



Comreg

KPI Assessment

Version 1.0

Version History

Version	Date	Author	Changes	Distribution	Approval
V1.0	29/11/21		Added KPI assessment – plan C	Comreg	

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1. Executive Summary

Eircom has been required to monitor and report on its performance in respect of regulated access products and services by reference to several Key Performance Indicators (KPIs). Eircom produces the KPIs monthly and publishes them on quarterly basis.

- Eircom is required to extend the KPIs to report performance on NGA (Next Generation Access) and CEI (Civil Engineering Infrastructure) services.
- Due to decline in demand of LLU products, Comreg proposes to withdraw the requirement of publishing these KPIs.
- New Fault allocation KPIs are required to be included in the reporting suite for the current CGA (Current Generation Access) services.
- The existing CGA KPIs need to be updated to display the wholesale and their retail equivalent product and order types.
- The requested KPIs can be segmented into 3 services of NGA, CGA and CEI.

Cartesian has proposed 3 project plans as per the best industry practice to produce these KPIs. Plan A estimates the KPIs based on the assumption that the records required to produce the logic of reporting will be easier to derive. The required parameters and clauses to produce KPI reports will be available in the data sets.

Plan B estimates effort based on the assumption that for a few of the kpis like – Appointment based kpis, electronically enabled kpis, non-instu connection kpis and quality of supply kpis : the data set required to derive the logic will require stitching of raw data from various sources. This stitching or joining of data will require various business rules.

Plan C is a hybrid of plan A and plan B. It includes effort estimates of Plan A for NGA and CGA KPIs plus effort estimates of plan B for CEI KPIs

As per plan A, the total estimated man days to produce the KPIs is 140-man days. This effort could be broken down into the below phases -

- Design and development effort of 67.5-man days
- Testing effort of 34.75-man days
- Others (deployment and post installation report extraction) of 17.75 days
- An overhead of 2 days per week of project management for 10 weeks. A total of 20 days of project management overhead

As per plan B, the total estimated man days to produce the KPIs is 187-man days. This effort could be broken down into the below phases –

- Design and development effort of 110-man days
- Testing effort of 37.25-man days
- Others (deployment and post installation report extraction) of 17.75 days

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- An overhead of 2 days per week of project management for 11 weeks. A total of 22 days of project management overhead

2. Approach

The 210 required KPIs to be processed can be segmented into 3 service categories as shown below –

1. NGA (Next Generation Access) Services
2. CGA (Current Generation Access) Services
3. CEI (Civil Engineering Infrastructure) Services

SB-WLR KPIs are out of scope

Cartesian has assessed these kpis based on the assumption that importing and loading of data sets is out of scope for this project. The required datasets for all the feeds are already loaded into Eircom enterprise Datawarehouse using ETL processes.

3. NGA (Next Generation Access) Core KPIs

Since 2011 there have been significant changes in the regulatory and technical landscape, including an increasing use and regulation of Next Generation Access products. As markets have evolved the regulated product range offered by Eircom has extended to NGA and physical infrastructure products. A review of the KPIs mandated in ComReg Decision D05/11 is accordingly now necessary to ensure that the KPIs which Eircom is required to report and publish are still relevant and fit-for purpose

Below is the list of core KPIs extracted to be assessed for NGA services–

- Orders Metrics (totals for orders based on statuses)
- Orders Metrics (percentages for orders based on statuses)
- Orders Metrics (mean, median and standard deviation for orders)
- Appointment based metrics (connections)
- Electronically enabled metrics (connections)
- Non-in-situ connections
- Quality of supply (Dead on Arrival)
- Quality of supply (Early Life Faults)
- Fault allocation
- Fault repairs

3.1. NGA effort and assumptions as per plan A

S.No	Core KPI	Sub KPIs	KPI Reference	Assumptions	Total design & development effort (days)	Total Testing effort (days)	Total Deployment & post installation effort (days)	Total effort (days)
1.	Order Metrics (totals for orders)	9	1 - 10	<p>The records with the different required statuses will be available in the NGN data sets.</p> <p>The totals will be calculated on COUNTS of different set of statuses based on x number of working days. Same formula will be used as GROUP by statement</p> <p><i>Low effort</i></p>	2.5 days	2 days	1 day	5.5 days
2.	Orders metrics (percentages for the orders)	9	10 - 20	<p>A summary logic will be written on top of totals calculated in the scenario above. The percentages for the totals above will be calculated for the statuses on x number of working days. Same formula will be replicated 9 times to produce percentages based on different order statuses</p> <p><i>Low to medium effort</i></p>	4 days	2 days	1 day	7 days
3.	Orders metrics (mean, median and standard deviation)	4	20 - 25	<p>These KPIs will require calculation of median, mean and standard deviation formulae on parked time and appointments. These calculations will be complex.</p>	4.5 days	2 days	1 day	7.5 days

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S.No	Core KPI	Sub KPIs	KPI Reference	Assumptions	Total design & development effort (days)	Total Testing effort (days)	Total Deployment & post installation effort (days)	Total effort (days)
				<p>Median and standard deviation will require set up of datasets in a format which could derive this logic. Testing these 4 KPIs will be relatively higher effort as the formulae are complex</p> <p>Medium effort</p>				
4.	Appointment based	12	26 - 38	<p>Appointment Based order” means an order in respect of a Line that is not Electronically Enabled or is Non in-situ for which completion requires a technician’s visit at the End User’s premises.</p> <p>1. The number of orders completed in the reporting period which have been delivered within x number of working days</p> <p>2.The percentage of orders completed in the reporting period which have been delivered within x number of working days</p> <p>3.mean, median and standard deviation</p> <p>Medium effort</p>	5 days	2 days	1 day	8 days
5.	Electronically Enabled	8	60 - 65	<p>These are EE enabled connections identified as a field in the data set records</p> <p>The number of orders completed in the reporting period which have been delivered</p>	4.5 days	2 days	1 day	7.5 days

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S.No	Core KPI	Sub KPIs	KPI Reference	Assumptions	Total design & development effort (days)	Total Testing effort (days)	Total Deployment & post installation effort (days)	Total effort (days)
				<p>within (i.e. \leq) x working days</p> <p>The mean, median and standard deviation for the number of working days to deliver the orders which have been completed in the reporting period</p> <p>Medium effort</p>				
6.	Non – instu connections	8	43-55	<p>These are non instu connections identified as a column in the data set records.</p> <p>Calculate - The number and percentage of orders completed in the reporting period which have been delivered within (i.e., \leq) x working days</p> <p>The mean, median and standard deviation for the number of working days to deliver the orders which have been completed in the reporting period</p> <p>Medium effort</p>	4.5 days	2 days	1 day	7.5 days

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S.No	Core KPI	Sub KPIs	KPI Reference	Assumptions	Total design & development effort (days)	Total Testing effort (days)	Total Deployment & post installation effort (days)	Total effort (days)
7.	Quality of Supply (DoA)	6	39, 41, 56, 58, 65	<p>A parameter would be available to calculate the time elapsed between completed order status and post completion status DoA - dead on arrival i.e., a service never worked despite completing provisioning</p> <p>Identify the faults using status = 'recorded' for an order where start time of order is between completed order and the post completed order statuses</p> <p>Medium to high effort to identify the records and create KPIs</p> <p>1. Total number of DOA appt orders in x working days</p> <p>2. (Total number of DoA appointed NGA orders in the Data Collection Period x 100)/ (Total number of appointed NGA orders completed in the Data Collection Period)</p>	4.5 days	2 days	1 day	7.5 days
8.	Quality of Supply (ELF)	6	40, 42, 57, 59, 66	<p>Derive a parameter to calculate the time elapsed between the post completion order status in and fault recorded status per record</p> <p>An ELF is a fault identified withing 28 days of order completion.</p> <p>Medium to high effort</p> <p>1. Total number of ELA appt orders in x working days</p> <p>2. (Total number of ELA appointed NGA orders in the Data Collection Period x 100)/ (Total number of appointed NGA orders completed in the Data Collection Period)</p>	4.5 days	2 days	1 day	7.5 days

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S.No	Core KPI	Sub KPIs	KPI Reference	Assumptions	Total design & development effort (days)	Total Testing effort (days)	Total Deployment & post installation effort (days)	Total effort (days)
9.	Fault Repair	17	69 – 87	<p>calculate number of days taken to repair a fault using statuses - a status changing from recorded to reported status or rejected status for an order. *reference from Consultation pdf - When the fault order validation process is completed, a fault transitions to either a reported status (meaning the order is accepted on Eircom's assurance systems) or the fault order is rejected.</p> <p>High effort in designing and medium effort for development and testing</p> <p>Calculate total number of fault repairs in x number of days Percentage of total number of fault repaired in x number of days</p> <p>The mean, median and the standard deviation of the number of days to clear faults in the Data Collection Period, calculated using the following formula: Where μ is calculated as: $(\text{Total time for completed electronically enabled NGA orders within the Data Collection Period} * 100) / N$, N is the total number of completed electronically enabled NGA orders within the Data Collection Period, and the Median is the middle value in the ascending series of time for each of the completed electronically enabled NGA orders delivered in the Data Collection Period</p>	5.5 days	2 days	1 day	8.5 days

S.No	Core KPI	Sub KPIs	KPI Reference	Assumptions	Total design & development effort (days)	Total Testing effort (days)	Total Deployment & post installation effort (days)	Total effort (days)
10.	Fault Allocation	2	149, 150	The faults can be identified using the status = recorded. COUNT sql function will be used to calculate the total Percentage formula will be used on the totals above to calculate percentage KPI. <i>Low effort</i> per phase	2.5 days	1 day	0.5 day	4 days

3.2. Delta for NGA effort estimates between plan A and plan B

The total number of days required to complete NGA reports as per plan A is 70.5-man days. According to plan B estimates, the total number of days required to complete these reports is 86-man days. There is a delta of 16.5-man days between the estimates for 2 plans. Please refer to the table below for plan B estimates for the KPIs that may require longer to complete as per the best standard industry practice

3.3. NGA effort and assumptions as per plan B

The KPIs (described in the table below) may require longer to complete due to the requirement of stitching and joining of raw data from various sources to produce the logical data sets.

S.No	Core KPI	Sub KPIs	KPI Reference	Assumptions	Total design & development effort (days)	Total Testing effort (days)	Total Deployment & post installation effort (days)	Total effort (days)
1.	Appointment based	12	26 - 38	Appointment Based order” means an order in respect of a Line that is not Electronically Enabled or is non-in-situ for which completion requires a technician’s visit at the End User’s premises. This category of technician appointments may not be readily available in the data set and would require stitching up of data using business rules to create meaningful data sets from various sources <i>High effort</i>	6 days	2.5 days	1 day	9.5 days

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S.No	Core KPI	Sub KPIs	KPI Reference	Assumptions	Total design & development effort (days)	Total Testing effort (days)	Total Deployment & post installation effort (days)	Total effort (days)
2.	Electronically Enabled	5	60 - 65	<p>This category of EE connections may not be readily available in the data set and would require stitching up of data using business rules to create meaningful data sets from various sources</p> <p>The number of orders completed in the reporting period which have been delivered within (i.e., <=) x working days</p> <p>The mean, median and standard deviation for the number of working days to deliver the orders which have been completed in the reporting period</p> <p>High effort</p>	7 days	3 days	1 day	11 days
3.	Non – instu connections	11	43 - 55	<p>This category of connection isn't readily available in the data set and require stitching up of data using business rules to create meaningful data sets from various sources</p> <p>The number of orders completed in the reporting period which have been delivered within (i.e., <=) x</p>	9 days	3 days	1 day	13 days

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S.No	Core KPI	Sub KPIs	KPI Reference	Assumptions	Total design & development effort (days)	Total Testing effort (days)	Total Deployment & post installation effort (days)	Total effort (days)
				<p>working days</p> <p>The percentage of orders completed in the reporting period which have been delivered within (i.e., <=) x working days</p> <p>The mean, median and standard deviation for the number of working days to deliver the orders which have been completed in the reporting period</p> <p>High effort</p>				
4.	Quality of Supply (DoA)	6	39, 41, 56, 58, 65, 67	<p>To join data sets from various sources in order to derive a parameter to calculate the time elapsed between completed order status and post completion status DoA - dead on arrival i.e. a service never worked despite completing provisioning</p> <p>Identify the faults using status = 'recorded' for an order where start time of order is between completed order and the post completed order statuses</p> <p>Medium to high effort to identify the records and create KPIs</p> <p>1. Total number of DOA appt orders in x working days</p> <p>2. (Total number of DoA appointed NGA</p>	7 days	2 days	1 day	10 days

S.No	Core KPI	Sub KPIs	KPI Reference	Assumptions	Total design & development effort (days)	Total Testing effort (days)	Total Deployment & post installation effort (days)	Total effort (days)
				orders in the Data Collection Period x 100)/ (Total number of appointed NGA orders completed in the Data Collection Period)				
5.	Quality of Supply (ELF)	6	40, 42, 57, 59, 66, 68	<p>To join data sets from various sources to derive a parameter to calculate the time elapsed between the post completion order status in provisioning and fault status per record</p> <p>An ELF is a fault identified within 28 days of order completion. Medium to high effort</p> <p>1. Total number of ELF apt orders in x working days 2. (Total number of ELF appointed NGA orders in the Data Collection Period x 100)/ (Total number of appointed NGA orders completed in the Data Collection Period)</p>	7 days	2 days	1 day	10 days

4. CGA (Current Generation Access) Core KPIs

Since the introduction of NGA products, End Users have been migrating from CGA based products and services to NGA-based products and services, where available, in order to benefit from higher line and broadband speeds. ComReg anticipates that the NGA products will replace CGA product and services over time. The important role played by NGA products in delivering regulated broadband access means that it is essential that Eircom’s performance is tracked. This does not mean, however, that CGA, and KPIs for CGA, are no longer relevant. CGA products and services continue to be important for certain cohorts of End Users particularly in some rural areas where Eircom may not supply NGA products and services.

Below is the list of core KPIs for CGA services–

- Broadband service supply (list of existing KPIs – totals and percentages of the orders)
- Broadband fault repair (list of existing KPIs – totals and percentages of the faults repaired)
- Fault allocation (list of new KPIs)

4.1 CGA Core KPIs effort and assumption as per plan A & B

The effort remains same to produce CGA KPIs for both plan A and B. Most of these KPIs are already existing and reported by Eircom. Only the content of the KPI reports need to be changed to include Standalone and POTS products for wholesale and retail access seekers in one table or view (report).

S.no	Core KPI	Sub KPI	KPI Reference	Assumptions	Total Design & development effort (days)	Total Testing effort (days)	Total deployment and post installation effort (days)	Total effort (days)
1.	CGA Broadband service supply	11	88-100	These KPIs already exist - The content of KPI report will be as per the consultation doc SA and PB wholesale and retail KPIS will be joined into one report. Low effort as it involves only the presentation of report being changed	2.5 days	2 days	0.5 day	5 days
2.	CGA Fault Repair	10	101-111	These KPIs already exist - The content of KPI report will be as per the consultation doc SA and PB wholesale and retail KPIS will be joined into one report. Low effort as it involves only the presentation of report being changed	2.5 days	2 days	0.5 day	5 days
3.	Fault Allocation	2	150, 153	These are new KPIs The records for faults will be available in the data feed and no further stitching up of data sets would be required to derive a fault for CGA feeds Total faults could be counted using COUNT function low effort	2.5 days	0.75 days	0.25 days	3.5 days

5. CEI Core KPIs

ComReg expects the consumption of CEI products and services to increase, having regard to current ongoing product developments, such as the development of a sub-duct self-install access product. When consumption has increased to a sufficient volume, KPI Metrics should be in place in order to ensure that performance monitoring can commence without delay.

Below is the list of core CEI KPIs –

- Duct and sub-duct supply (total orders based on statuses)
- Duct and sub-duct supply (percentages of total orders based on their statuses)

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- Duct and sub-duct repair (total repairs)
- Duct and sub-duct repair (percentage repairs in x number of working days on total orders)
- Pole repair
- Pole Supply (total orders based on statuses)
- Pole Supply (percentage of total orders based on statuses)

5.1. CEI effort and assumption as per plan A

S.no	Core KPI	Sub KPI	KPI Reference	Assumptions	Total Design & development effort (days)	Total Testing effort (days)	Total deployment and post installation effort (days)	Total effort (days)
1.	Duct and sub-duct supply (totals of supply)	7	163 - 171	<p>The specific lengths ducts will be used in KPI reporting. The numbers could be calculated using Count function for statuses in Completed, validated and recorded states. The records will be present with the 3 statuses in the data sets. COUNT function could be used in a sql query to give the results</p> <p>Medium effort</p>	3 days	1.5 days	1 day	5.5 days
2.	Duct and sub-duct supply (percentage of the totals supply)	7	155 - 162	<p>Calculate the percentage of orders validated and completed for 8 different parameters</p> <p>Low effort</p>	2.5 days	1 day	1 day	4.5 days
3.	Duct and sub-duct repair (total number of faults repaired)	4	189 - 194	<p>Faults could be identified in the data set. Calculate counts for duct repairs where status = completed for the faults in x working days</p> <p>x working days could be calculated using start times of fault recorded and fault completed</p> <p>Low effort</p>	2.5 days	1 day	1 day	4.5 days

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S.no	Core KPI	Sub KPI	KPI Reference	Assumptions	Total Design & development effort (days)	Total Testing effort (days)	Total deployment and post installation effort (days)	Total effort (days)
4.	Duct and sub-duct repair (percentages and mean and median)	3	194 - 198	Identify the ducts and subducts repaired using the status = completed <i>Low effort</i>	2.5 days	1.5 days	1 day	5 days
5.	Pole Repair (totals)	9	199 - 208	Identify the pole faults repaired using the fault status = completed Calculate totals and percentage of pole repairs. Additionally mean is calculated <i>Medium effort</i>	3.5 days	1.5 days	1 day	6 days
6.	Pole Supply (percentages)	8	170 - 179	The orders statuses - completed and validated would be present in status column of the data sets <i>Medium effort</i> as it to calculate the same percentage formula could be replicated for x working hours	2.5 days	1.5 days	1 day	5 days

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S.no	Core KPI	Sub KPI	KPI Reference	Assumptions	Total Design & development effort (days)	Total Testing effort (days)	Total deployment and post installation effort (days)	Total effort (days)
7.	Pole Supply (totals)	7	180 - 188	The orders statuses - completed and validated would be present in status column of the data sets Medium effort as it to calculate the totals COUNT formula could be replicated for x working hours	3.5 days	1 day	1 day	5.5 days

5.2. Delta for CEI effort estimates between plan A and plan B

The total number of days required to complete CEI reports as per plan A is 36-man days. According to plan B estimates, the total number of days required to complete these reports is 65.5-man days. There is a delta of 29.5-man days between the estimates for 2 plans. Please refer to the table below for plan B estimates for these KPIs which may require longer to complete as per the best standard industry practice

5.3. CEI effort and assumption as per plan B

S.no	Core KPI	Sub KPI	KPI Reference	Assumptions	Total Design & development effort (days)	Total Testing effort (days)	Total deployment and post installation effort (days)	Total effort (days)
1.	Duct and sub-duct supply (totals of supply)	7	163 - 171	<p>The specific lengths ducts will be used in KPI reporting. To derive this data set – stitching or joining of data from various sources using business rules will be required. The numbers could be calculated using Count function for statuses in Completed, validated and recorded states. The records will be present with the 3 statuses in the data sets. COUNT function could be used in a sql query to give the results</p> <p>Medium-high effort</p>	6.5 days	1.5 days	1 day	9 days
2.	Duct and sub-duct supply (percentage of the totals supply)	7	155 - 162	<p>The specific lengths ducts will be used in KPI reporting. To derive this data set – stitching or joining of data from various sources using business rules. A summary report will sit on top of the total counts calculated above</p> <p>Calculate the percentages and mean median standard deviation of orders validated and completed for 8 different parameters</p> <p>Medium-high effort</p>	6.5 days	1.5 day	1 day	9 days
3.	Duct and sub-duct repair (total number of faults repaired)	4	189 - 194	<p>The specific lengths ducts will be used in KPI reporting. To derive this data set – stitching or joining of data from various sources using business rules -Faults could be identified in the data set. Calculate counts for duct repairs where status = completed for the faults in x working days</p> <p>x working days could be calculated using start times of fault recorded and fault completed</p>	6.5 days	2 days	1 day	9.5 days

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S.no	Core KPI	Sub KPI	KPI Reference	Assumptions	Total Design & development effort (days)	Total Testing effort (days)	Total deployment and post installation effort (days)	Total effort (days)
				<p>Additionally require percentages and mean calculated KPIs</p> <p>Medium-high effort</p>				
4.	Duct and sub-duct repair (percentages and mean and median)	4	194 - 198	<p>Identify the ducts and subducts repaired using the status = completed</p> <p>Summary report will sit on the repaired totals calculated above. This will require structuring of data into more logical order to derive the formulae</p> <p>Medium-high effort</p>	7 days	1.5 days	1 day	9.5 days
5.	Pole Repair (totals)	9	199 - 208	<p>To derive this data set – stitching or joining of data from various sources using business rules - Faults could be identified in the derived data set for poles</p> <p>Identify the pole faults repaired using the fault status = completed Calculate totals and percentage of pole repairs. Additionally mean is calculated</p> <p>Medium-high effort</p>	7 days	1.5 days	1 day	9.5 days
6.	Pole Supply (percentage)	8	170 - 179	<p>To derive this data set – stitching or joining of data from various sources using business rules -</p> <p>The orders statuses - completed and validated would</p>	7 days	1.5 days	1 day	9.5 days

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S.no	Core KPI	Sub KPI	KPI Reference	Assumptions	Total Design & development effort (days)	Total Testing effort (days)	Total deployment and post installation effort (days)	Total effort (days)
				be present in status column of the derived data sets <i>Medium-high</i> as it to calculate the same percentage formula could be replicated for x working hours				
7.	Pole Supply (totals)	7	180 - 188	The orders statuses - completed and validated would be present in status column of the data sets <i>Medium-high</i> effort as it to calculate the totals COUNT formula could be replicated for x working hours	7 days	1.5 days	1 day	9.5 days

6. Resource Planning A

According to the project plan A – the project could be completed in 10 weeks

The below listed resources will be required –

- A designer who will document high level design for the required KPI
- 2 developers who will develop the KPI reports and unit test the code
- 2 testers who will perform and execute the system testing, UAT and deploy/publish the reports

Resource	Role	Engagement duration
Designer	To document high level design for NGA, CGA and CEI KPIs	4 weeks
Developer 1	NGA service KPI reporting	4 weeks and 1.5 days

Developer 2	CGA and CEI service KPI reporting	5 weeks and 1 day
Tester 1	NGA service KPI testing and deployment including post-installation issues	6 weeks and 0.5 day
Tester 2	CGA and CEI KPI testing and deployment including post-installation issues	4 weeks and 2 days

7. Resource Planning B

According to the project plan A – the project could be completed in 11 weeks

The below listed resources will be required –

- A designer who will document high level design for the required KPI
- 2 developers who will develop the KPI reports and unit test the code
- 2 testers who will perform and execute the system testing, UAT and deploy/publish the reports

Resource	Role	Engagement duration
Designer	To document high level design for NGA, CGA and CEI KPIs	6 weeks and 1 day
Developer 1	NGA and CEI service KPI reporting	7 weeks and 1.5 days
Developer 2	NGA, CGA and CEI service KPI reporting	8 weeks and 2.5 days
Tester 1	NGA service KPI testing and deployment including post-installation issues	6 weeks and 1 day
Tester 2	CGA and CEI KPI testing and deployment including post-installation issues	~5 weeks

8. KPI assessment – Plan C

Due to the nature of CEI KPIs, it is expected that the data sets required to produce the reports will require various business rules and higher effort as per described in plan B. However, NGA and CGA KPI estimates based on plan A are more relevant. It is expected that the data sets and fields required to derive NGA and CGA KPIs will be more readily available.

Therefore, Cartesian has proposed an additional Plan C – which is a hybrid of plan A and B. This plan includes

- The effort and estimates of plan A for NGA and CGA KPIs
- The effort and estimates of plan B for CEI KPIs

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As per plan C, the total estimated man days to produce the KPIs is 169.5-man days. This effort could be broken down into the below phases –

- Total effort for NGA KPIs – 70.5-man days
- Total effort for CGA KPIs – 13.5-man days
- Total effort for CEI KPIs – 65.5-man days
- An overhead of 2 days per week of project management for 10 weeks. A total of 20 days of project management overhead

9. Resource Planning C

According to the project plan C – the project could be completed in 10 weeks

The below listed resources will be required –

- A designer who will document high level design for the required KPI
- 2 developers who will develop the KPI reports and unit test the code
- 2 testers who will perform and execute the system testing, UAT and deploy/publish the reports

Resource	Role	Engagement duration
Designer	To document high level design for NGA, CGA and CEI KPIs	4 weeks and 4 days
Developer 1	NGA service KPI reporting	7 weeks and 1.5 days
Developer 2	CGA and CEI service KPI reporting	7 weeks
Tester 1	NGA service KPI testing and deployment including post-installation issues	6 weeks and 0.5 day
Tester 2	CGA and CEI KPI testing and deployment including post-installation issues	4weeks and 4 days

10. Project Assumptions

1. NGA FTTC and FTTH data sets are available and loaded into Enterprise Data Warehouse tables using Etl procedures
2. CEI data feeds with duct; sub duct and pole records are available
3. CEI data set is already being extracted and loaded into the tables in Enterprise Data Warehouse tables using Etl procedures
4. The existing schemas in EDW could be used to store all the required enriched and cleansed data sets in tables

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5. The existing schemas in EDW could be used to produce SQL views (reports) for the requested KPIs
6. The access to development and testing environments and servers will be available before development or testing commences
7. CEI data feeds include length parameter for ducts and sub-ducts in the records
8. CGA data sets are already being loaded, cleansed, normalised and consumed in the current KPI reporting
9. NGA KPIs will not be broken down into SA and POTS. One table will store both SA and POTS records for FTTC and FTTH categories.
10. For NGA NFF (No fault found) KPIs - the required clear codes are already present in the data feeds and are loaded into tables.
11. For example - The clear code RWT - Right when tested- (001) is a clear code used by service centre staff.
 - ii. The clear code F.O.K - Found O.K - (002) is clear code used by field staff
 - iii. The clear code 'No Entry' – (003)
12. All the required data sets for requested KPIs in EDW tables are stored in cleansed and normalised form.
13. The data sets are stored in Eircom's Enterprise Data Warehouse and processed using software modules (mainly SQL scripts) to create the KPI metrics tables for publication.
14. The below listed product types are present in wholesale data feeds for NGA and CGA-
 - POTS-based FTTH VUA
 - POTS-based FTTC VUA
 - FTTH VUA SA
15. The below order types are present in wholesale data feeds for NGA and CGA-
 - a. PNO, PNN, PNW, PNS
16. The below listed product types are present in retail data feeds for NGA and CGA-
 - POTS-based FTTH Bitstream +
 - POTS-based FTTC Bitstream +
 - FTTH BS + SA
17. The below order types are present in retail data feeds-
 - a. PNO, PNN, PNW, PNS
18. For CEI wholesale feeds - order types - 'type1' and 'type 2' are present in the data sets
19. For CEI retail feeds - order types - 'PDC' is present in the data sets

11. Project Dependencies

1. Availability of all the required data feeds for CGA, NGA and CEI
2. Availability of all the required data feeds for CGA, NGA and CEI in Enterprise Datawarehouse tables

12. Project Risks

1. Dependent data feeds may not be available as per plan causing a delay in the project

Cartesian is a specialist consulting firm in the telecoms, media and technology sector. For 30 years, we have advised clients worldwide in strategy development and assisted them in execution against their goals. Our unique portfolio of consulting services and managed solutions are tailored to the specific challenges faced

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