



Telecommunications Statistics and Market Report

2018

Information Note

Channel Islands Competition & Regulatory Authorities

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1. INTRODUCTION

As part of its work to promote fair competition and advance consumer interests in the Channel Islands, the Channel Islands Competition and Regulatory Authorities (CICRA)¹ monitors and publishes information on market developments. The availability of timely and relevant market intelligence improves the ability of stakeholders including consumers to make informed choices and supports CICRA in prioritising its own resources as markets change and competition develops.

This report presents statistics on the telecommunications sectors in the Bailiwicks of Guernsey² and Jersey. It covers the calendar year 2018 and is based primarily on data submitted by the licensed telecommunications operators during the first half of 2019.

The data used to compile this report has been provided by the Channel Islands' licensed telecoms operators using an agreed set of data definitions. The accuracy of the data is the sole responsibility of the operators. CICRA has not audited the data, although it has provided operators with the opportunity to review their data and to make adjustments where they feel necessary. Where appropriate, notes have been included in the text to recognise and explain potential anomalies.

Significant changes to the report were made in 2015 so as to reflect the changing nature of telecommunications technologies and the services provided to consumers. CICRA will continue to review the report to ensure it reflects the needs of users and the evolving industry. For the first time in 2015, data was included from other licenced operators for whom telecommunications activities form a minor part of their businesses (Nitel and Logicalis) in addition to the main operators (JT, Sure, Airtel, Homenet and Newtel). Consequently, users of this report should be mindful that the figures shown for 2015 to 2018 are not necessarily comparable with data published prior to 2014. Notes are added to the text as appropriate.

CICRA would like to thank all operators for their contributions to this report.

¹ CICRA is the name given to the Guernsey Competition and Regulatory Authority (GCRA) and the Jersey Competition Regulatory Authority (JCRA). Together they are the economic regulators in the Channel Islands for the telecommunications sector.

² For the purposes of this report Guernsey is used to mean the islands of Guernsey, Herm, Alderney and Sark.

2. EXECUTIVE SUMMARY

Overall telecommunications sector

In Guernsey during 2018, the main operators offering telecommunications services were Sure³ (the incumbent offering a full range of fixed and mobile services), JT⁴ (offering fixed and mobile services) and Airtel⁵ (offering mobile services).

In Jersey during 2018, the main operators offering telecommunications services were JT (the incumbent offering a full range of fixed and mobile services), Sure (offering fixed and mobile services), Airtel (offering mobile services), Homenet⁶ (offering residential services through various technologies) and Newtel⁷ (offering fixed business services).⁸

Other licensed operators providing retail telecommunications services to business customers across the Channel Islands include Nitel⁹, Logicalis¹⁰ and C5¹¹.

The telecommunications industry in the Channel Islands in 2018

- generated turnover, including fixed, mobile, Internet access, associated services and the sale of handsets of £168.3m;
- employed 776 full time staff, excluding contractors working on fibre roll-out;
- contributed £20.3m to the exchequers through corporate, staff, and social taxes (including GST payments in Jersey);
- invested £24.8m in capital projects. Around half of this investment has been in the fixed access network in Jersey.

Fixed line market (section 5)

Total fixed-line revenues in 2018 were £10.9m in Guernsey and £15.2m in Jersey.

There were 57 fixed line subscriptions per 100 inhabitants in Guernsey and 45 per 100 inhabitants in Jersey¹².

Fixed line call minutes fell in Guernsey by 2.9% to 68 million and in Jersey by 10.6% to 99 million.

³ In this document the name Sure refers to Sure (Guernsey) Limited and Sure (Jersey) Limited as appropriate.

⁴ JT refers to JT (Guernsey) Limited (formerly known as Wave Telecom) and JT (Jersey) Limited as appropriate.

⁵ Airtel refers to Airtel-Vodafone being Guernsey Airtel Ltd and Jersey Airtel Limited as appropriate.

⁶ Homenet refers to Home Net Limited.

⁷ Newtel refers to Newtel Limited.

⁸ Homenet took over all residential services from Newtel in 2014.

⁹ Nitel refers to Nitel Limited in both Jersey and Guernsey.

¹⁰ Logicalis refers to Logicalis Guernsey Limited and Logicalis Jersey Limited as appropriate.

¹¹ C5 refers to C5 IT Services (Guernsey) Limited in Guernsey and C5 Alliance Limited in Jersey.

¹² A definitional change this year aimed to eliminate uncertainty regarding the accuracy of the data, and has resulted in a lack of equivalence with previous years, particularly in Jersey.

Average revenue per fixed (wireline and wireless) subscription per month in Guernsey was £25.44 and in Jersey it was £26.49.

By December 2018, Sure was retailing 17.5% of the fixed network wireline connections in Jersey. Airtel, Homenet and Nitel also offer services relevant to the market for fixed telephony. JT launched its service in Guernsey in June 2016, and had acquired 6.7% of Guernsey's fixed network wireline connections by December 2018. JT also has a small fibre-optic network in Guernsey over which it provides some fixed line connections, and Airtel offers fixed wireless telephones.

Broadband market (section 6)

Total fixed broadband revenues in 2018 were £8.1m in Guernsey and £14.2m in Jersey.

Fixed broadband¹³ penetration rates per 100 inhabitants were 38.9 in Guernsey and 35.5 in Jersey (not including mobile substitutions), compared with 40 in 2018 in the UK. The OECD average is 30.92¹⁴. When data-only mobile access is included, penetration rates are 42.7 for Guernsey and 40.8 for Jersey.

The technology and download speeds available for broadband internet access differ between the Islands. Guernsey subscribers are predominantly able to access services via xDSL technologies with advertised download speeds of up to 20Mbps (based on ADSL technology) and up to 100Mbps (based on VDSL technology). However there are some fibre connections. In Jersey, by the end of 2018, most of the network had been converted to fibre and subscribers had access to products with advertised download speeds up to 1Gbps. Some copper lines were still providing voice services, and Homenet's WiMax and Fibre to the Home (FTTH) networks also serviced some subscribers, giving speeds of up to 20Mbps and up to 100Mbps.

In Guernsey, 76% of fixed network broadband subscription used services of up to 20Mbps, with the remaining 24% using services in a range up to 100Mbps (an 8% absolute increase from 2016). In Jersey 92% of fixed subscribers used up to 250Mbps services with the remaining 8% using services of up to 1Gbps.¹⁵

The rise in data consumption seen in the UK is mirrored in the Channel Islands, although it has not been as great locally. Average consumption on the fixed network in Guernsey was 177 Gbytes/month, and in Jersey it was 172 Gbytes/month. In the UK it was 240 Gbytes/month¹⁶. UK data usage is very high compared to other jurisdictions: in 2017 UK fixed broadband data per capita was 74Gbytes/month, above other developed nations. Guernsey and Jersey were at 69 and 62 Gbytes/month in 2018, above any other comparator used by Ofcom in their 2018 International Broadband Scorecard.¹⁷

¹³ For this report, the terms 'broadband' and 'internet' interchangeably refer to internet access services.

¹⁴ As of July 2019: www.oecd.org/sti/broadband/oecdbroadbandportal.htm

¹⁵ The Advertising Standards Agency has changed its guidelines on the reporting of broadband speeds. These classifications are in line with the older framework.

¹⁶ Ofcom: Connected Nations 2018 p.2 (<https://www.ofcom.org.uk/research-and-data/multi-sector-research/infrastructure-research/connected-nations-2018/main-report>)

¹⁷ Ofcom: International Broadband Scorecard Figure 1.33 (<https://www.ofcom.org.uk/research-and-data/telecoms-research/broadband-research/eu-broadband-scorecard>

Leased lines market (section 7)

The number of leased lines in Guernsey has fallen from 2017's figure of 642 to 622 lines in 2018. In Jersey, the market has also decreased from 1,017 in 2017 to 937 in 2018.

In Guernsey, 69% of Direct Internet Access (DIA) lines were enabled for bursting to higher data rates when demand requires it. In Jersey, 23% were enabled for bursting.¹⁸

The retail leased line market was worth £5.1m in Guernsey and £10.8m in Jersey in 2018.

Mobile market (section 8)

Total mobile-related revenues in 2018 were £24.3m in Guernsey and £42.0m in Jersey. These are very similar to 2017 levels.

The total number of mobile subscriptions in the Channel Islands in 2018 was 197,219, an increase of approximately 7,500 from 2017. In Guernsey, there were 114 mobile subscriptions per 100 inhabitants, and in Jersey there were 118 subscribers per 100 inhabitants.

An average of 479 call minutes were made for every pre-paid subscription in Guernsey during 2018; for each post-paid subscription there was an average of 1,177 call minutes. In Jersey, the equivalent figures were 667 and 1,395.

An average of 266 SMS text messages were sent for every pre-paid subscription in Guernsey during 2018; each post-paid subscription sent an average of 515 messages. In Jersey the equivalent figures were 287 and 605.

Average monthly revenues per subscription in Guernsey were £9.41 for pre-paid and £22.21 for post-paid in 2018. In Jersey, it was £8.50 for pre-paid and £23.92 for post-paid.

In 2018, Channel Islands consumers generated revenues for local operators of £7.5m using mobile services while roaming abroad, £0.6m less than in 2017.

Porting times for consumers switching mobile service provider stayed at 1.2 working days in Guernsey and remained at 0.9 in 2018 in Jersey¹⁹. These times compare to the European Commission's Universal Service Directive, which requires operators to provide porting within 1 working day.²⁰

¹⁸ There is a large variability year-on-year in the data with which we have been provided. These variances could be real or related to accuracy problems.

¹⁹ Porting XS

²⁰ <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32002L0022&from=en>

Off-island links (section 9)

Guernsey and Jersey have high resilience and capacity in their external telecommunications links. With various fibre-optic submarine cables linking the two Bailiwick, the U.K. and France from multiple landing points, and high-capacity modern transmission technology, the Channel Islands would be able to maintain connectivity in the event of total failure of more than one cable without a noticeable impact on consumers.

3. CONSUMER SNAPSHOT

Guernsey consumer summary

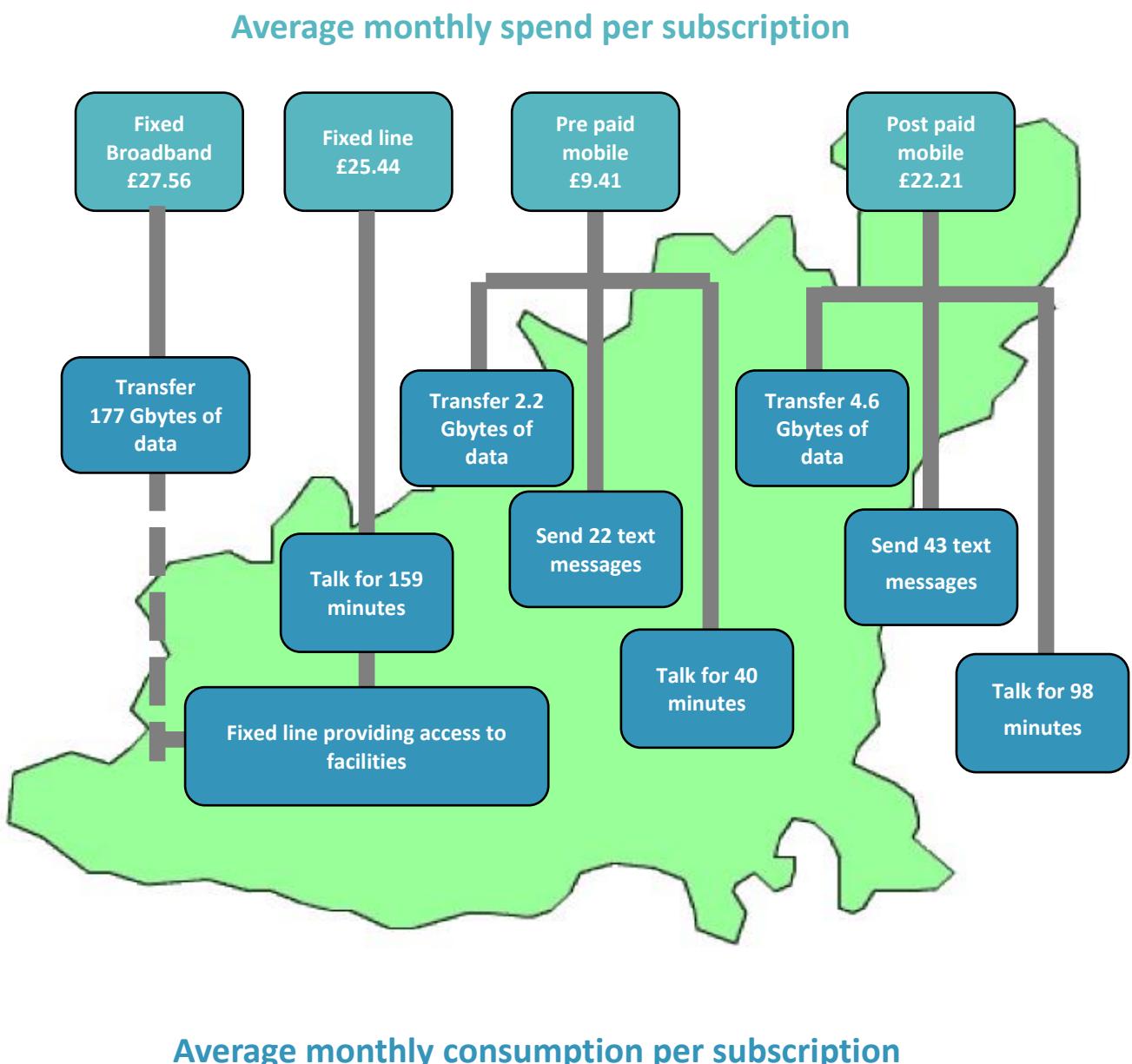


Figure 1 Guernsey consumer summary
Source: Industry questionnaires, CICRA analysis

Jersey consumer summary

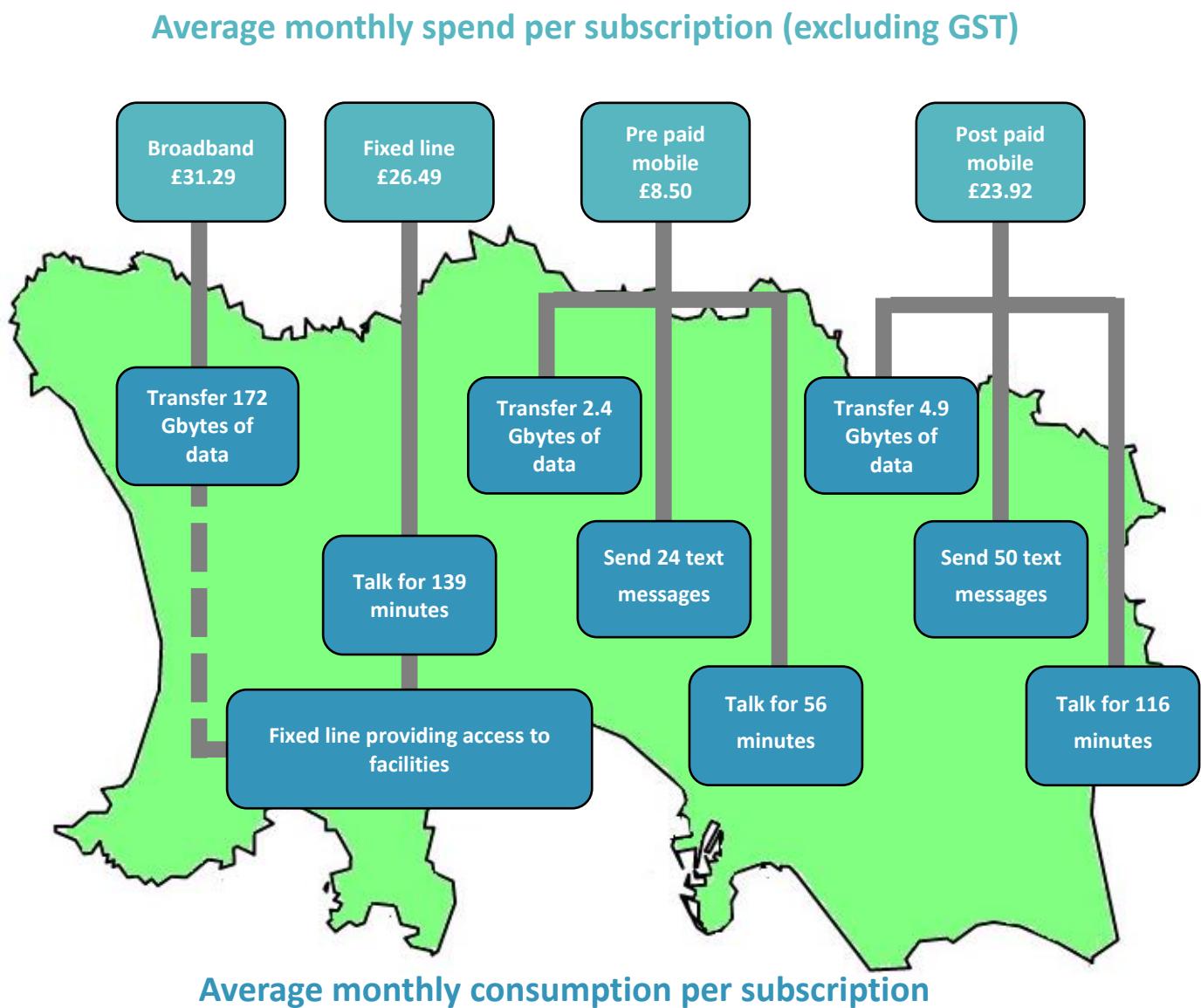


Figure 2 Jersey consumer summary

Source: Industry questionnaires, CICRA analysis

4. ECONOMIC IMPACT OF THE TELECOMMUNICATIONS SECTOR

This section of the report presents general data about the Jersey and Guernsey telecommunications sectors for the calendar year 2018.

As noted in the introduction, statistics in this report are comparable across the Channel Islands, but care is required when comparing trends because of changes made to the reporting over time.

Total turnover for telecommunication services in the Channel Islands

Total turnover of the telecommunications industry in the Channel Islands (including fixed, mobile, Internet, the sale of handsets and the provision of telecommunications associated with data centre/hosting services²¹) was £168.3m. Revenues associated with Guernsey subscribers while on and off the island, plus revenue from visitors to Guernsey in 2018 was 2.2% of Guernsey's GDP²². In Jersey the equivalent figure was 2.4% of GDP²³.

Table 1 shows the turnover in the telecommunications market in the Channel Islands during the period 2013 to 2018.

Turnover (£m)	Guernsey	Jersey	Total
2013	69.7	140.3	210.0
2014	75.4	144.4	219.8
2015*	70.3	98.2	168.5
2016**	69.0	97.8	166.8
2017***	64.1	101.9	171.1
2018	67.1	101.2	168.3

Table 1 Telecommunications turnover 2013 to 2018

Source: *Industry questionnaires, CICRA analysis*

* All years prior to 2015 include significant revenues from JT's international business (as well as that generated from Channel Island customers) and the total revenues associated with data centres (rather than the telecommunications activities associated with them). These elements have been removed from later figures and represent a large part of the considerable difference in revenue demonstrated.

** 2016 figures have been adjusted since the 2016 report based on updated information provided.

*** 2017 figures have been adjusted since the 2017 report based on updated information provided.

Figure 3 overleaf shows the total turnover segmented into different types of telecommunications activity in 2018.

The fixed and mobile figures include revenues from both voice and data services, and for both retail and corporate customers.

²¹ The reports for years before 2016 stated revenues from all data centre activities and not just telecommunications activities within them.

²² GDP figures used are for 2017. For Guernsey, as estimated in Guernsey Annual GVA and GDP Bulletin 2017 (First Estimates) – 6 September 2018.

²³ For Jersey, the GDP figure used was that for 2017 from

<https://www.gov.je/SiteCollectionDocuments/Government%20and%20administration/R%20GVA%20and%20GDP%202017%2020181003%20OSU.pdf> as published 3 October 2018.

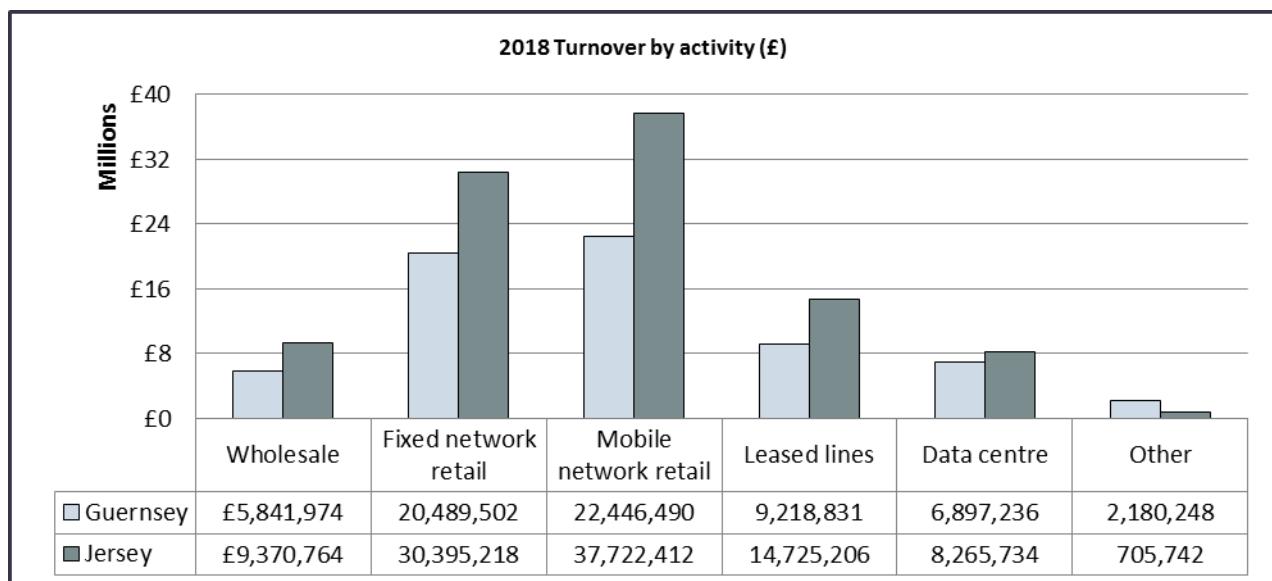


Figure 3 Total turnover by type of telecommunications activity

Source: CICRA industry questionnaires – see also note 21 on preceding page

Table 2 summarises total turnover by key service categories.

Turnover (£m) ²⁴	Guernsey	Jersey	Total
Fixed	42.5	62.8	105.2
Mobile	22.4	37.7	60.2
Other	2.2	0.7	2.9
Total	67.1	101.2	168.3

Table 2 Total turnover by key service category - Guernsey and Jersey

Source: CICRA industry questionnaires

The biggest share of revenue in Guernsey and Jersey was generated in the fixed sector. In 2018 in Guernsey, it accounted for 63% of total industry turnover, and in Jersey it represented 62%.

Employment in the telecommunications sector

Table 3 shows the number of full-time equivalent staff employed in Guernsey and Jersey at the end of each year since 2013.

Staff	2013	2014	2015	2016	2017	2018
Guernsey	235	237	236	227	227	222
Jersey	415	464	433	505	506	554

Table 3 Full-time equivalent staff members employed in telecommunications

Source: CICRA industry questionnaires

²⁴ Fixed turnover includes internet business services, wholesale revenue, and corporate data services revenues. Mobile turnover includes retail, business, and in-roaming service revenues. Other turnover includes all non-mobile and non-fixed revenues.

Taxation contributions

Figure 4 overleaf shows that the telecommunications sector contributed £20.3m in taxation in 2018 (£18.5m in 2017); £5.4m in Guernsey (£4.8m in 2017) and £14.9m in Jersey (£13.8m in 2017).

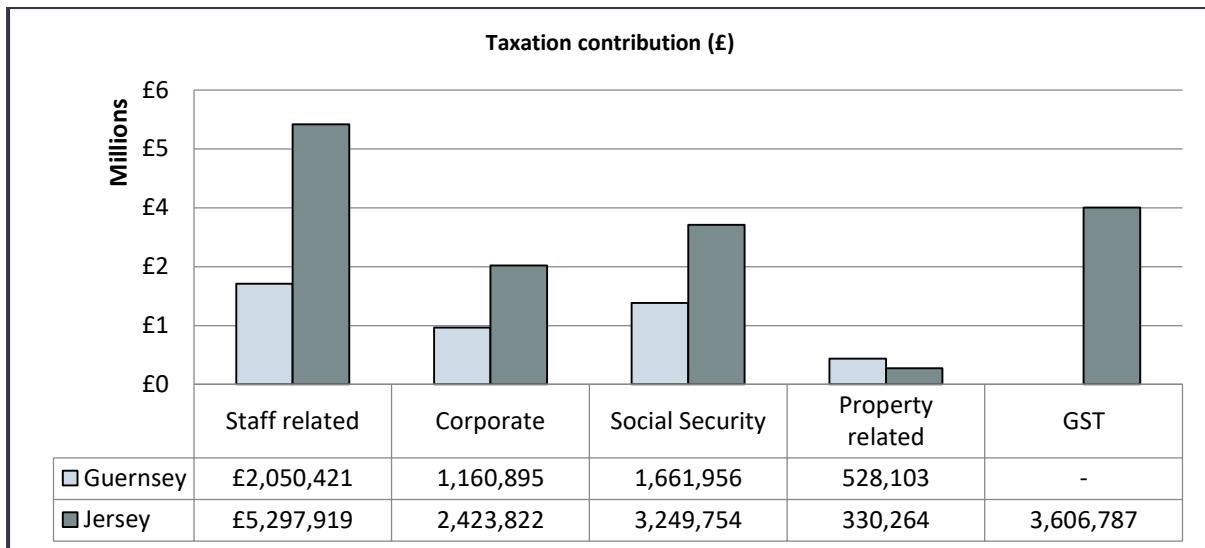


Figure 4 Taxation contributions
Source: CICRA industry questionnaires

Capital investment

Table 4 shows the levels of capital investment in telecommunications in Guernsey and Jersey in the years 2013 to 2018.

Capital invested (£m)	Guernsey	Jersey
2013	10.7	24.8
2014	8.8	22.4
2015	22.5	21.3
2016	10.0	22.6
2017	4.9	23.3
2018	5.2	19.6

Table 4 Capital investment in telecommunications 2013 to 2018
Source: CICRA industry questionnaires

Figures 5 and 6 show where the investment was made in each island. Significant expenditure on fibre roll-out in Jersey accounts for part of the large proportion of fixed access network spend.

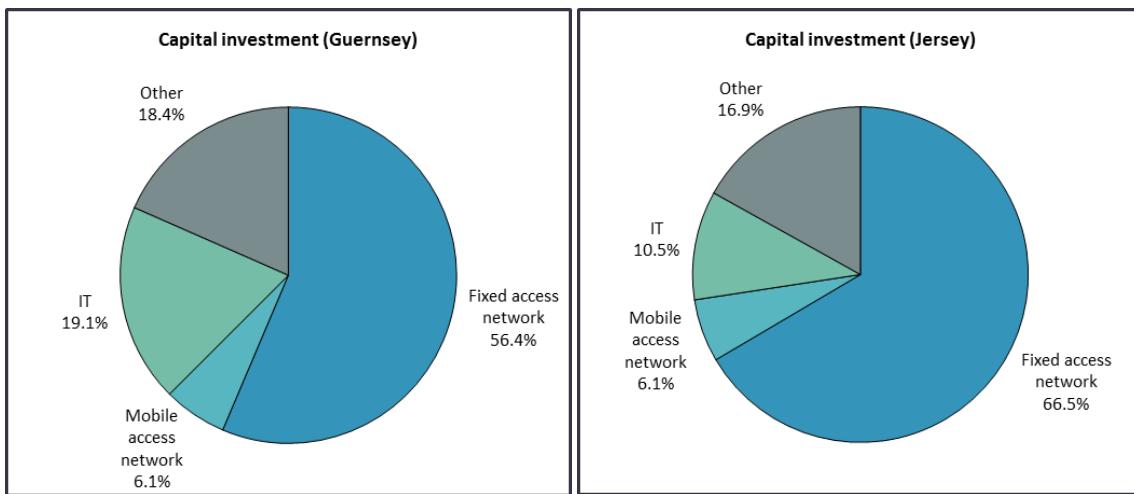


Figure 5 Capital investment (Guernsey) 2018

Source: *Industry questionnaires, CICRA analysis*

Figure 6 Capital investment (Jersey) 2018

Source: *Industry questionnaires, CICRA analysis*

5. FIXED NETWORK MARKET

The fixed network market is characterised by consumer equipment that is in a fixed geographic location and used to make/receive voice calls, send/receive faxes and to support broadband and leased line services. In contrast, the consumer equipment in the mobile market is not fixed to a single geographic location and moves easily from place to place. Various technologies are used in fixed networks including traditional copper circuits, fibre optics and wireless links.

Information on fixed network broadband and fixed network leased line services is contained in sections 6 and 7 of this report respectively.

Total number of lines and subscriptions

Figure 7 shows the number of fixed wireline lines in the Islands during the period 2013 to 2018. The apparent sudden falls in Guernsey in 2015 and Jersey in 2018 are likely to be a result of reporting differences which have not been adjusted for prior years.

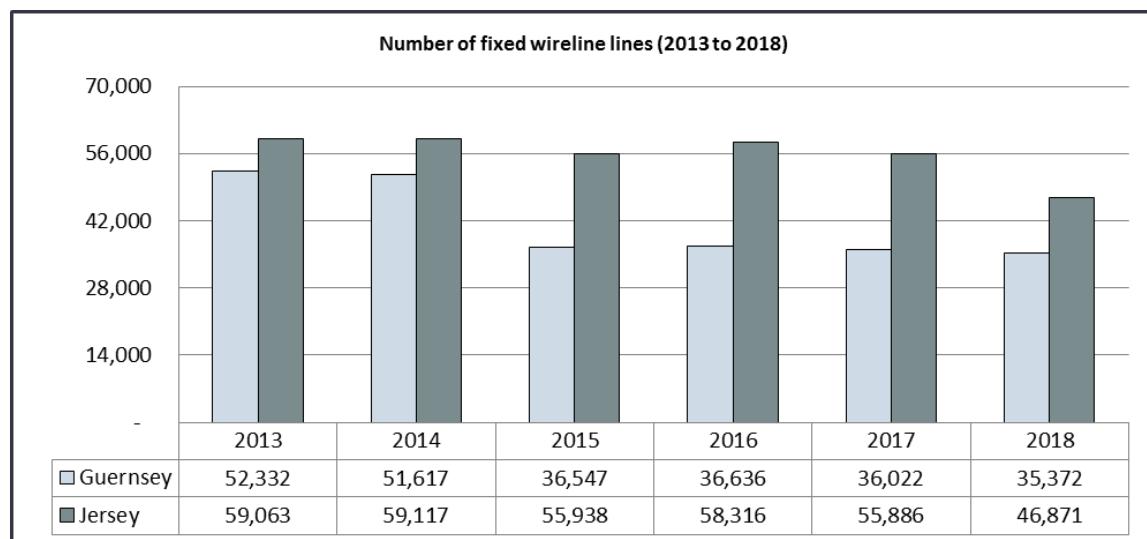


Figure 7 Number of retail fixed lines and subscriptions

Source: CICRA industry questionnaires

In addition to fixed wireline connections, Homenet has a fixed wireless network (WiMax), and a number of operators retail data-only sim cards, which can be used in place of a fixed connection for broadband internet access. This type of internet access via mobile networks is considered in Section 8.

Alternative carrier services

Carrier select style services have been available in the Channel Islands for a number of years and, in 2015, Wholesale Line Rental (WLR) services also became available. Table 5 shows the number of subscriptions to such services at the end of 2018.

Subscriptions	Guernsey	Jersey
Carrier select	202	607
Wholesale Line Rental	2,294	8,604
Total	2,496	9,211

Table 5 Number of subscriptions to alternative carriers

Source: CICRA industry questionnaires

Fixed telephony minutes

Figures 8 and 9 show the numbers of minutes carried by operators in Guernsey and Jersey annually between 2013 and 2018. Both show a continuing decline in the number of fixed network call minutes originating in the Islands. Possible causes of this fall are substitution of traditional PSTN/ISDN services by mobile phones and alternative forms of communications such as VoIP and messaging services. New entrant's market share is increasing as the incumbent operators lose volume.

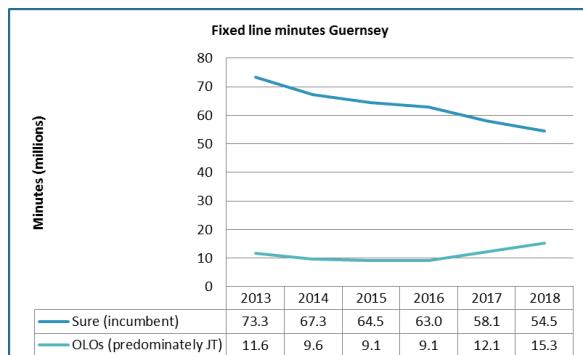


Figure 8 Numbers of fixed line minutes 2013 to 2018 (Guernsey)

Source: CICRA industry questionnaires

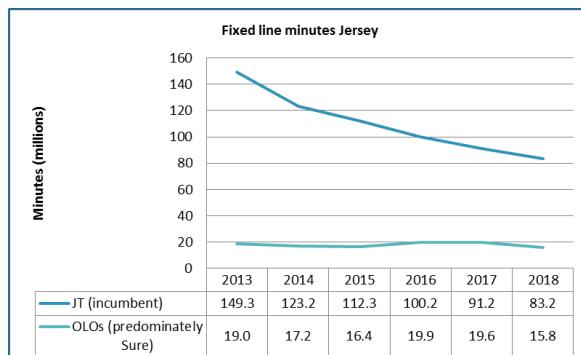


Figure 9 Numbers of fixed line minutes 2013 to 2018 (Jersey)

Source: CICRA industry questionnaires

The continuing decline in the numbers of fixed line call minutes is similar to declines seen in the U.K.²⁵

Fixed network penetration rates

Table 6 shows the number of fixed network connections (wireline and wireless combined) per 100 inhabitants in Guernsey and Jersey.

* The penetration rates in Guernsey for 2013 and 2014 are thought to have been overstated.

** The penetration rates in Jersey prior to 2018 are thought to have been overstated.

Connections per 100 inhabitants	Guernsey	Jersey
2013	85 *	60**
2014	83 *	59**
2015	60	58**
2016	59	59**
2017	58	59**
2018	57	45

Table 6 Fixed and wireless fixed retail lines per 100 inhabitants

Source: Industry questionnaires, CICRA analysis, government statistics (see section 10)

Revenues

Excluding broadband and leased line services (see sections 6 and 7 respectively), revenues associated with fixed networks in 2018 were £10.9m in Guernsey and £15.2m in Jersey.

These revenue totals break down into line rental, usage charges and other charges (e.g. for customer premises equipment and support services) – see figures 10 and 11 below. The Islands are broadly similar in terms of the proportions of fixed network revenues from different sources.

²⁵ Ofcom: Communications Market Report, United Kingdom, Published 3 August 2017, page 141

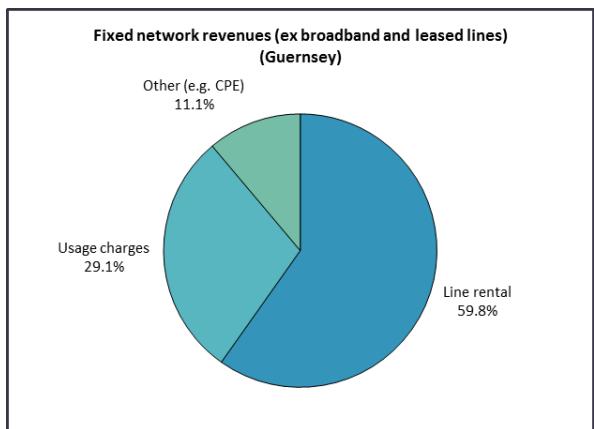


Figure 10 Breakdown of fixed network revenues (Guernsey)

Source: *Industry questionnaires, CICRA analysis*

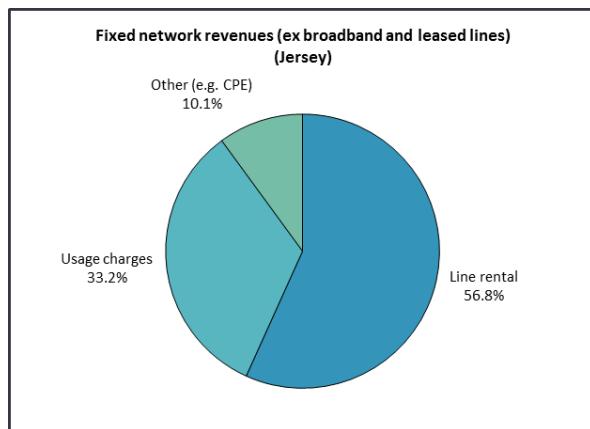


Figure 11 Breakdown of fixed network revenues (Jersey)

Source: *Industry questionnaires, CICRA analysis*

The average revenue per fixed line (wireline and wireless) from line rental, usage charges and associated equipment and services in Guernsey in 2018 was £305.32 (£25.44 per month). The equivalent annual figure in Jersey was £317.90 (£26.49 per month)²⁶. Charges for services such as broadband are in addition to these.

²⁶ Please note that these figures are calculated on a different basis from those in last year's report. As before, they exclude GST in Jersey.

6. FIXED NETWORK BROADBAND MARKET

Fixed network broadband services are those delivered over physical copper connections, fibre connections and fixed wireless communications links (e.g. WiMax). They do not include services delivered over 2G, 3G and 4G mobile networks.

While the majority of broadband subscribers in both Islands can be categorised as residential users rather than business users, it is difficult to draw a clear distinction because of the tendency for small businesses to use services primarily designed for residential use. Historically, the proportion of business users is thought to be of the order of 5% of the total subscriber base. No attempt is made in this report to distinguish between the two groups.

Subscriptions and penetration rates

Table 7 shows historic levels in both Islands for fixed broadband subscriptions and overall broadband subscriptions (including mobile substitutions).

Subscriptions	Guernsey		Jersey	
	Overall	Inc. data only mobile broadband	Overall	Inc. data only mobile broadband
2013	22,757		35,004	
2014	23,484		36,420	
2015	23,779	24,582	36,134	37,861
2016	23,226	24,558	35,877	39,228
2017	23,971	25,520	37,233	41,160
2018	24,410	26,763	37,928	43,568

Table 7 Numbers of fixed broadband subscriptions 2013 to 2018

Source: CICRA industry questionnaires

As illustrated in figure 12, the Islands continue to benefit from above OECD average broadband penetration rates per 100 inhabitants of 30.9 (Guernsey 38.9 subscriptions per 100 inhabitants and Jersey 35.5).

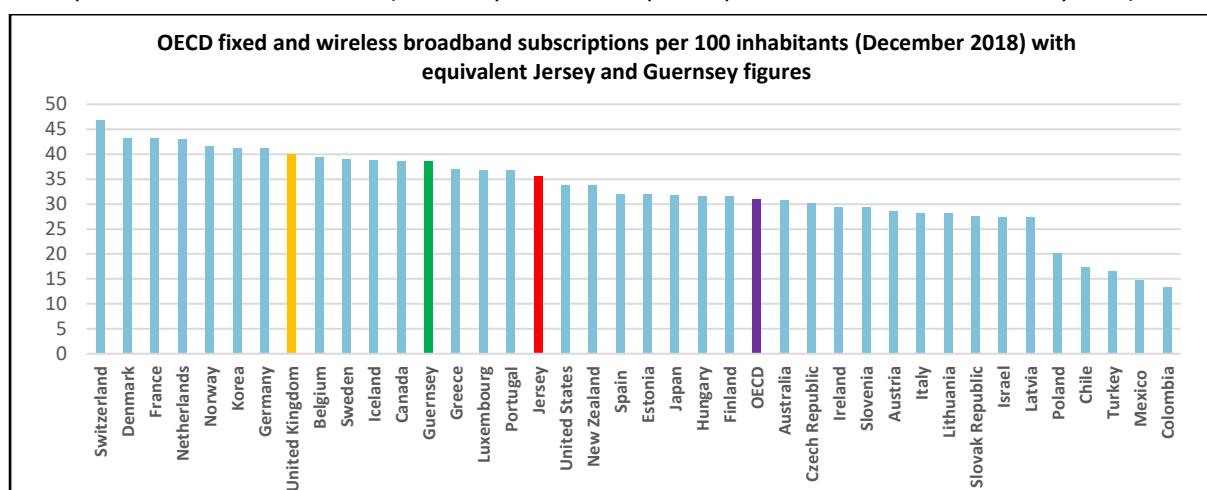


Figure 12 Guernsey and Jersey broadband penetration rates compared to OECD countries

Source: OECD Fixed and wireless broadband subscriptions per 100 inhabitants, December 2018 with Guernsey and Jersey data inserted ²⁷

²⁷ <http://www.oecd.org/sti/broadband/oecdbroadbandportal.htm> table 1.2.1

Market share by numbers of fixed broadband subscriptions

Figures 13 and 14 show the retail market shares of the fixed network broadband providers in Guernsey and Jersey respectively, by numbers of subscriptions. The incumbent operators remained dominant in their respective home markets.

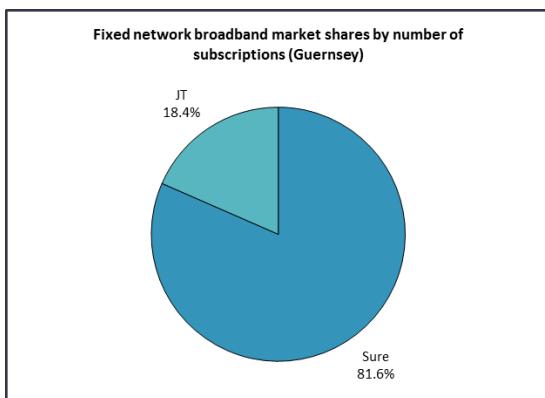


Figure 13 2018 Fixed network broadband market shares by number of subscriptions (Guernsey)

Source: Industry questionnaires, CICRA analysis

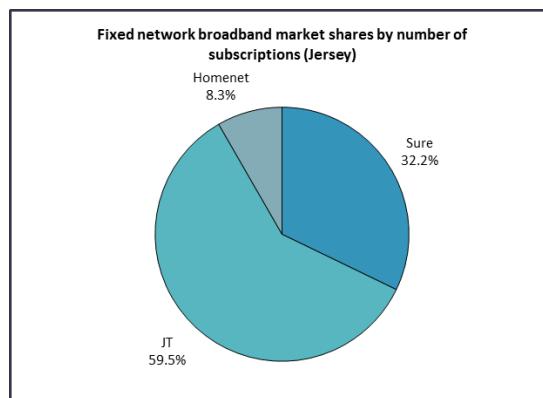


Figure 14 2018 Fixed network broadband market shares by number of subscriptions (Jersey)

Source: Industry questionnaires, CICRA analysis

Table 8 shows historic market shares in the fixed broadband market in Guernsey and Jersey between 2013 and 2018.

% Market share	Guernsey		Jersey		
	Sure	JT	Sure	JT	Homenet (and others) ²⁸
2013	81	19	11	76	13
2014	82	18	16	72	12
2015	83	17	22	72	6
2016	85	15	27	68	5
2017	82	18	30	61	9
2018	82	18	32	60	8

Table 8 Fixed broadband market shares 2013 to 2018

Source: Industry questionnaires, CICRA analysis

Broadband download speeds

In Guernsey, Sure owns all the physical lines and JT obtains services through wholesale arrangements. Services with download speeds up to 20Mbps are delivered using ADSL technology, while higher speeds in a range up to 100Mbps are delivered using VDSL technology.

In Jersey, there are a number of separate local access network infrastructures. JT owns the majority of the fibre connections (providing services up to 1Gbps). Other licenced operators gain access to JT's network through wholesale arrangements. Homenet also provides services through its WiMax and Fibre to the Home (FTTH) networks (providing services up to 20Mbps and 100Mbps).

²⁸ Up to 2014 this column includes other operators and Homenet alone after this.

Figures 15 and 16 show the proportions of fixed network broadband subscriptions by download speed on the historically reported basis of ‘up to’ speeds²⁹ in Guernsey and Jersey respectively. Fibre-based services are included in this classification, notwithstanding that fibre connections have different characteristics from those delivered by xDSL over copper.

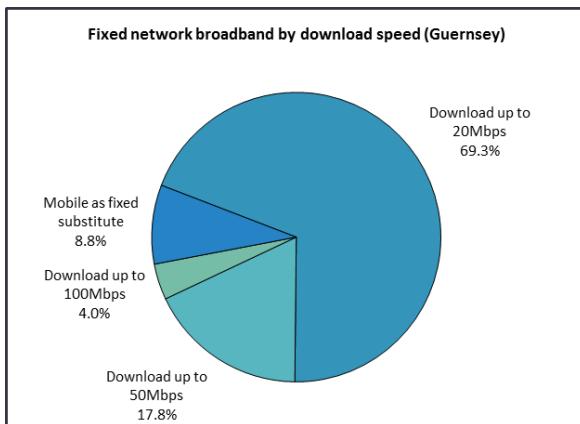


Figure 15 Fixed broadband subscriptions by download speed (Guernsey)

Source: Industry questionnaires, CICRA analysis

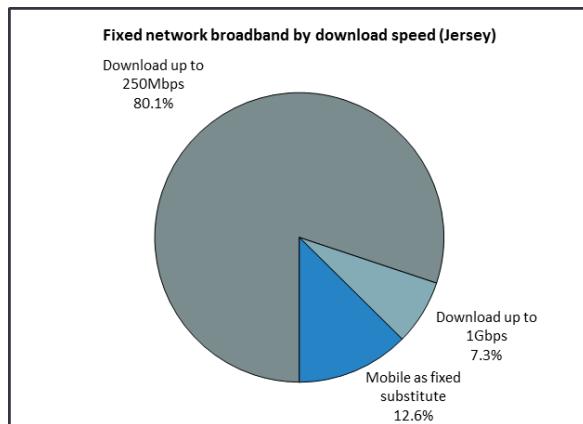


Figure 16 Fixed broadband subscriptions by download speed (Jersey)

Source: Industry questionnaires, CICRA analysis

Data volumes

Not all service providers were able to provide information on the volumes of data consumed by their customers but, from the information that was provided, it can be estimated that, on average, fixed network broadband subscribers (including mobile substitutions) in Guernsey each sent and received an average of 177 GBytes of data per month in 2018 while subscribers in Jersey each sent and received an average of 172 GBytes per month. Data usage continues to rise, as has been seen in the UK, where data usage per subscriber per month has risen to 240 GBytes per month.³⁰

Revenues

Total retail revenues in 2018 from fixed broadband services were £8.1m in Guernsey and £14.2m in Jersey.

Fixed network broadband services in Guernsey were, subject to fair usage policies, generally uncapped, meaning that consumers could download and upload as much data as they wish for a fixed monthly subscription. 96.2% of revenues were derived from basic subscriptions and 3.8% from other sources such as equipment sales.

In Jersey, some fixed network broadband services retailed by JT are subject to caps on the amount of data its customers can download, the allowed amount depending on the monthly subscription; customers can also buy bolt-on packages for extra data allowances and/or pay overage charges. Sure and Homenet sell subscriptions with unlimited usage, subject to fair usage policies.

²⁹ The Advertising Standards Agency has changed its guidelines on the reporting of broadband speeds. These classifications are in line with the older framework.

³⁰ Ofcom report : Connected Nations 2018

Figure 17 shows the distribution of revenues from different sources across all broadband service providers in Jersey.

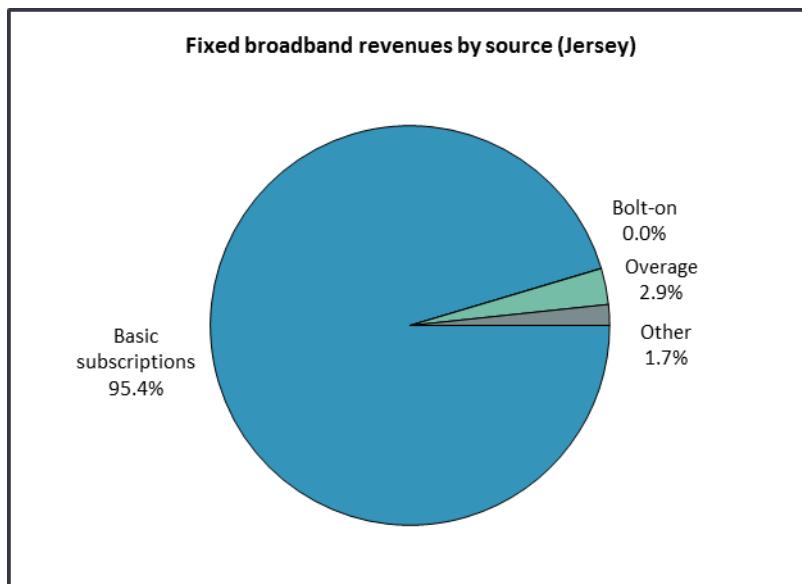


Figure 17 Fixed broadband revenue by source (Jersey)

Source: Industry questionnaires, CICRA analysis

Average revenue per subscription

In Guernsey, estimated³¹ average revenue per fixed network broadband subscription was £331 for the year (£27.56 per month).

For Jersey the equivalent annual figure in Jersey was £375 for the year (£31.29 per month).

These exclude revenues from associated line rental.

³¹ Not all operators were able to separate retail revenues derived from true fixed network broadband activities from those derived from broadband provided by fixed network substitution. It is therefore only possible to estimate the average revenues per fixed broadband subscription. Figures here as elsewhere exclude GST where relevant.

7. LEASED LINE MARKET

Leased lines (sometimes called private circuits) are private, bi-directional, symmetric telecommunications links between two or more locations. Usually used by corporate and governmental organisations, they can be used for voice or data services.

Figure 18 shows how leased lines were used in 2018.³²

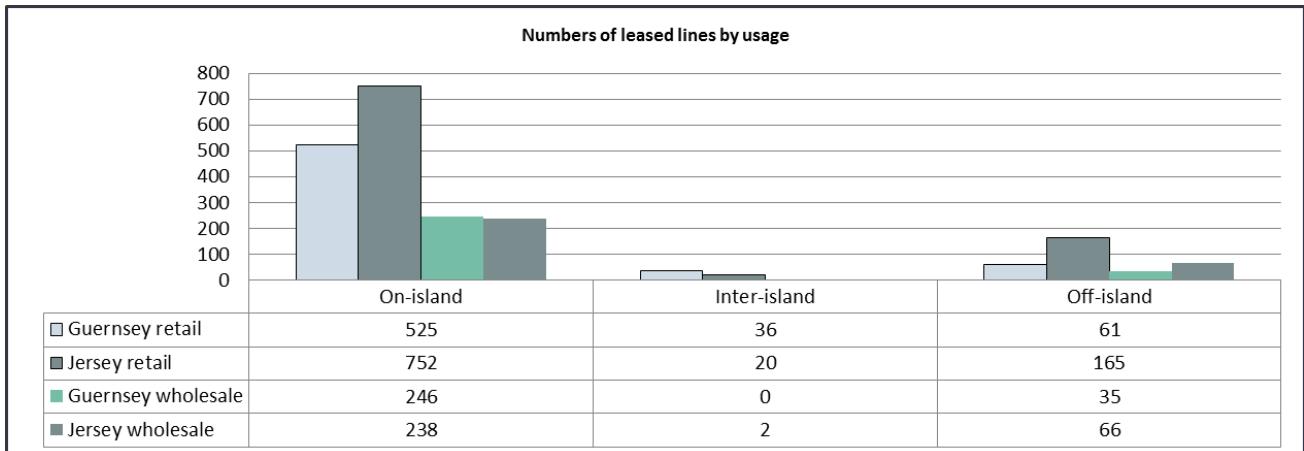


Figure 18 Numbers of leased lines by usage

Source: CICRA industry questionnaires

Figure 19 shows the numbers of retail and wholesale leased lines supplied across the islands at the end of 2018. Wholesale leased lines are those supplied by one licenced operator to another licenced operator.

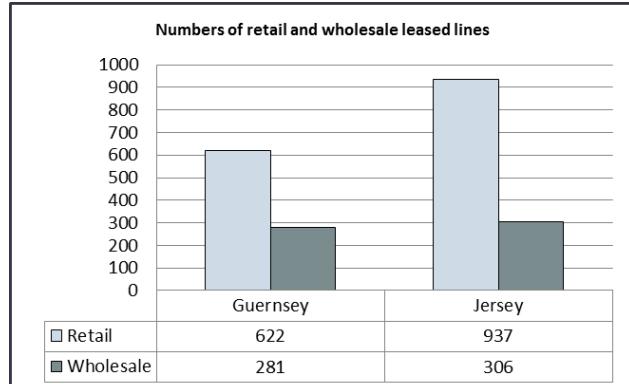


Figure 19 Number of retail and wholesale leased lines

Source: CICRA industry questionnaires

Table 9 shows the historic numbers of retail leased lines in the islands.

Retail lines	Guernsey	Jersey
2013	585	922
2014	495	810
2015	571	1,030
2016	575	1,061
2017	642	1,017
2018	622	937

Table 9 Number of retail leased lines 2013 to 2018
Source: CICRA industry questionnaires

³² On-island leased lines are defined as lines that originate and terminate in the same island. Inter-island leased lines originate in one island and terminate in another. Off-island leased lines connect Channel Islands locations with non Channel Island locations.

Retailed leased line revenues

Revenues from retailed leased lines in Guernsey in 2018 were £5.1m and revenues in Jersey were £10.8m.

Figure 20 shows the breakdown of these totals by on-island, inter-island and off-island services.

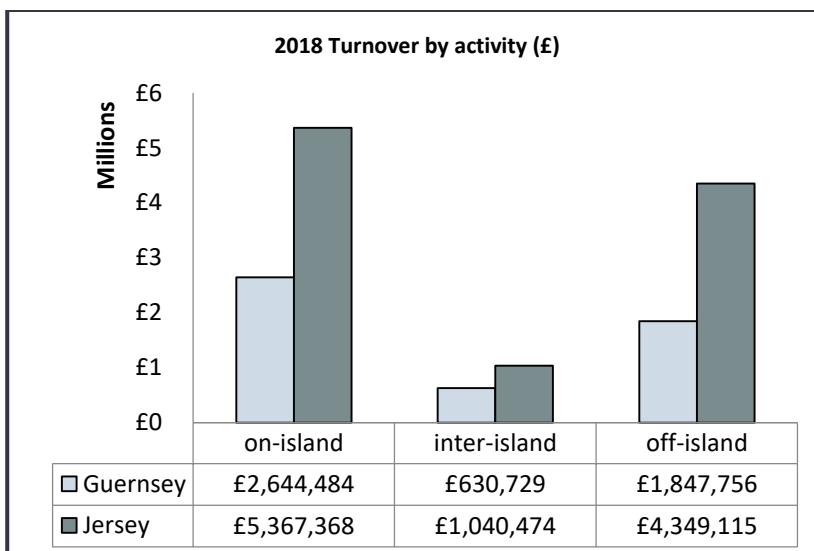


Figure 20 Revenues from retailed leased lines

Source: CICRA industry questionnaires

Direct Internet Access (DIA)

An increasing use of leased lines is to provide access to the Internet. Such usage is an alternative to broadband and is typically used by organisations with large demand, a requirement for guaranteed service levels and/or a need for symmetrical services. Direct Internet Access (DIA) lines connect the customer's computer equipment to their service provider's core network where access to the global Internet is obtained.

DIA lines are provided at different data rates to match the customer's specific requirements. Table 10 provides a breakdown of the numbers of DIA lines provided in each island by data rate.

DIA Lines	≤ 2Mbps	>2Mbps & ≤ 4Mbps	>4Mbps & ≤ 6Mbps	>6Mbps & ≤ 8Mbps	>8Mbps & ≤ 10Mbps	> 10Mbps & ≤ 100Mbps	>100 & < 1Gbps	> 1Gbps
Guernsey	25	7	7	3	33	57	9	2
Jersey	16	9	3	1	58	74	7	3

Table 10 Numbers of Direct Internet Access lines

Source: CICRA industry questionnaires

Bursting

Bursting is a facility whereby a customer can exceed the normal data rate of their DIA line for a period of time; this assists them to cater for occasional periods of higher than usual demand. Tables 11 and 12 show the numbers of DIA lines with bursting capability in Guernsey and Jersey respectively, again by data rate.

Burst To → From ↓	≤ 2Mbps	>2Mbps & ≤ 4Mbps	>4Mbps & ≤ 6Mbps	>6Mbps & ≤ 8Mbps	>8Mbps & ≤ 10Mbps	>10Mbps & ≤100Mbps	>100 & < 1Gbps	>1Gbps
≤ 2Mbps	-	2	1	3	-	3	-	-
>2Mbps & ≤ 4Mbps	-	-	-	-	-	2	-	-
>4Mbps & ≤ 6Mbps	-	-	-	-	1	2	-	-
>6Mbps & ≤ 8Mbps	-	-	-	-	-	-	-	-
>8Mbps & ≤ 10Mbps	-	-	-	-	-	11	-	-
> 10Mbps & ≤ 100Mbps	-	-	-	-	-	31	-	-
>100 & < 1Gbps	-	-	-	-	-	-	4	-
> 1Gbps	-	-	-	-	-	-	-	2

Table 11 Numbers of DIA lines with bursting capabilities (Guernsey)

Source: CICRA industry questionnaires

Burst To → From ↓	≤ 2Mbps	>2Mbps & ≤ 4Mbps	>4Mbps & ≤ 6Mbps	>6Mbps & ≤ 8Mbps	>8Mbps & ≤ 10Mbps	>10Mbps & ≤100Mbps	>100 & < 1Gbps	>1Gbps
≤ 2Mbps	-	2	-	2	-	-	-	-
>2Mbps & ≤ 4Mbps	-	-	-	-	-	1	-	-
>4Mbps & ≤ 6Mbps	-	-	-	-	-	-	-	-
>6Mbps & ≤ 8Mbps	-	-	-	-	-	1	-	-
>8Mbps & ≤ 10Mbps	-	-	-	-	-	4	-	-
> 10Mbps & ≤ 100Mbps	-	-	-	-	-	10	-	-
>100 & < 1Gbps	-	-	-	-	-	-	4	-
> 1Gbps	-	-	-	-	-	-	-	-

Table 12 Numbers of DIA lines with bursting capabilities (Jersey)

Source: CICRA industry questionnaires

No consistent figures are available for the volumes of data being passed over DIA and other leased lines.

8. MOBILE MARKET

Subscriptions, penetration rates and market shares

As of 31 December 2018, there were three mobile network operators (MNO) with commercial activities in Jersey and Guernsey: Sure, JT and Airtel. Homenet retail access to these MNO networks for data only. Figure 21 below provides a breakdown of the total number of mobile subscriptions, pre-paid and post-paid, for these operators.³³

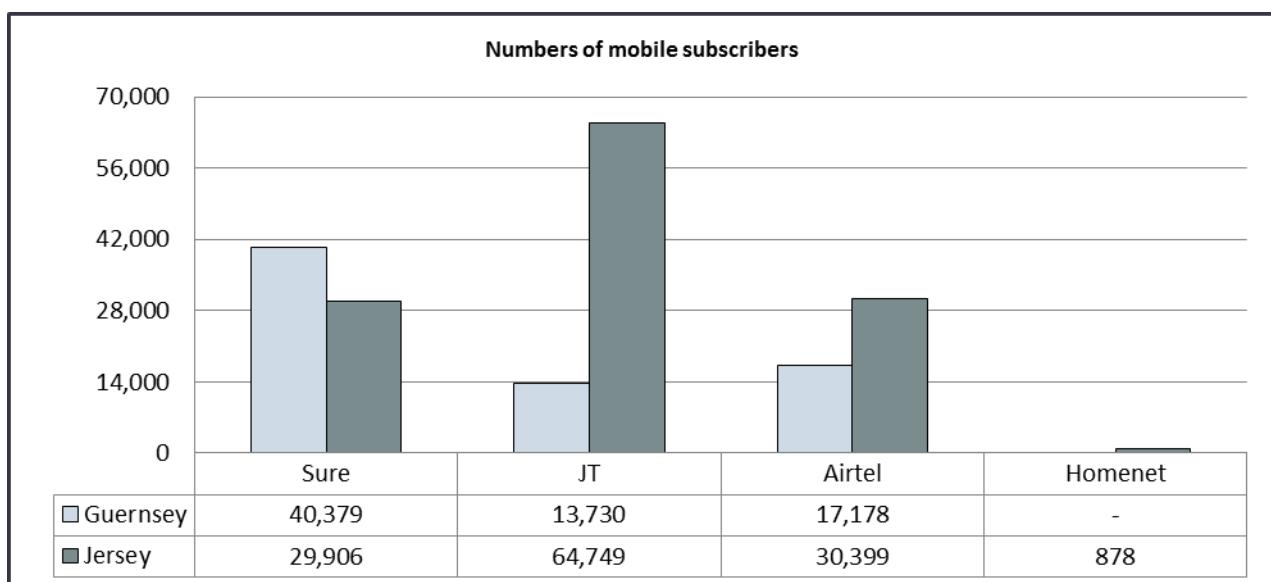


Figure 21 Number of mobile subscriptions per operator

Source: CICRA industry questionnaires

Numbers of post-paid subscriptions continued to grow, although there has been a small reduction in pre-paid subscriptions. Table 13 below shows the numbers of mobile subscriptions in the period 2013 to 2018.

Subscriptions	Guernsey	Jersey
2013	64,914	112,464
2014	68,522	118,960
2015	71,249	122,668
2016	71,169	121,750 ³⁴
2017	68,848	120,851
2018	71,287	125,932

Table 13 Numbers of active mobile subscriptions 2013 to 2018

Source: CICRA industry questionnaires

In common with many developed countries, the number of active mobile subscriptions in the Channel Islands is greater than the number of inhabitants. At the end of 2018 in Guernsey there were 114 active subscriptions per 100 inhabitants, and in Jersey there were 118 subscriptions per 100 inhabitants.

³³ All mobile operators report "Active Subscribers" based on a 90 day cycle period. See also note 31 below re historic reporting errors

³⁴ Estimated figure: adjusted as a result of historic system reporting difficulties for one operator

Figure 22 below shows the mobile penetration rates in Guernsey and Jersey overlaid on the penetration rates within OECD countries.

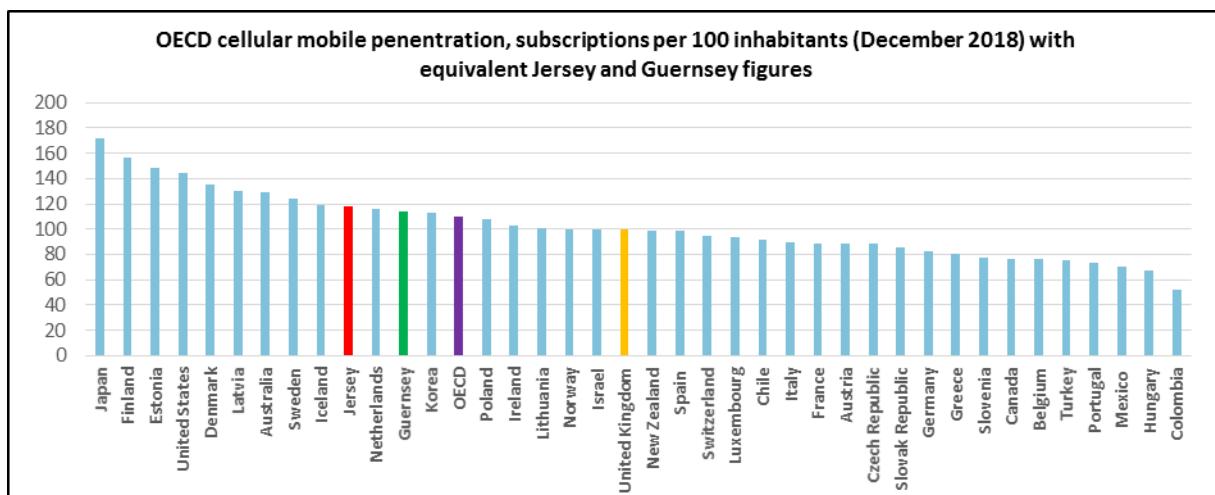


Figure 22 Mobile penetration rates in Guernsey and Jersey compared to OECD countries
Source: OECD,³⁵ Industry questionnaires, CICRA analysis

Figures 23 and 24 show the market shares of each operator in Guernsey and Jersey respectively.

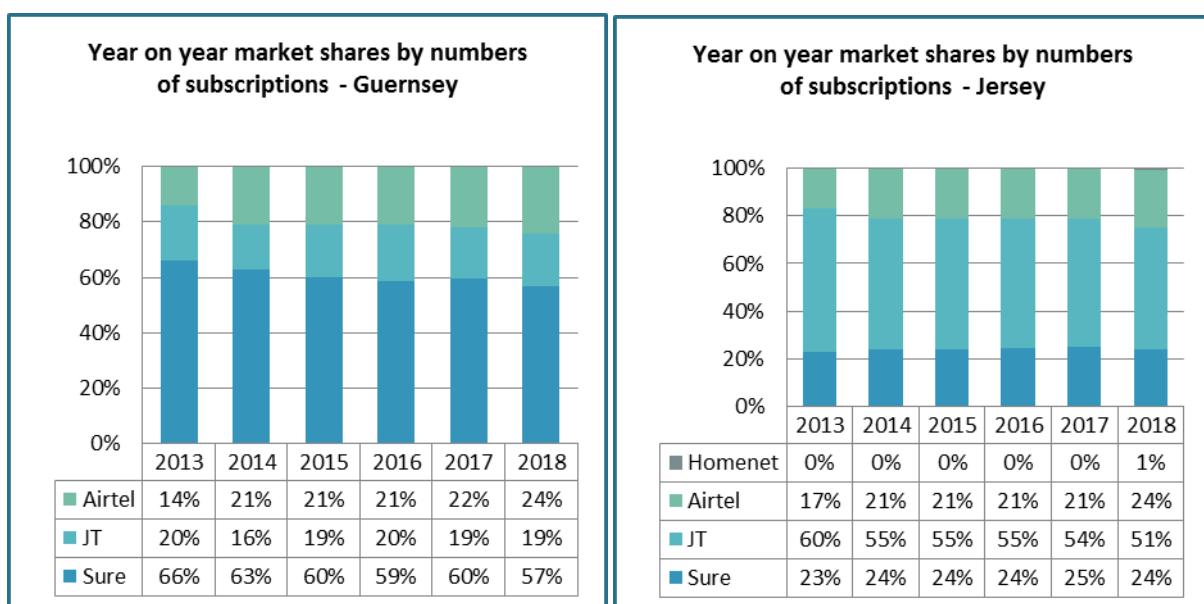


Figure 23 Mobile market shares 2013 to 2018 (Guernsey)
Source: Industry questionnaires, CICRA analysis

Figure 24 Mobile market shares 2013 to 2018 (Jersey)
Source: Industry questionnaires, CICRA analysis

The general increase in post-paid subscriptions continues in both Islands, whilst there has been a decrease in pre-paid subscriptions. Figure 25 provides a breakdown of pre-paid and post-paid mobile subscriptions in each island in the period 2013 to 2018.³⁶

³⁵ OECD data updated October 2017 <http://www.oecd.org/internet/broadband/oecdkeyictindicators.htm>

³⁶ Pre-paid subscribers make payment in advance of using the service; typically they are not business users and have low levels of usage. In contrast post-paid subscribers tend to have higher usage levels and are charged monthly in arrears paying by direct debit. Figures in this report exclude pre-paid customers that have been deactivated in the last 12 months due to inactivity.

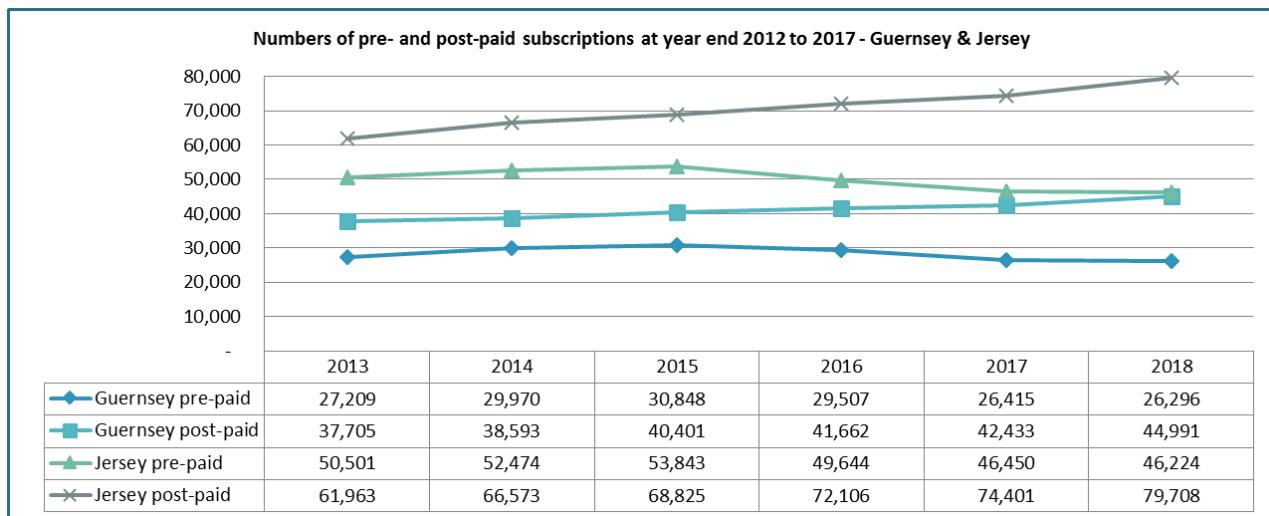


Figure 25 Pre- and post-paid mobile subscriptions 2013 to 2018

Source: CICRA industry questionnaires

Voice traffic - numbers of minutes

Figure 26 shows the number of mobile voice minutes originating on each operator's network in each Island in 2018. This included traffic derived from in-roaming activities. Sure has the largest market share in Guernsey and JT has the largest share in Jersey.

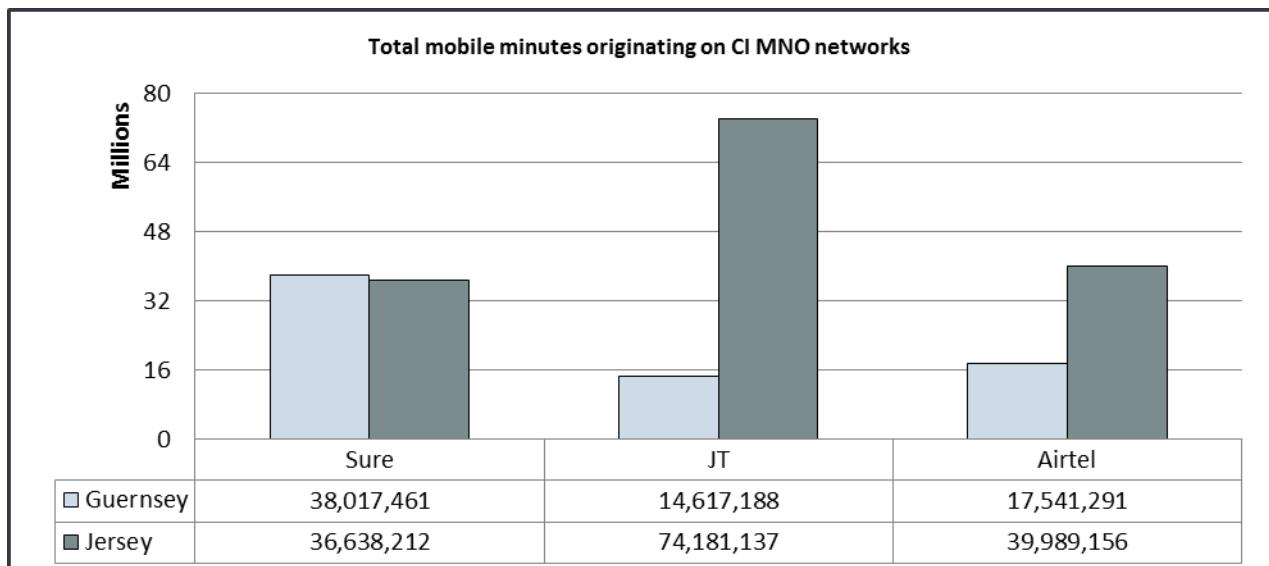


Figure 26 Numbers of minutes originating on CI mobile networks in 2018

Source: CICRA industry questionnaires

Table 14 shows the average number of mobile voice minutes in 2018 for pre-paid and post-paid subscriptions. On the assumption that out-roaming minutes are overwhelmingly associated with post-paid subscribers, these include all out-roaming voice minute activities.

	Guernsey	Jersey
Minutes per pre-paid subscriber	479	667
Minutes per post-paid subscriber	1,177	1,395

Table 14 Average mobile voice minutes per pre-paid and post-paid subscription

Source: Industry questionnaires, CICRA analysis

SMS traffic – numbers of messages

Figure 27 shows the number of SMS text messages originating on each operator's network in each Island in 2018. These include SMS messages associated with in-roaming activities. Overall volumes have reduced from 2017 (Guernsey: 31.3m in 2018, 38.4m in 2017; Jersey: 64.0m in 2018, 78.9m in 2017).

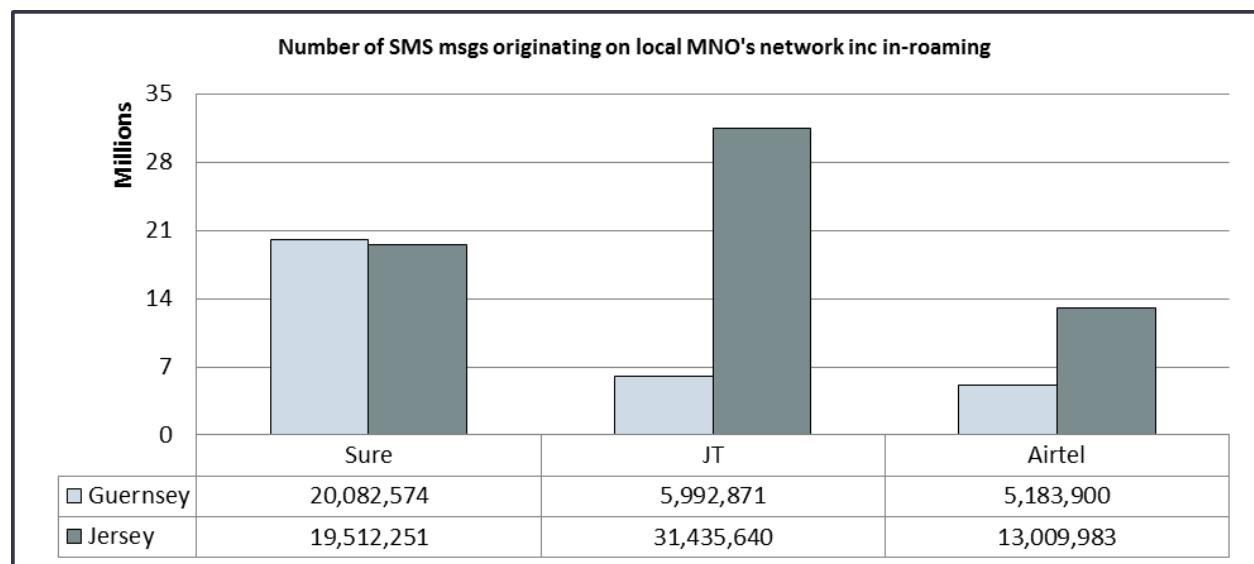


Figure 27 Numbers of SMS text messages originating on CI networks in 2018

Source: CICRA industry questionnaires

Table 15 shows the average number of SMS text messages sent in 2018 for pre-paid and post-paid subscriptions. On the assumption that out-roaming SMS messages are overwhelmingly associated with post-paid subscribers, out-roaming SMS activities messages are included in the post-paid figures.

	Guernsey	Jersey
SMS messages per pre-paid subscriber	266	287
SMS messages per post-paid subscriber	515	605

Table 15 Average SMS text messages sent per pre-paid and post-paid subscription

Source: Industry questionnaires, CICRA analysis

Mobile data

Figure 28 shows the volume of data (in Gbytes) sent and received over each operator's network in each island in 2018. These include data associated with in-roaming activities.

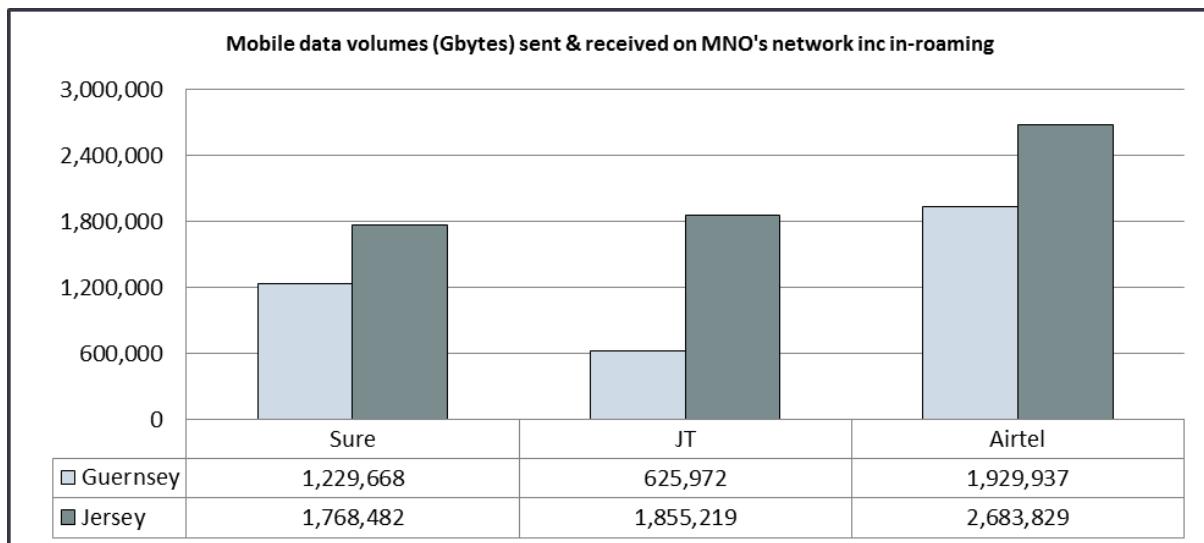


Figure 28 Volume of data sent and received on CI mobile networks in 2018

Source: CICRA industry questionnaires

Table 16 shows the average data volume (in Gbytes) consumed in 2018 per Guernsey and Jersey pre-paid and post-paid subscription. On the assumption that out-roaming data activities are overwhelmingly associated with post-paid subscribers, this includes all out-roaming data activities. These data usage figures could be compared with Ericsson's estimate of data traffic per smartphone in Western Europe of 2.7 Gbytes/month (32.4 Gbytes/year) in 2016.³⁷

Year's consumption of mobile data	Guernsey	Jersey
Gbytes of data per pre-paid subscriber	26.73	29.00
Gbytes of data per post-paid subscriber	54.77	58.45

Table 16 Average data volume sent and received per mobile subscription in 2018

Source: Industry questionnaires, CICRA analysis

Mobile data caps

The mobile service providers operate a number of different policies regarding the amount of data a customer can send/receive over the mobile networks.

Airtel	Data limits form part of the customer's contracted service plan and are enforced by the network and billing system.
JT	Data limits form part of the customer's contracted service plan and are enforced by the network and billing system.
Sure	Depends on the plan purchased.

³⁷ <https://www.ericsson.com/en/mobility-report/latest-mobile-statistics> as viewed on 4 May 2018

Data only mobile SIMs

To monitor the changing nature of the mobile market, CICRA now collects data on SIM card types to understand how many subscriptions were extant for different types of SIM card. Figures 29 and 30 show the proportions of mobile subscriptions by product type in Guernsey and Jersey respectively. No voice only subscriptions were available in either Island in 2018. Operators were unable to provide information on whether data only SIMs were sold as fixed access substitutes or for mobile devices.

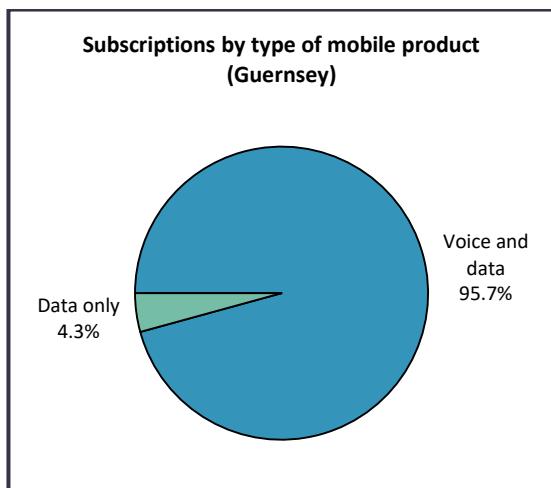


Figure 29 Mobile subscriptions by product type (Guernsey)

Source: Industry questionnaires, CICRA analysis

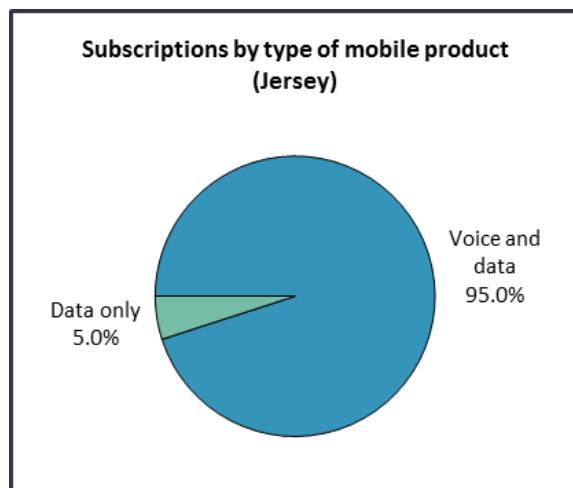


Figure 30 Mobile subscriptions by product type (Jersey)

Source: Industry questionnaires, CICRA analysis

Mobile revenue

Total revenues from mobile related activities in Guernsey in 2018 were £24.3m and in Jersey £42.1m. Figures 31 and 32 provide a breakdown of the sources of mobile revenues.

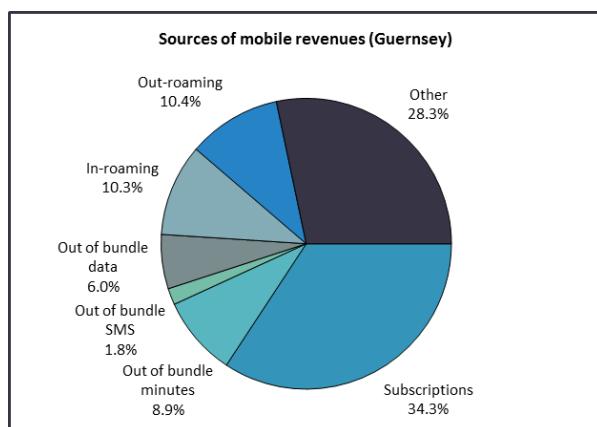


Figure 31 Sources of mobile revenues (Guernsey)

Source: Industry questionnaires, CICRA analysis

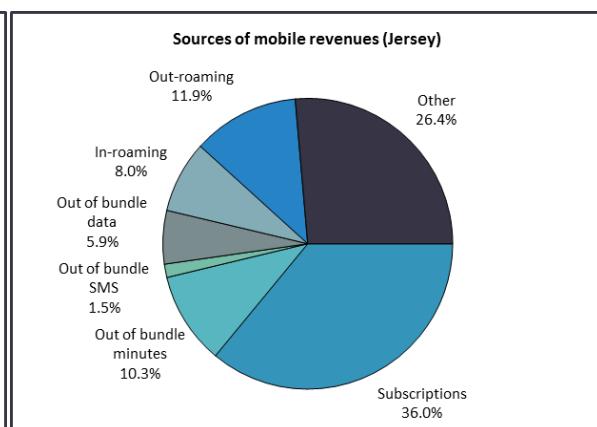


Figure 32 Sources of mobile revenues (Jersey)

Source: Industry questionnaires, CICRA analysis

Subscriptions include basic packages (with inclusive amounts of minutes, texts and data) and all “bolt-ons” for additional minutes, texts and data. Other revenues include items such as handsets and mobile termination charges.

Taking account of the different ways that operators structure their retail offerings, estimates of the average annual spend on usage related charges (as opposed to handsets and other ancillary services) are shown in table 17. For this purpose all out-roaming revenues are assumed to be associated with post-paid subscribers.

		Guernsey	Jersey
Pre-paid	During 2018	£112.92	£101.96
	Per month	£9.41	£8.50
Post-paid	During 2018	£266.48	£286.98
	Per month	£22.21	£23.92

Table 17 Annual and monthly spend per pre-paid and post-paid subscription in 2018

Source: Industry questionnaires, CICRA analysis (figures exclude GST in Jersey)

Switching activity in the Guernsey and Jersey mobile markets

One measure of the competitive dynamics apparent in markets is the extent to which consumers switch from one supplier to another. If consumers switch, it suggests that telecom operators are innovative, competitive and creating new offerings that entice consumers. Switching is usually associated with the process called ‘porting’ whereby consumers can switch from one supplier to another while keeping their telephone number; in effect, consumers ‘port’ their mobile telephone number from one telecommunications supplier to another. In the Channel Islands, number porting is available intra-island but not inter-island.

In table 18 and figure 33, ‘porting-in’ describes the number of consumers moving to a new supplier and ‘porting-out’ describes the number of consumers leaving their existing supplier.³⁸

Consumer switching behaviour in the past few years has been varied, suggesting, in line with the above, that there is adaptation of products and that consumers are responding to different offerings.

Guernsey porting activity

	Port in	Port out	Net benefit
Airtel	805	479	326
JT	772	386	386
Sure	433	1145	-712
Island total	2,010	2,010	

Jersey porting activity

	Port in	Port out	Net benefit
Airtel	1104	1190	-86
JT	1512	1415	97
Sure	1295	1306	-11
Island total	3,911	3,911	

Table 18 Mobile number porting activity - Guernsey and Jersey 2018

Source: Porting XS MNP Channel Island data 2018

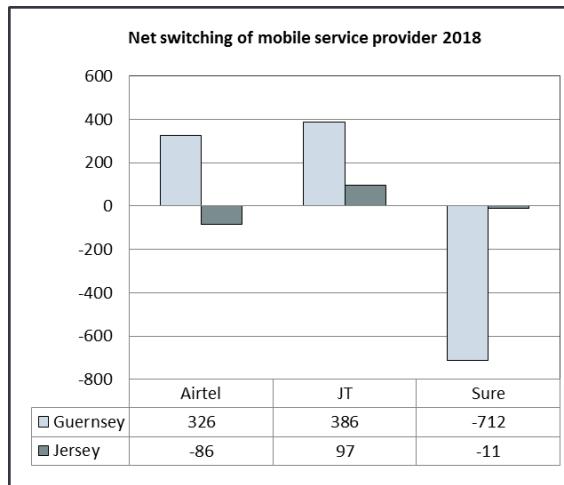


Figure 33 Net numbers of consumers switching mobile service provider in 2018

Source: Porting XS MNP Channel Island data 2018

³⁸ Note that the figures shown in Table 19 and Figure 31 appear surprising in the context of the changes in market share shown in Figures 23 and 24. This is likely to be related to the system reporting difficulties identified by one operator.

Table 19 shows the percentage of registered mobile numbers that switched service provider in Guernsey and Jersey in 2013 to 2018. Porting activity remains at a level below that in the UK, where 10% of the active subscriber base ported in 2015.³⁹

%	2013	2014	2015	2016	2017	2018
Guernsey	1.8	3.5	1.9	1.6	2.8	2.8
Jersey	3.0	4.5	3.4	2.4	3.7	3.1

Table 19 Levels of mobile number switching 2013 to 2018

Source: Porting XS MNP Channel Island data 2013 to 2018

The number of working days required to complete a successful port from one service provider to another stayed at 1.2 working days in Guernsey but fell in Jersey to 0.9 in 2018.⁴⁰ These times compare to the European Commission's Universal Service Directive, which requires operators to provide porting within 1 working day.⁴¹

Out-roaming

Out-roaming is the use of mobile services by customers of Channel Island operators while roaming on networks outside of the Channel Islands.

OUT-ROAMING REVENUES

In 2018, operators in the Channel Islands generated total revenues of £7.5m from out-roaming activities, approximately 12% of total mobile revenue (excluding in-roaming revenues).

Figure 34 shows total out-roaming revenues in the period 2013 to 2018, combining Guernsey and Jersey.

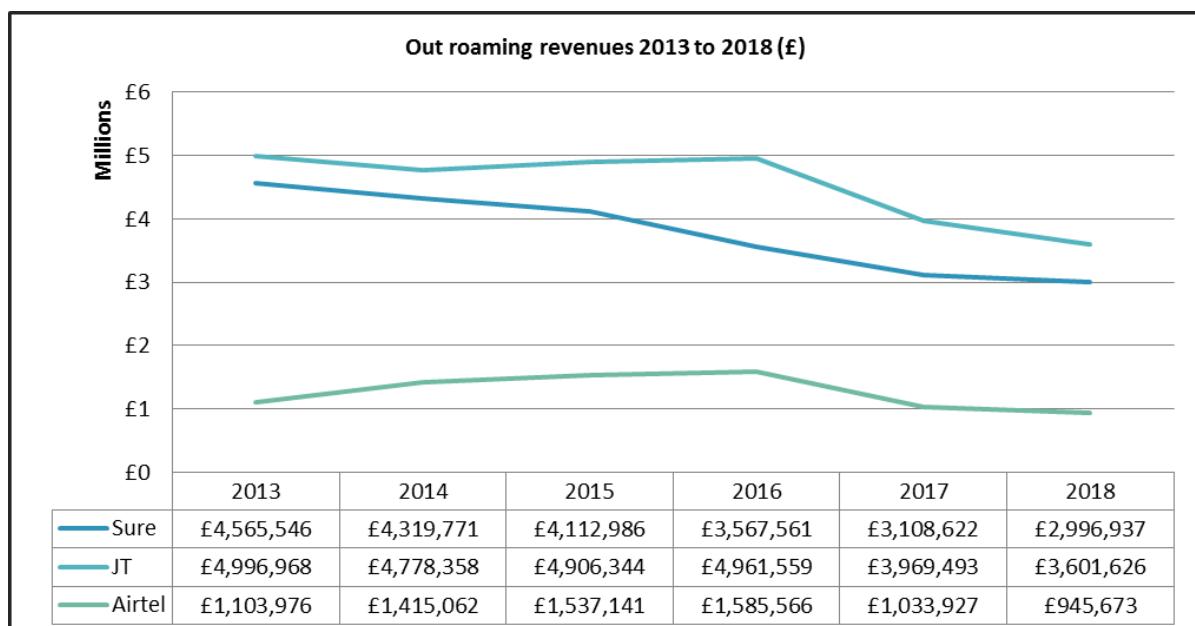


Figure 34 Total out-roaming revenues 2013 to 2018, Guernsey and Jersey combined

Source: CICRA industry questionnaires

³⁹ https://www.ofcom.org.uk/_data/assets/pdf_file/0023/38543/annex.pdf Page 38

⁴⁰ Porting XS

⁴¹ <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32002L0022&from=en>

OUT-ROAMING TRAFFIC LEVELS

Out-roaming outgoing call minutes relate to calls made by the mobile customers of Channel Island operators while roaming on networks outside the Channel Islands. Similarly, out-roaming SMS texts are those sent by Channel Island customers from non Channel Island networks.

Out-roaming incoming refers to call minutes and SMS texts received by Channel Island customers while using non Channel Island networks.

Out-roaming data is data both sent and received by Channel Island customers while using non- Channel Island networks.

Table 20 shows the total numbers of out-roaming incoming and outgoing minutes, SMS text and Gbytes of data for Channel Island customers in 2018.

	Guernsey	Jersey
Minutes	3,438,758	4,830,372
SMS texts	2,682,880	4,042,068
Data (Gbytes)	11,972	12,976

Table 20 Out-roaming minutes, SMS texts and data volumes in 2018

Source: CICRA industry questionnaires

9. OFF-ISLAND LINKS

Cable dispositions

Jersey and Guernsey have multiple submarine cables carrying voice, data and internet traffic between the islands and to the U.K. and France. The existence of multiple routes for the transmission of information gives resilience, with different possibilities for the routing of traffic.

Not only are there multiple connections with the U.K. and France, but the four cables connecting the Channel Islands and the U.K. have three different landing points. The cables to France also have different termination points. Figure 35 gives a representation of the geographic distribution of cables, and shows the multiple routes possible for traffic between Islands and outside of Guernsey and Jersey.

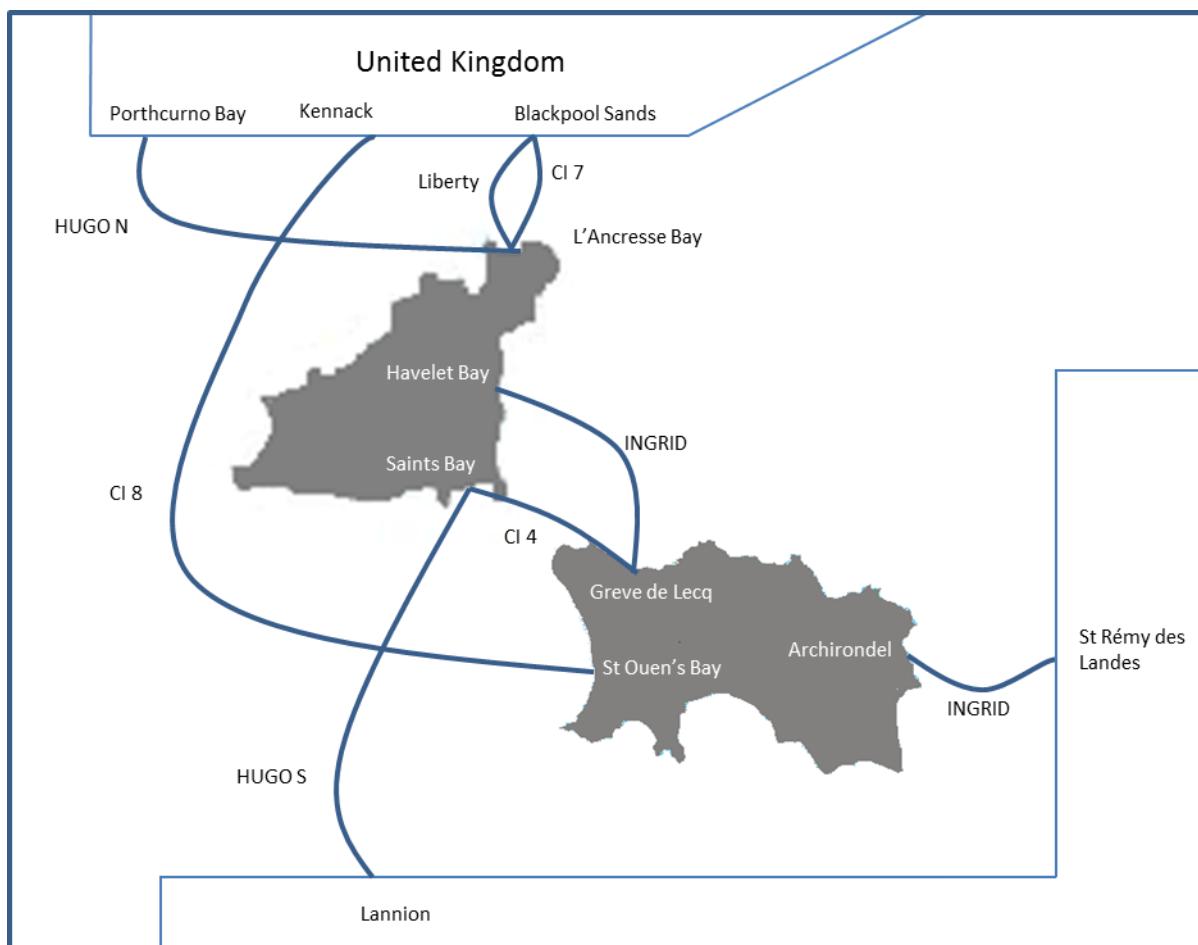


Figure 35 Schematic representation of cable links (excluding UK to France)
Source: CICRA industry questionnaires, various public sources

Cable capacities and utilisation

Modern systems for the transmission of information allow large amounts of data to be passed over fibre-optic cables. Dense Wavelength Division Multiplexing (DWDM) allows the transmission of multiple wavelengths over the same fibre strand, thus making the available bandwidth extremely large. The DWDM equipment fitted to most of the cables allows multiple 10Gbps wavelengths per fibre. Multiple fibres are present in each cable.

The management of traffic over cables is dynamic, and the amount of traffic is not measured in the same way by all operators, however the number of wavelengths in use and the information with which we have been provided makes clear that capacity is well in excess of usage at peak times. It is also clear that the re-routing of traffic in the event of damage to individual or even multiple cables is entirely achievable, as was demonstrated in 2016 when more than one cable was severed in a marine incident but there was no significant impact on the islands' communications traffic as a result of effective co-operation between operators.

10. REPORT DEFINITIONS

- Broadband connection - active high-speed Internet access connection, provided by either wireline or wireless delivery technologies, which could be provided with other fixed or mobile services.
- Inhabitants – the number of inhabitants of the islands is used to standardise various metrics throughout the report. The numbers are as follows

Guernsey	62,734 estimated at 30 June 2018 ⁴²
Jersey	106,800 estimated at 31 December 2018 ⁴³

- Fixed calls - calls billed as part of a monthly subscription allowance and billed separately (when charged per minute) of all outgoing calls originating on a fixed network in the Channel Islands during the year, to all destinations i.e., Channel Islands, international, non-geographic, fixed and mobile.
- Fixed connection – active telephone line (PSTN or ISDN) retailed by a telecommunications operator, identified by having a fixed line telephone number (area code + 6 digit local number) plus fixed wireless connections which may or may not have an associated telephone number.
- Mobile connection – mobile phone retail connection on a telecommunications operator's network with a mobile telephone number that has been active within the previous 90 days.
- Subscription - individual telephone number or connection, whether fixed or mobile. It is important to bear in mind that it does not apply to an individual; a person or a business may use a number of connections and telephone numbers each of which counts as one subscription.

⁴² Guernsey Annual Electronic Census Report, 30st June 2019, <https://www.gov.gg/CHttpHandler.ashx?id=118898&p=0>

⁴³ Population estimates at www.gov.ie/Government/JerseyInFigures/Population/Pages/Population.aspx for 2018 as at XX July 2019

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