	-	-	x	x	x	x	-	-	-	-	-
166	PI Sub-Duct Self Install provisioning process point metrics	The number of blockages cleared per kilometre that did not require excavation	x	x	x	x	-	-	x	x	-	x	-	x	x	x	x	-	-	-	-	-
167	PI Sub-Duct Self Install provisioning process point metrics	The number of blockages cleared per kilometre that required excavation with duct diameter greater than 100 millimetres	x	x	x	x	-	-	x	x	x	x	-	x	x	x	x	-	-	-	-	-
168	PI Sub-Duct Self Install provisioning process point metrics	The number of blockages cleared per kilometre that required excavation with duct diameter less than or equal to 100 millimetres	x	x	x	x	-	-	x	x	x	x	-	x	x	x	x	-	-	-	-	-
169	PI Sub-duct Self Install Fault Metrics	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging a SDSI fault to SDSI fault accepted.	x	x	x	x	-	-	-	-	-	-	x	-	x	x	-	-	-	-	-	-
170	PI Sub-duct Self Install Fault Metrics	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from logging a SDSI fault to SDSI fault rejected.	x	x	x	x	-	-	-	-	-	-	x	-	x	x	-	-	-	-	-	-
171	PI Sub-duct Self Install Fault Metrics	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.	x	x	x	x	-	-	-	-	-	-	x	-	x	x	-	-	-	-	-	-
172	PI Sub-duct Self Install Fault Metrics	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).	x	x	x	x	-	-	-	-	-	-	-	-	x	x	-	-	-	-	-	-
173	PI Sub-duct Self Install Fault Metrics	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.	x	x	x	x	-	-	-	-	-	-	-	-	x	x	-	-	-	-	-	-
174	PI Sub-duct Self Install Fault Metrics	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.	x	x	x	x	-	x	-	-	-	-	-	-	x	x	-	-	-	-	-	-
175	PI Direct Duct Access	The number of submitted direct duct access orders	x	x	x	x	-	-	-	-	-	-	-	-	x	x	-	-	-	-	-	-
176	PI Direct Duct Access	The number of cancelled direct duct access orders	x	x	x	x	-	-	-	-	-	-	-	-	x	x	-	-	-	-	-	-
177	PI Direct Duct Access	The cancelled direct duct access orders as percentage of accepted direct duct access or	x	x	x	x	-	-	-	-	-	-	-	-	x	x	-	-	-	-	-	-
178	Pole Ordering Metrics	The number of submitted pole orders	x	x	x	x	-	-	-	-	-	-	-	x	x	x	x	-	-	-	-	-
179	Pole Ordering Metrics	The number of accepted pole orders	x	x	x	x	-	-	-	-	-	-	-	x	x	x	x	-	-	-	-	-
180	Pole Ordering Metrics	The number of rejected pole orders	x	x	x	x	-	-	-	-	-	-	-	x	x	x	x	-	-	-	-	-
181	Pole Ordering Metrics	The number of cancelled pole orders	x	x	x	x	-	-	-	-	-	-	-	x	x	x	x	-	-	-	-	-
182	Pole Ordering Metrics	The number of pole orders completed	x	x	x	x	-	-	-	-	-	-	-	x	x	x	x	-	-	-	-	-
183	Pole Ordering Metrics	The number of pole undeliverable orders	x	x	x	x	-	-	-	-	-	-	-	x	x	x	x	-	-	-	-	-
184	Pole Ordering Metrics	The number of pole residual orders	x	x	x	x	-	-	-	-	-	-	-	x	x	x	x	-	-	-	-	-
185	Pole Ordering Metrics	The number of pole orders re-forecasted	x	x	x	x	-	-	-	-	-	-	-	x	x	x	x	-	-	-	-	-

186	Pole Ordering Metrics	The number of non-fluid pole orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
187	Pole Ordering Metrics	The number of pole orders non-fluid by reason	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
188	Pole Ordering Metrics	The accepted pole orders as a percentage of submitted pole orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
189	Pole Ordering Metrics	The rejected pole orders as a percentage of submitted pole orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
190	Pole Ordering Metrics	The cancelled pole orders as percentage of accepted pole orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
191	Pole Ordering Metrics	The completed pole orders as a percentage of accepted pole orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
192	Pole Ordering Metrics	The undeliverable pole orders as a percentage of accepted pole orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
193	Pole Ordering Metrics	The residual pole orders as a percentage of accepted pole orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
194	Pole Ordering Metrics	The re-forecasted pole orders as a percentage of accepted pole orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
195	Pole Ordering Metrics	The non-fluid pole orders as a percentage of accepted pole orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
196	Pole Ordering Metrics	The non-fluid pole orders by reason type as a percentage of accepted pole orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
197	PI Pole Provisioning Process Point Metrics	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).	x	x	x	x	x	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
198	PI Pole Provisioning Process Point Metrics	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).	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
199	PI Pole Provisioning Process Point Metrics	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).	x	x	x	x	x	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
200	PI Pole Provisioning Process Point Metrics	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).	x	x	x	x	x	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
201	PI Pole Provisioning Process Point Metrics	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.	x	x	x	x	–	x	x	–	–	–	–	x	x	x	x	–	x	–	–	–
202	PI Pole Provisioning Process Point Metrics	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.	x	x	x	x	–	x	x	–	–	–	–	x	x	x	x	–	x	–	–	–
203	PI Pole Provisioning Process Point Metrics	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.	x	x	x	x	–	–	x	–	–	–	–	x	x	x	x	–	–	–	–	–
204	PI Pole Provisioning Process Point Metrics	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.	x	x	x	x	–	x	x	–	–	–	–	x	x	x	x	–	x	–	–	–
205	PI Pole Provisioning Process Point Metrics	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.	x	x	x	x	–	x	x	–	–	–	–	x	x	x	x	–	x	–	–	–
206	PIA Pole Fault Metrics	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed from logging a Pole fault to Pole fault accepted.	x	x	x	x	–	–	–	–	–	–	x	–	x	x	–	–	–	–	–	–
207	PIA Pole Fault Metrics	The mean, mode, median, standard deviation, skewness and kurtosis of the elapsed time from Pole fault Accepted to the request for Pole repair.	x	x	x	x	–	–	–	–	–	–	x	–	x	x	–	–	–	–	–	–
208	PIA Pole Fault Metrics	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).	x	x	x	x	–	–	–	–	–	–	x	–	x	x	–	–	–	–	–	–
209	PIA Pole Fault Metrics	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.	x	x	x	x	–	–	–	–	–	–	x	–	x	x	–	–	–	–	–	–

210	PIA Pole Fault Metrics	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.	x	x	x	x	–	–	–	–	–	–	x	–	x	x	–	–	–	–	–	–
211	PI Dark Fibre Orders	The number of Dark Fibre offers issued to Access Seekers in lieu of PI Access	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
212	PI Dark Fibre Orders	The number of Dark Fibre offers accepted by Access Seekers in lieu of PI Access	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
213	PI Dark Fibre Orders	The average length of Dark Fibre ordered by Access Seekers in lieu of PI Access	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
214	PI Dark Fibre Orders	The number of Cancelled Dark Fibre orders as a percentage of Dark Fibre orders in lieu c	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
215	PI Dark Fibre Orders	The number of Undeliverable Dark Fibre orders as a percentage of Dark Fibre orders in lie	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
216	PI Chambers Orders	The number of Chamber orders submitted	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
217	PI Chambers Orders	The number of Chamber orders submitted that are accepted	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
218	PI Chambers Orders	Chamber orders as a percentage of submitted Chambers orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
219	PI Chambers Orders	Chamber orders cancelled as a percentage of Chambers orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
220	PI Chambers Orders	Chamber orders that are undeliverable as a percentage of Chambers orders	x	x	x	x	–	–	–	–	–	–	–	x	x	x	x	–	–	–	–	–
221	Bulk PI	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.	x	x	x	x	x	–	–	–	–	–	–	–	x	x	–	x	x	–	–	–
222	Bulk PI	The mean, mode, median, standard deviation, skewness and kurtosis of elapsed time from order submission to when the order is accepted.	x	x	x	x	–	–	–	–	–	–	–	–	x	x	–	x	x	–	–	–
223	Bulk PI	The mean, mode, median, standard deviation, skewness and kurtosis of elapsed time from civil work pack creation to civils work pack completion.	x	x	x	x	–	–	–	–	–	–	–	–	x	x	–	x	x	–	–	–
224	Bulk PI	The total number of PI (duct, sub-duct, pole and chamber) change requests submitted.	x	x	x	x	–	–	–	–	–	–	–	–	x	x	–	x	x	–	–	–
225	Bulk PI	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	x	x	x	x	–	–	–	–	–	–	–	–	x	x	–	x	x	–	–	–
226	Bulk PI	The percentage volume of submitted PI (duct, sub-duct, pole and chamber) orders cancelled as a percentage of submitted orders	x	x	x	x	–	–	–	–	–	–	–	–	x	x	–	x	x	–	–	–
227	Bulk PI	The percentage volume of submitted PI (duct, sub-duct, poles and chambers) orders undeliverable as a percentage of submitted orders	x	x	x	x	–	–	–	–	–	–	–	–	x	x	–	x	x	–	–	–
228	Bulk PI	The percentage volume of residual PI (duct, sub-duct, poles and chambers) orders as a p	x	x	x	x	–	–	–	–	–	–	–	–	x	x	–	x	x	–	–	–
229	Bulk PI	The total volume of PI change requests as a percentage of submitted orders	x	x	x	x	–	–	–	–	–	–	–	–	x	x	–	x	x	–	–	–

Systems Review >>>

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Appendix 3 "PIA KPIs metrics specification with attributes lists"
to the report "PIA KPI metrics technical feasibility review"
26.04.2023

[redacted]

**The attributes have been presented for indicative purposes only and according to the limitations and the assumptions stated in the report "PIA KPI metrics technical feasibility review"*

Attribute/Field name	Attribute/Field Description	Data format
[redacted]		