



ARUP

SGN RII02 Business Plan Support



RIIO GD2 Business Plan Appendix:
Work Management & Business Support

August 2019

Covering Letter

SGN RIIO2 Support

To: Hilary Chapman

Dear Client,

In accordance with the terms of reference set out in our engagement letter dated 22 July 2019, we enclose our report of benchmarking and evidence gathering services to support the development of your Business Plan Appendix for Work Management and Business Support. The basis of preparation of our work to date is attached.

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This report is addressed to you in accordance with the terms of the Engagement Letter.

Yours faithfully

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Arup's Role

Arup's Role

As a continuation of the support Arup are providing SGN to deliver a high quality RIIO GD2 Business Plan for the final submission; Arup's role has been to undertake independent benchmarking and evidence gathering for the Work Management and Business Support Appendix.

Basis of preparation

Our work to date has comprised of:

- Global benchmarking review of similar gas networks.
- Arup insights from regulated sectors, including Arup's proprietary data from UK and European networks.
- 1-hour stakeholder interviews to provide insight regarding different success factors and improvement opportunities to enhance the RIIO GD2 Business Plan.
- A critical review of the current Work Management and Business support Appendix to guide feedback.
- During the course of our work we have satisfied ourselves, so far as possible, that the information presented in our report is consistent with the information which was made available to us in accordance with the terms of our Engagement Letter. We have not, sought to establish the reliability of the sources by reference to other evidence, unless stated. However, we have added supplementary data sources where relevant through our own industry knowledge and from past experience of similar assets.
- This Report makes reference to 'Arup Analysis'; this indicates only that we have (where specified) undertaken certain analytical activities on the underlying data to arrive at the information presented; we do not accept responsibility for the underlying data.
- Following internal client reviews in October 2019, the report has been updated to clarify reported analysis and interpretations and formatting in specific sections of the report. This update did not include incorporating new information provided by SGN.

Limitations of scope

As per the Terms outlined in our Engagement Letter dated 22nd July 2019.

Distribution

This report is for internal use only.

Sources of information

- Arup proprietary data and European gas network benchmarks.
- Insights from sector experts in Arup network.
- SGN Business Plan July submission and supporting data.
- Semi-structured interviews with SGN function leads.

1. Executive summary

2. Arup's analysis

- Arup conclusions
- Key findings and conclusions from independent benchmarking analysis
- Track record of performance
- Analysis of cost efficiency
- Analysis of functionality



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SGN: RIIO-2 Business Plan Review

→ Executive Summary



Executive Summary

Arup concludes Work Management and Business Support are achieving an optimal frontier between functionality and cost efficiency in the delivery of their services to SGN and the consumer

Approach

Arup's independent assessment of SGN's efficiency has been conducted based on the principle outlined opposite;

Arup consider there is a natural frontier between functionality and cost.

When considering SGN's efficiency, Arup have sought to understand SGN's cost effectiveness in relation to their functionality, in order to determine SGN's relative value to the customer.

Insights and Rationale

Typical efficiency measures often sacrifice functionality, resulting in a lower value to the customer.

Arup analysis finds SGN's approach to be aligned to the 'Balanced Scorecard'¹:

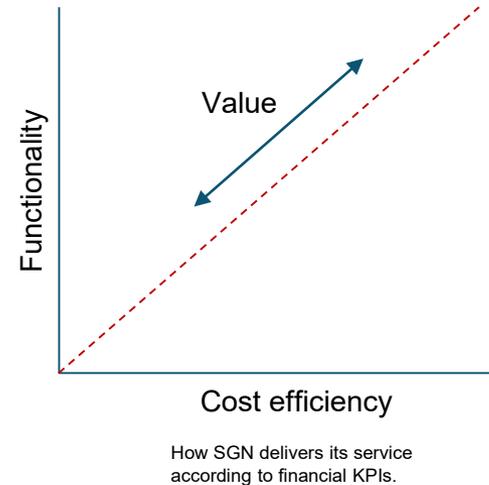
- This approach aims to implement a cohesiveness within the business in which an improvement in one perspective does not become an obstacle in another perspective.

In the case of SGN this would translate into a balanced approach to achieving totex efficiency, with the non-financial performance KPIs set out under Ofgem's regulatory regime.

Arup's assessment principle

Value can be considered as the frontier between 'Functionality' and 'Cost efficiency'

How SGN delivers its service according to non financial KPIs.



¹ The Balanced Scorecard is a strategic performance measurement model developed by Robert Kaplan and David Norton.

Executive Summary

Arup Analysis: Cost vs. Function

To what extent does SGN demonstrate cost efficiency and functionality?

1. Cost Efficiency

1. a) SGN's opex per customer demonstrates excellent cost efficiency; it is in the 90th percentile of Arup's benchmarking sample, and outperforms the other UK GDNs (slide 11).

1. b) Arup consider SGN's opex per km demonstrates excellent cost efficiency; it is in the 90th percentile of Arup's benchmarking sample, and highly comparable with the other UK GDNs (page 12).

2. Function

2.a) Arup's analysis demonstrates in aggregate SGN are a top performing network according to Ofgem's recent analysis of performance 2018/2019 (page 9 & 10).

2b) The impact of SGN's operating model is clearly evident when benchmarking total staff (including contractors). Arup note the additional headcount does not adversely affect cost efficiency (page 14).

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SGN: RIIO-2 Business Plan Review

→ Arup Analysis



Arup analysis

In order to assess the relative functionality of SGN, Arup have collated and analysed the percentage under/over performance against Ofgem’s RIIO-1 non financial KPIs.

Functionality assessment | RIIO-1 Strategic performance comparative analysis

Overview:

In order to assess the relative functionality of the UK GDNs, and therefore understand where SGN’s performance sits in comparison to peers, Arup has analysed the performance of each GDN against the RIIO-1 framework.

Arup approach:

- At the time of writing, 2018/19 data for each of the GDNs has not been made available via Ofgem.
- Arup conducted a search in the public domain, including the websites of each of the GDNs, in order to collect the non-financial KPI data.

Arup analysis:

- For each KPI, GDN’s are set an Ofgem-approved target, the basis of which is not discussed as part of this analysis.
- In order to assess the relative performance of each GDN, Arup has calculated the percentage of under or over performance. This is summarised in the table opposite.
- Note that some of the targets are set annually and others are set for the RIIO-1 period. In the case of period targets, Arup have annualised the target to gauge indicative performance.
- Note inconsistent levels of data are made publicly available across the GDNs as highlighted in the analysis opposite.

Percentage under/over performance against Ofgem's non-financial KPIs, 2018/19	Cadent EoE	Cadent Lon	Cadent NW	Cadent WM	WWU	NGN	SGN Sco	SGN Sou
Reliability (planned occurrences)	-8%	15%	14%	12%	38%	1%	20%	20%
Reliability (planned duration) millions of mins	12%	22%	33%	19%	48%	17%	26%	29%
Reliability (unplanned occurrences)	4%	14%	12%	19%	22%	-8%	27%	24%
Reliability (unplanned duration) millions of mins	22%	-123%	-43%	11%	47%	-7%	44%	2%
Safety	2%	1%	2%	2%	2%	3%	2%	2%
Social Obligations	30%	119%	-23%	-39%	-31%	44%	8%	25%
CSAT (Emergency Response and repair)	7%	4%	6%	7%	9%	8%	8%	7%
CSAT (Planned Works)	7%	2%	2%	-4%	9%	9%	11%	9%
CSAT (Connections)	2%	-7%	8%	4%	14%	11%	15%	9%
CSAT (Complaints)	76%	70%	72%	63%	78%	76%	82%	69%
Connections / Wider Works (% of quotes issued within timescale)	9%	9%	7%	9%	7%	8%	10%	10%
Connections / Wider Works (% of jobs substantially completed within time period agreed with the customer)	4%	2%	7%	5%	7%	8%	9%	10%
Environment	9%	8%	9%	8%	14%	15%	5%	7%

SGN are the only GDN to exceed all targets

Arup analysis

In aggregate outperformance, SGNs networks were ranked 1 and 3, with SGN being the only GDN that did not underperform against target across all available KPIs

Functionality assessment | RIIO-1 Strategic performance comparative analysis continued

Analysis of KPIs

- The chart opposite presents a visualisation of the KPI data collated by Arup.
- In order to present the data opposite, Arup displayed the KPIs as a stacked bar chart. Aggregate performance i.e. a sum of the percentage under/over performance is presented on the chart as a line, with corresponding totals.

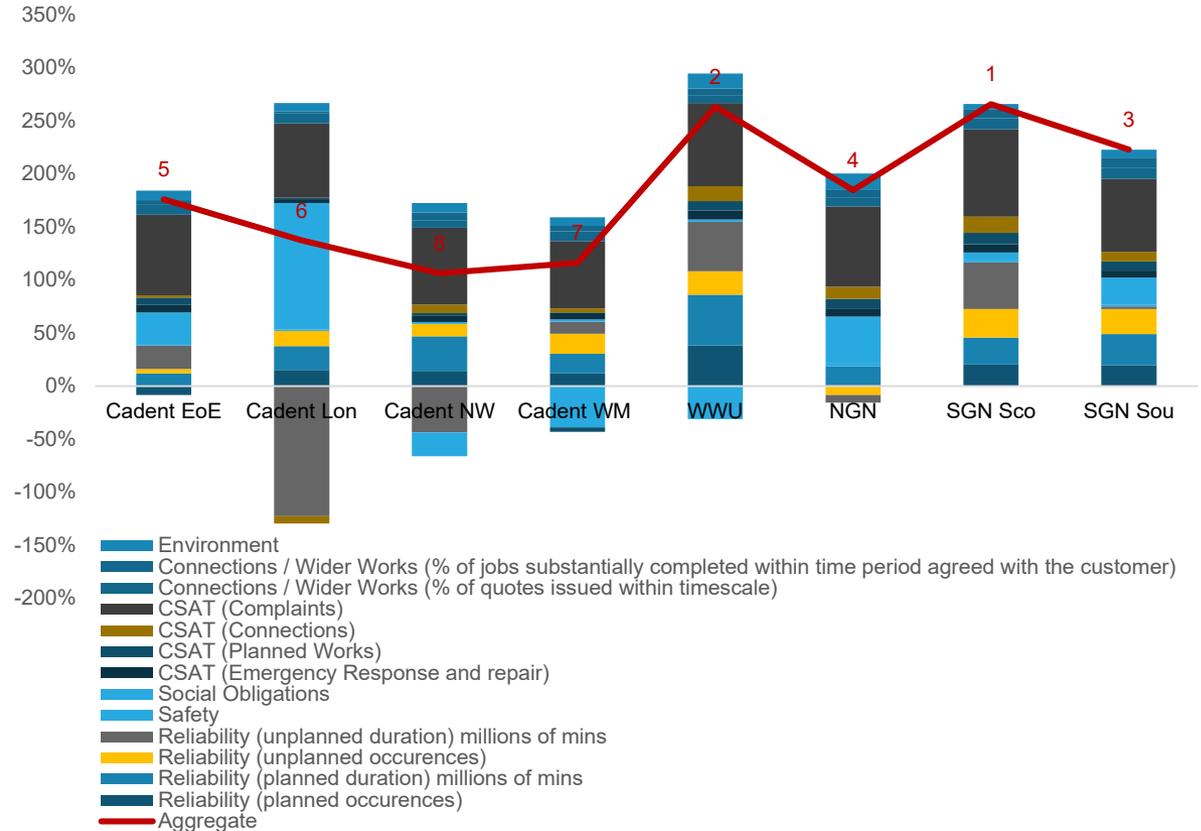
Observations from the data

Underperformance:

- SGN's networks are the only GDNs not to underperform against their targets.
- All other GDNs exhibit underperformance, with some exhibiting significant underperformance.

Overperformance:

- All networks overperformed in aggregate against the targets, with strong general trends of over performance exhibited across all GDNs.
- Aggregate GDN performance:
 1. SGN Scotland (SGN Sco)
 2. Wales & West Utilities (WWU)
 3. SGN Southern (SGN Sou)
 4. Northern Gas Networks (NGN)
 5. Cadent East of England (EoE)
 6. Cadent London (Lon)
 7. Cadent West Midlands (WM)
 8. Cadent North West (NW)



Arup analysis

In aggregate, SGNs networks were ranked 1 and 3, with SGN being the only GDN that did not underperform against target across all available KPIs

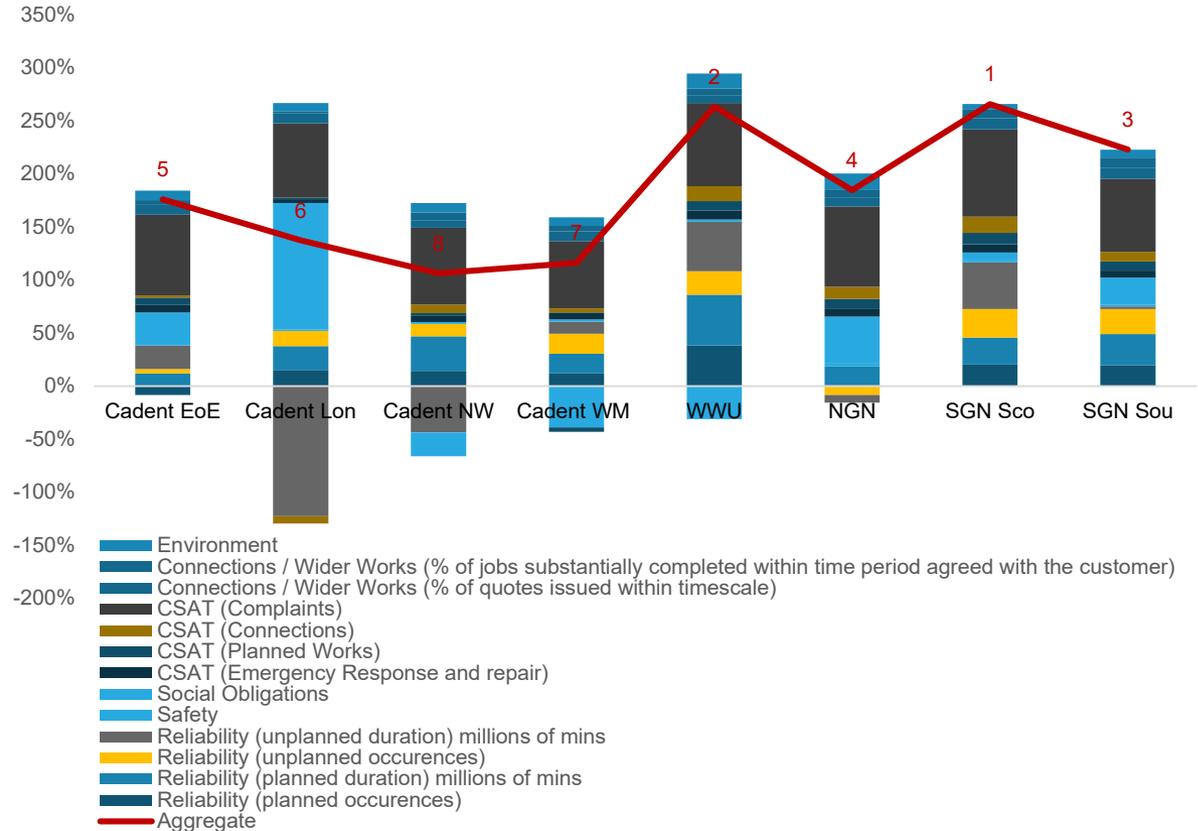
Functionality assessment | RIIO-1 Strategic performance comparative analysis continued

Drivers for outperformance:

- Analysis of the aggregate outperformance for each KPI demonstrates the majority of outperformance is driven by:
 - CSAT (Complaints), 40%
 - Reliability (planned duration) millions mins, 14%
 - Social obligations, 9%
 - Reliability (unplanned occurrences), 8%
- The remainder of outperformance is distributed relatively evenly across the other metrics.
- Reliability (unplanned duration) millions of minutes was the largest driver of underperformance, accounting for an aggregate underperformance of 3% across all GDNs. (Note unlike wider trends, SGN scored +44% and +2% for Sco and Sou respectively).
- Note that Safety accounts for just 2% of outperformance. This is due to the high target thresholds for this metric, set at 97% attendance at uncontrolled escapes within 1 hour. Both of SGN's GDNs achieved 99% against this metric, in line with performance exhibited across all GDNs.

Conclusions for SGN

- In aggregate SGN's networks rank 1 and 3, with both Scotland and Southern exhibiting strong outperformance against target.
- Additionally, SGN's networks are the only ones to have met / outperformed every KPI.
- Arup consider SGN's performance demonstrates class leading functionality, delivering outperformance against all KPIs.



Arup analysis

SGN's opex per customer demonstrates excellent cost efficiency; it is in the 90th percentile of Arup's benchmarking sample, and outperforms the other UK GDNs.

Opex benchmarking insights – Opex per customer

Overall

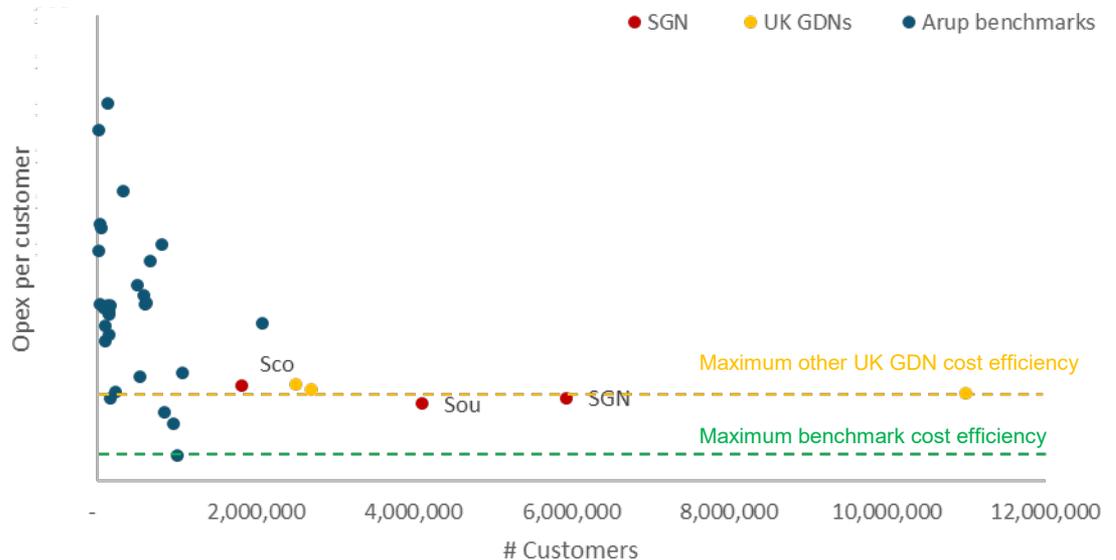
- Opex per customer is an indicator of the relative costs of serving customers. Scale and density are typical efficiency drivers for this metric, with greater density and greater scale usually reducing opex per customer.
- Arup consider SGN's opex per customer demonstrates excellent cost efficiency; it is in the 90th percentile of Arup's benchmarking sample, and outperforms the other UK GDNs.

Comparison to the other UK GDNs

- SGN outperforms the other UK GDNs in terms of opex per customer, demonstrating excellent comparative cost efficiency.
- Arup consider the key differential between Scotland and Southern are the slight economy of scale in Southern driven by the larger customer base and reduced sparsity of the network.

Comparison to Arup benchmarks

- SGN benchmarks in the 90th percentile of Arup's opex per customer dataset, demonstrating excellent cost efficiency.
- Arup consider this performance to be particularly impressive given the negative impact (in terms of opex per customer) of:
 - High repex workload: SGN and the other UK GDNs have a large mains replacement programme ongoing. For SGN, this drives an increase in Work Management and Business Support costs to effectively support the wider business.
 - Contracting approach: SGN's active management of smaller contractors requires greater supervision from the Work Management Functions. Note this model is not consistently applied across the industry, with many operators using alliance-style frameworks where supervisory and support costs are typically capitalised.



Arup analysis

Arup consider SGN’s opex per km demonstrates excellent cost efficiency; it is in the 90th percentile of Arup’s benchmarking sample, and highly comparable with the other UK GDNs.

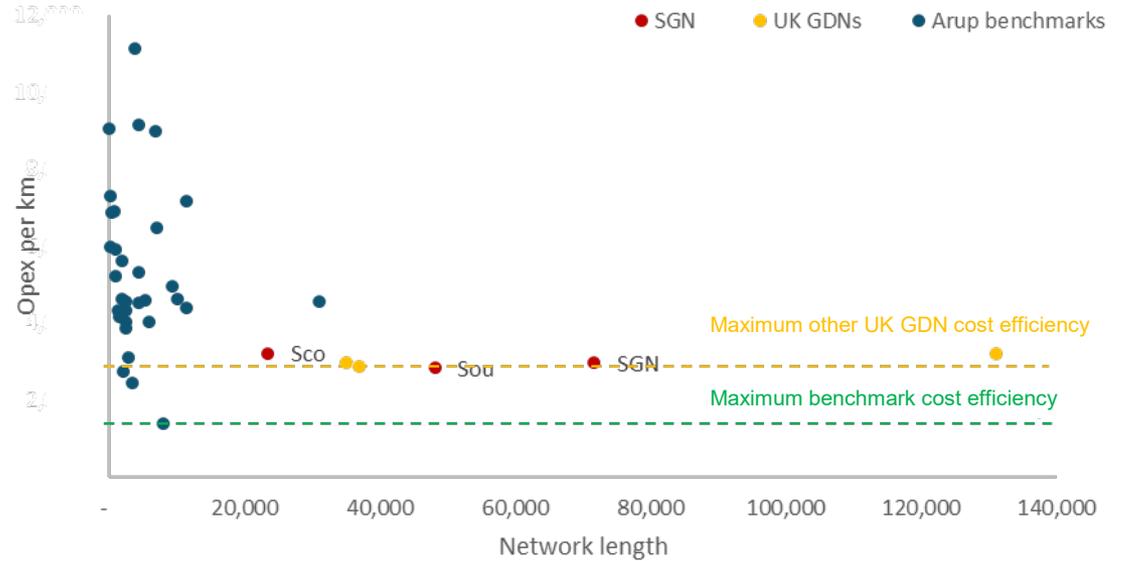
Opex benchmarking insights – Opex per km

Overall

- Opex per km is an indicator of the relative costs of servicing 1 km of the network. Scale and density are typical efficiency drivers for this metric, with greater density and greater scale usually reducing opex per km.
- The opex per km benchmarking supports the conclusions from the previous slide, in that despite not being the largest of networks, SGN still demonstrates excellent cost efficiency.
- Arup consider SGN’s opex per km demonstrates excellent cost efficiency; it is in the 90th percentile of Arup’s benchmarking sample, and highly comparable with the other UK GDNs.

Comparison to the other UK GDNs

- SGN is in line with the top performing UK GDN in terms of opex per km, demonstrating excellent comparative cost efficiency.
- Arup consider the key differential between Scotland and Southern are the slight economy of scale in Southern driven by the larger customer base and reduced sparsity of the network.



Arup analysis

The impact of SGN’s operating model is clearly evident when benchmarking total staff (including contractors). Arup note the additional headcount does not adversely affect cost efficiency, as demonstrated previously.

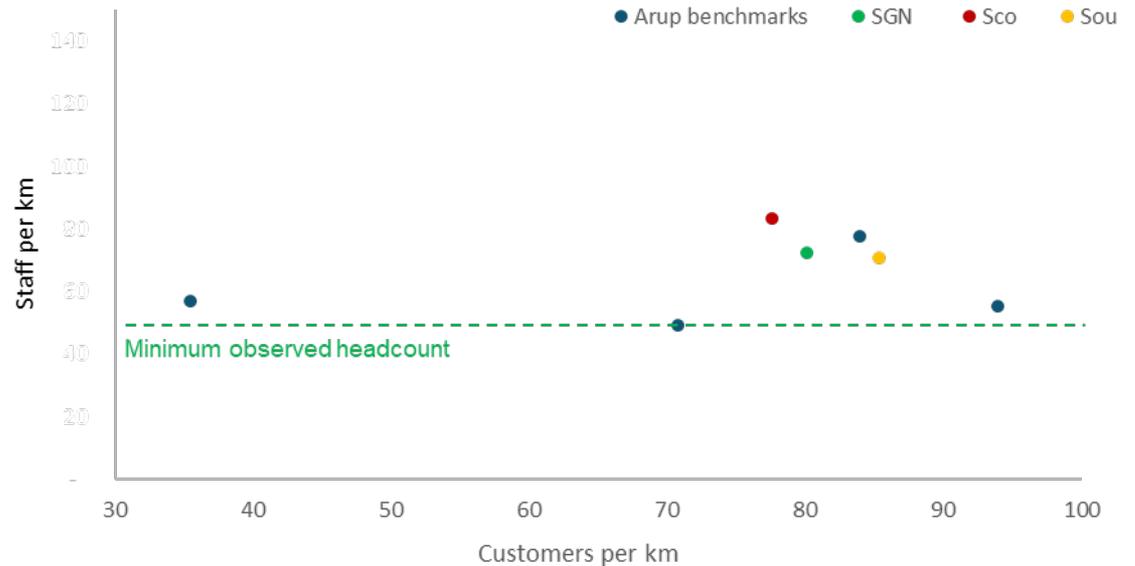
Total staff (including contractors) benchmarking insights

Overall

- SGN has some of the highest staff per km in the comparable benchmark sample.
- Arup consider this is a result of SGN’s operating model, most notably:
 - The active management of smaller contractors places additional workload into SGN, requiring more headcount in Work Management and Business Support (ref page 18).
 - SGN’s decentralised model, atypical for the industry, requires additional Work Management and Business Support FTEs in depots (ref page 16).
 - SGN’s focus on driving functionality improvements as per Ofgem’s requirements has directly resulted in greater headcount, particularly in relation to driving greater customer satisfaction (ref page 19).

Comparison between Scotland and Southern

- Scotland has a greater number of staff per km than Southern.
 - Arup consider this in line with Scotland’s lower customer per km and greater network sparsity



Note the reduced benchmark sample: networks selected based on the basis of comparable workload in the business e.g. mains replacement / network growth and sufficient clarity on the operating model of each business including the total staff (including contractors) in the business.

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