

PUBLIC SUMMARY
MEETING OF THE TECHNOLOGY DEVELOPMENT GROUP
Friday 17 December 2021

Present:	Andy Keeling	CE	Chief Executive (Chair)
	John Whitby	CR	Communications Regulator
	Christian Williams	CW	Information Technology
	Gareth Goodwin	GG	Chamber Technology Lead
	Justin McPhee	JMP	Sure
	Karn Douch	KD	BFSAI Representative (Representing SD)
	Lewis Clifton	LC	Rural Business Association
	Lou Ellis	LE	FIDC
	Paul Brickle	PB	SAERI
	Rachael Crowie	RC	Falkland Islands Tourist Board
Apologies:	Catherine Silva Donayre	DDCS	Director of Development & Commercial Services
	Geoff Baxter	DDDCS	Deputy Director of Development & Commercial Services
	James Bates	JB	Falkland Islands Fishing Companies Association
	Michael Ford	MF	Community Representative
	Pippa Christie	PC	Hydrocarbons Representative
	Stephen Dougan	SD	BFSAI Representative
	No representatives:		Retail Sector Construction Sector
Minutes:	Meghan Law	EA	Executive Assistant & TDG Secretary

1.0 Confirmation of the Minutes of the Meeting Held on 17th September 2021

The minutes of the meeting held on the 17th September 2021 were confirmed as a true and accurate record.

2.0 Matters Arising from the Minutes of the Meeting Held on the 17th September 2021

2.1 All actions were complete. With the following updates given:

2.2 Sure Improvements Programme – Item 3.0

JMP to include graphs of the off-peak data usage spikes and an update on parental control options at the next meeting of TDG.

2.3 Any Other Business: Public Domain – Item 6.1

EA informed TDG that the barebones of the website have been set up the links just need to be added so that downloads can be accessed.

2.4 Any Other Business: Vacant Sector Representatives – Item 6.3

EA confirmed that the Command Secretary will attend on behalf of BFSAI. GG confirmed that he will lead for the retail industry underneath the chamber lead role and, Ian Stewart will represent the construction industry.

3.0 User Habits Survey

CR gave a presentation to the TDG (attached). CR noted that annually there is a customer satisfaction survey looking back over the past year and, every 2 years the user habits survey is undertaken to address needs looking forward.

CR summarised that a large number of users still would like to see the move towards unlimited capacity. CE queried how CR came across the percentage totals in the presentation; CR explained that the average was calculated.

LC queried if the CR had drawn down the information on number of household devices against the recent census which asked a similar question; CR confirmed that exercise would be possible and that he would speak to the Statistician to draw comparison between the two data sets.

CR detailed that people tend to choose their package predominantly based upon the data allowance it provides.

KD queried if the user habits survey included BFSAI in its canvas; CR stated that he would need to check. LC queried if the survey is heavily focussed on Stanley, with CE querying if the data can be filtered and segmented into various groupings. CR confirmed that the data can be grouped in various ways, and although it was sent to both Stanley and Camp due to the size of the population the view leans towards Stanley. LE queried if businesses could also be recorded separately as their needs going forward differ to personal use; CR confirmed this was possible.

CE thanked the CR for his presentation.

TDG discussed the growth in demand over internet services for health care, training and educational requirements. CE added that internet services are normally driven by what people perceive others are getting and many across the world are used to seeing certain services such as online payment of bills as the norm.

CR informed TDG that the presentation will be saved on the Communications Regulator website, underlying data can be made available upon request to the Acting Director of Policy & Economic Development, FIG.

CR departed the meeting at 13:55.

4.0 Sure Improvements Programme

JMP gave a presentation to the TDG (attached), the highlights of which are summarised below:

- 4G installation improvements have been delivered a month ahead of schedule.
- New coverage maps shown of the improved 4G position. LC noted that the south of West Falkland and the surrounding islands still will receive no coverage improvements; this is a safety concern. JMP commented that due to the topography of the ground in the surrounding area the coverage is greatly affected, adding that both Mt Byron and Mt Alice do not provide far ranging coverage with the current 2G set up. LC noted the disconnect between the Islands Plan commitments and delivery of improved communications.
- Equipment is arriving on the December vessel; this equipment was previously affected by supply chain issues and increased manufacturing lead times.
- JMP outlined the 2021 projects giving updates. LC commented that it would be useful for planning applications to detail communication services to allow better transparency.
- JMP noted that the parent group of Sure are looking to be more environmentally focussed, KD commented that BFSAI are also committing to do more as well.
- JMP detailed future activity as per the presentation.
- LC queried the Starlink options commenting that current agreements can be supplemented so that internet provision is improved for the benefit of the nation. JMP advised that Sure have an exclusive licence with FIG until 2028.

- KD queried what will be involved in the Wi-Fi refresh; JMP advised that this will involve extending the public hotspot services. TDG discussed roaming customers, JMP stated that given the lack of time cruise tourists are present in the Falklands it would not justify the expenditure that would be required for further infrastructure.
- PB queried if bespoke broadband hotspot packages could be created for scientific research purposes at a reasonable rate. JMP explained that with movements in locations it complicates the solution. CW commented that 4G can be used for this reason however noted that it is expensive.
- LC queried if the traffic use can be broken down in to location; JMP advised that this is not possible as it measures the total through put on the inside of the perimeter, as well as this it could breach customer confidentiality.

5.0 Sector Presentation – Chamber of Commerce

No presentation given, GG stated that a presentation could be made available at the next meeting.

6.0 Sector Presentation – SAERI

PB gave a presentation (attached).

PB noted the IMS-GIS data centre, created in 2013, which holds the centralised data repository. This is a valuable tool for scientific research and allows capacity to analyse certain data across overseas territories. This centralised database helps to reduce duplication and allows for an audit trail.

PB commented that the new GIS Officer will be starting work in the new year and as part of their work will be going out to sectors/departments such as the Department of Agriculture to discuss the useful applications. PB explained that farmers and community members can access the landscape mapping online and finer detail maps can be accessed if necessary; PB noted that farmers and the DoA will be the experts on drawing down the data to interpret it and make it applicable to their needs. SAERI are also in the process of creating habitat maps which can be tracked over time to see if the habitats are changing.

PB noted that SAERI use Open Source wherever possible and systems that are capable of caching data on the phone and then upload over a secure connection.

PB detailed the current issues with connectivity at outer islands, highlighting that a national facility is required to reduce costs. A current work around is to use Iridium for very remote sites, however this is again very costly.

PB noted that it is anticipated video conferencing will take forefront in future multi-nation meetings. PB stressed that when presenting at these meetings video data is essential.

GG departed the meeting at 15:25.

7.0 Proposed Meeting Dates for 2022

TDG discussed the regularity of meetings suggesting that they should be held more frequently. EA to circulate the dates of meetings via email invite.

8.0 Any Other Business

8.1 Cloud-Based Solutions

CE queried what scope there was to use cloud-based storage within FIG. PB noted that SAERI use a number of cloud-based solutions with no issues; JMP agreed noting that there can sometimes be a bit of a lag but it is still

possible. CW confirmed that specific requirements need to be established, through the use of the shared drives FIG effectively are running a local cloud, as well as this MS Teams and SharePoint are also used.

8.2 TDG ToR

CE commented that the TDG was created to pull together a forum whereby various sectors can put across their needs, views and solutions whilst FIG, Synergy and Sure are present so that responses can be taken away and accounted for in other discussions. CE added that within the technology field there is no clear end, but steady incremental improvements.

TDG confirmed that the next review of the ToR is due in June 2022.

9.0 **Confirmation of Date of Next Meeting**

9.1 As discussed in item 7.0 dates will be circulated via email invite.

There being no other business the meeting closed at 15:41hrs.



Falkland Islands Communications Regulator

National Broadband Strategy

Lessons from comparing
the results of the User
Habits Surveys of 2019
and 2021

Introduction

- The Regulator has undertaken a survey of Consumer Habits in 2019 which was repeated in 2021
- The first survey preceded the doubling of satellite internet capacity in the Falkland Islands at the end of 2019.
- Comparing the results of the two surveys therefore allows the Regulator and FIG to gauge the impact and benefit of the additional satellite capacity
- There may also be evidence of what further action is required when the current satellite capacity contract expires at the end of 2022.

Summary of findings



The 2019 increase in capacity led to average data allowances more than doubling while monthly expenditure rose marginally.



DATA ALLOWANCE remains the most important factor for consumers when selecting and using their broadband package; but speed and reliability are more important than they used to be.



There is evidence of a shift to more data-intensive applications such as streaming and gaming, as well as more of an all-day usage pattern.

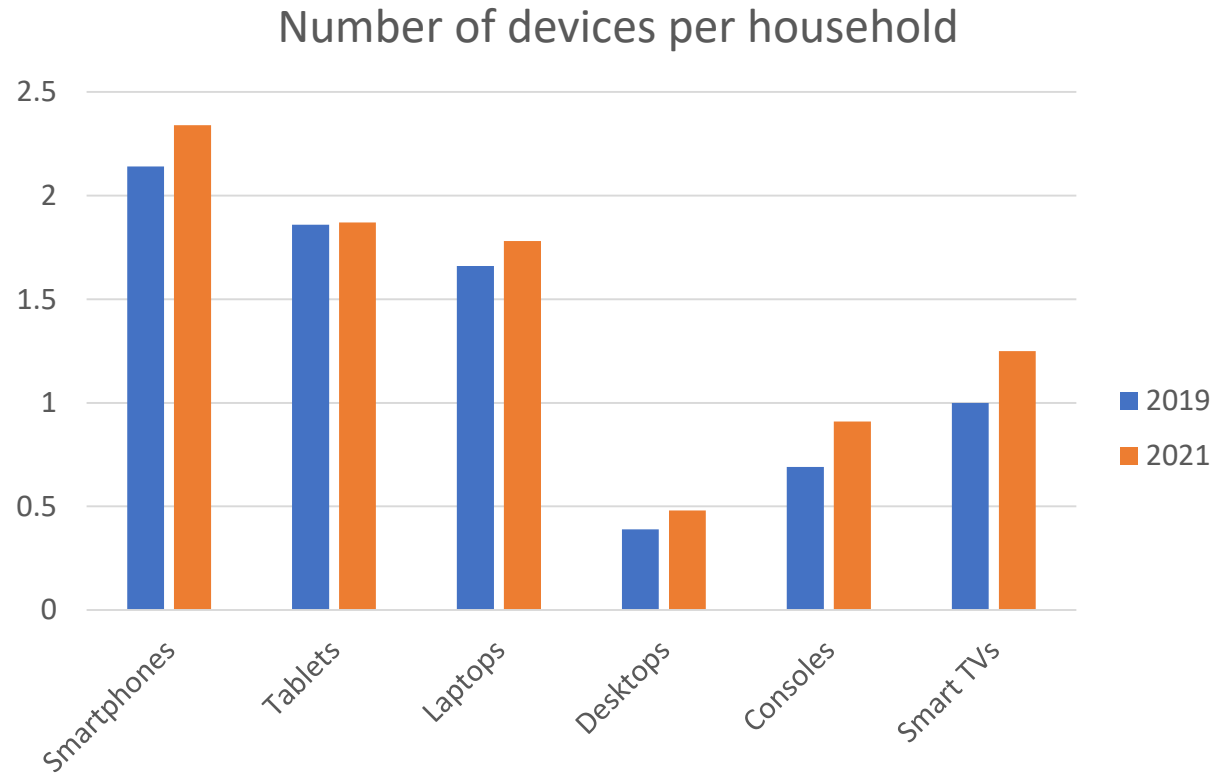


There is an increased awareness of what consumers cannot do online, and there remains a strong desire for “unlimited” broadband.



On average consumers would pay 4.2% more – amounting to £55 per annum – for unlimited broadband.

Device numbers per household have risen 11.5%

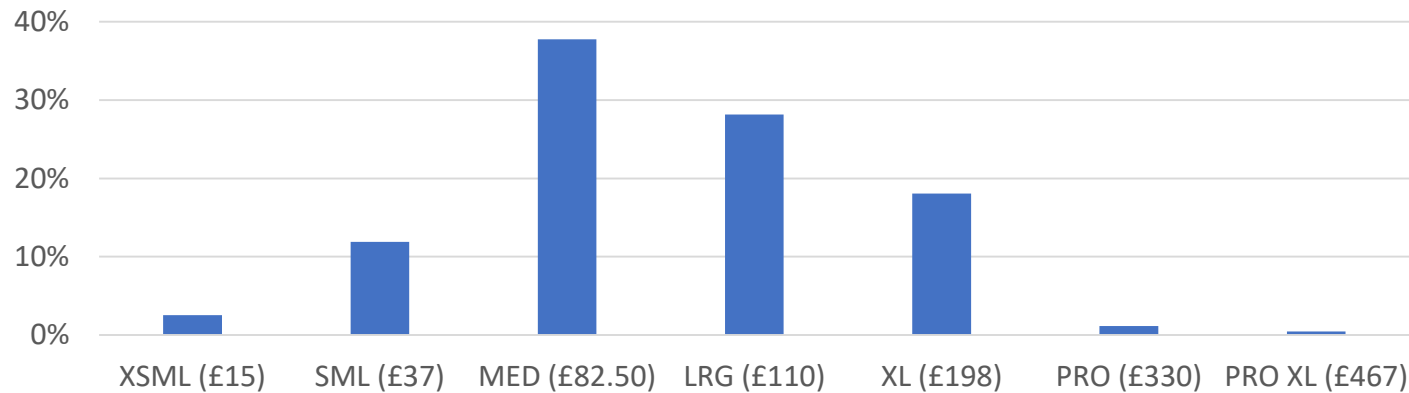


The average number of devices per household has risen from 7.7 to 8.6 between 2019 and 2021

The 2021 survey comprised 454 respondents representing 1183 people. This compares with 318 responses (794 people) for the 2019 survey

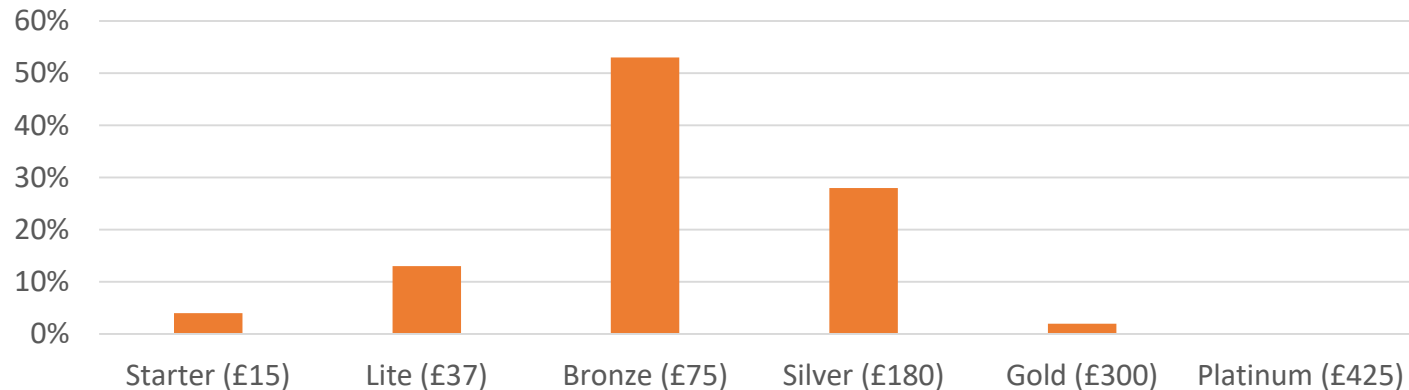
Data allowances have doubled; monthly bills stay about the same

Proportion of respondents by broadband package - 2021



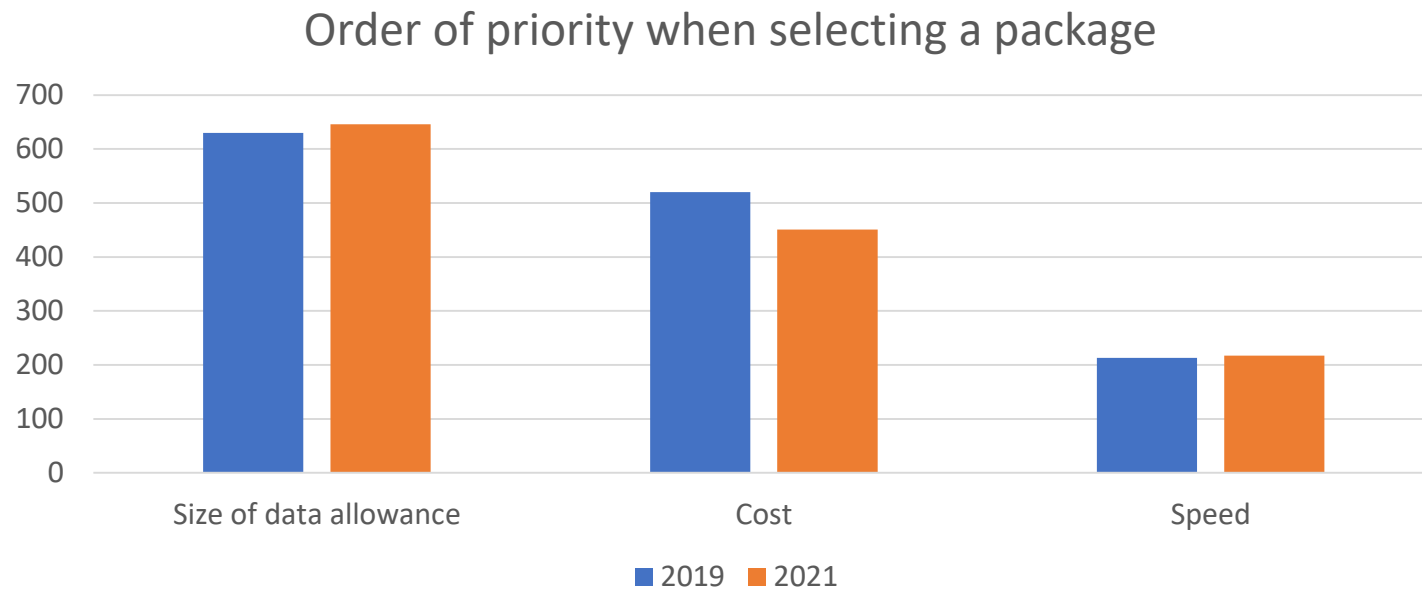
- The average monthly spend on broadband is £109.
- The average monthly data allowance is 55,000 MB

Proportion of respondents by broadband package - 2019



- The average monthly spend on broadband is £102.
- The average monthly data allowance is 25,000 MB

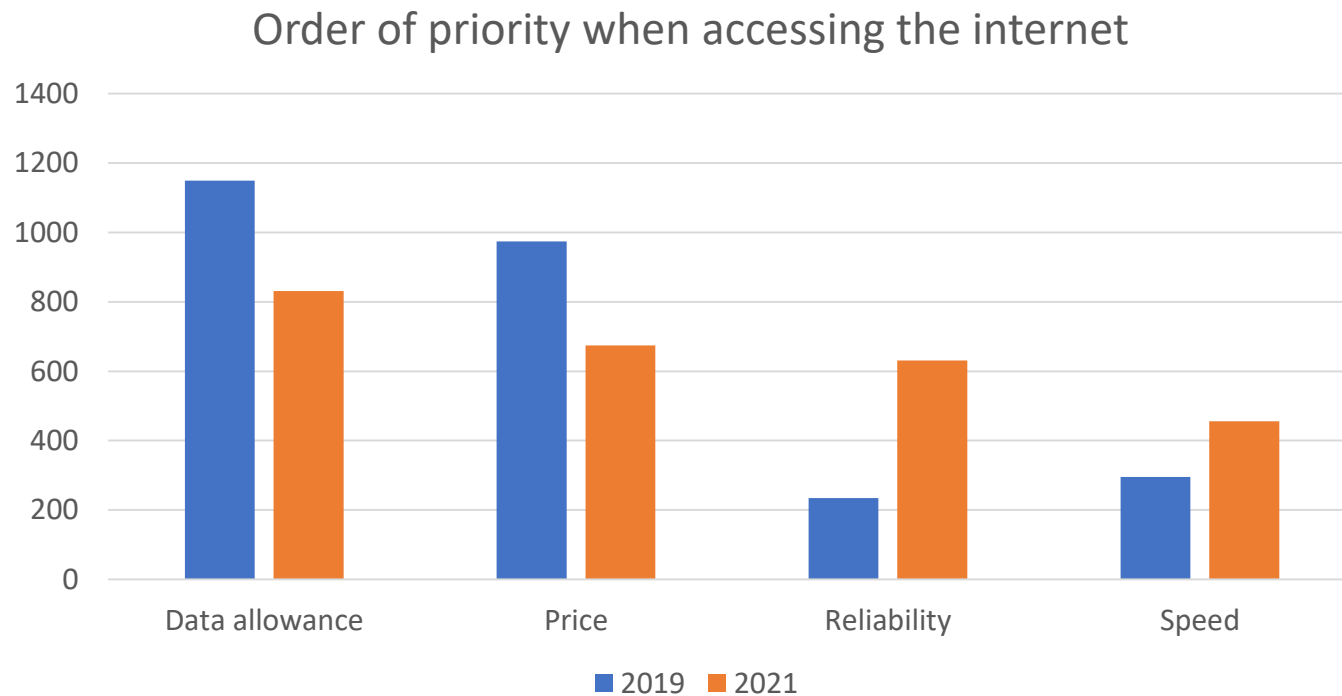
There has been very little change in how consumers choose their packages



- Data allowance remains the top priority.
- Cost (price) is also important.

Scoring on the basis of: 2 for top priority and 1 for second priority.

When using broadband consumers are most concerned about data allowance and price



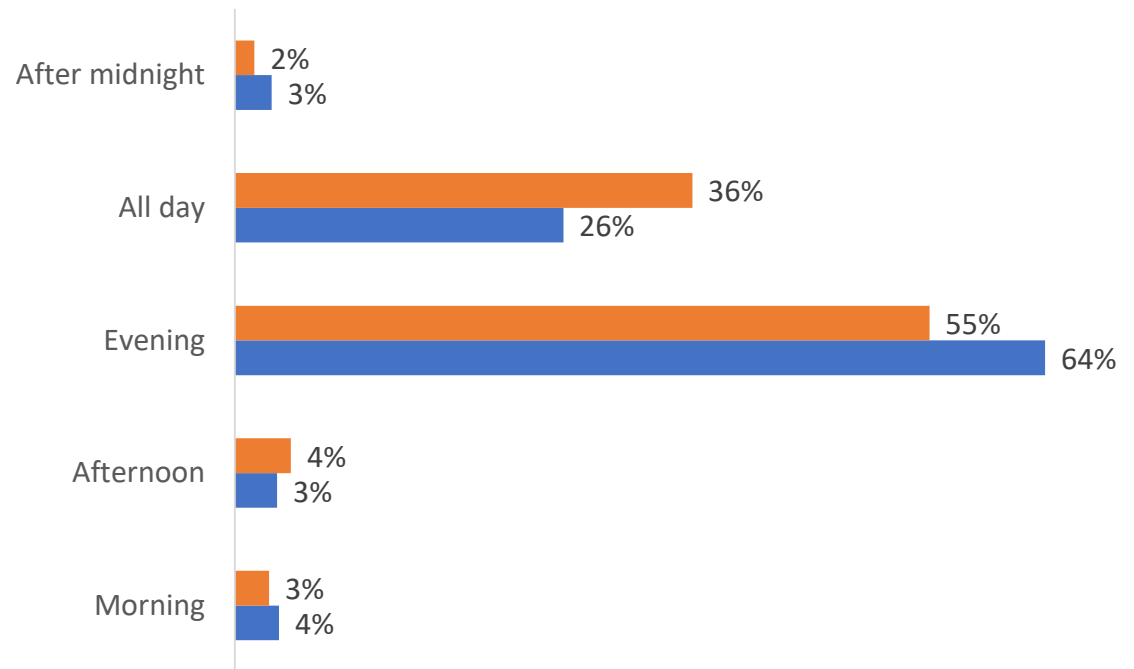
- As consumer data allowances have grown and prices per MB have fallen ...
- ... so reliability and data speed have become more important factors when using broadband.

Scoring on the basis of: 3 for top priority, 2 for second priority and 1 for third priority.

Some smoothing of the daily usage pattern

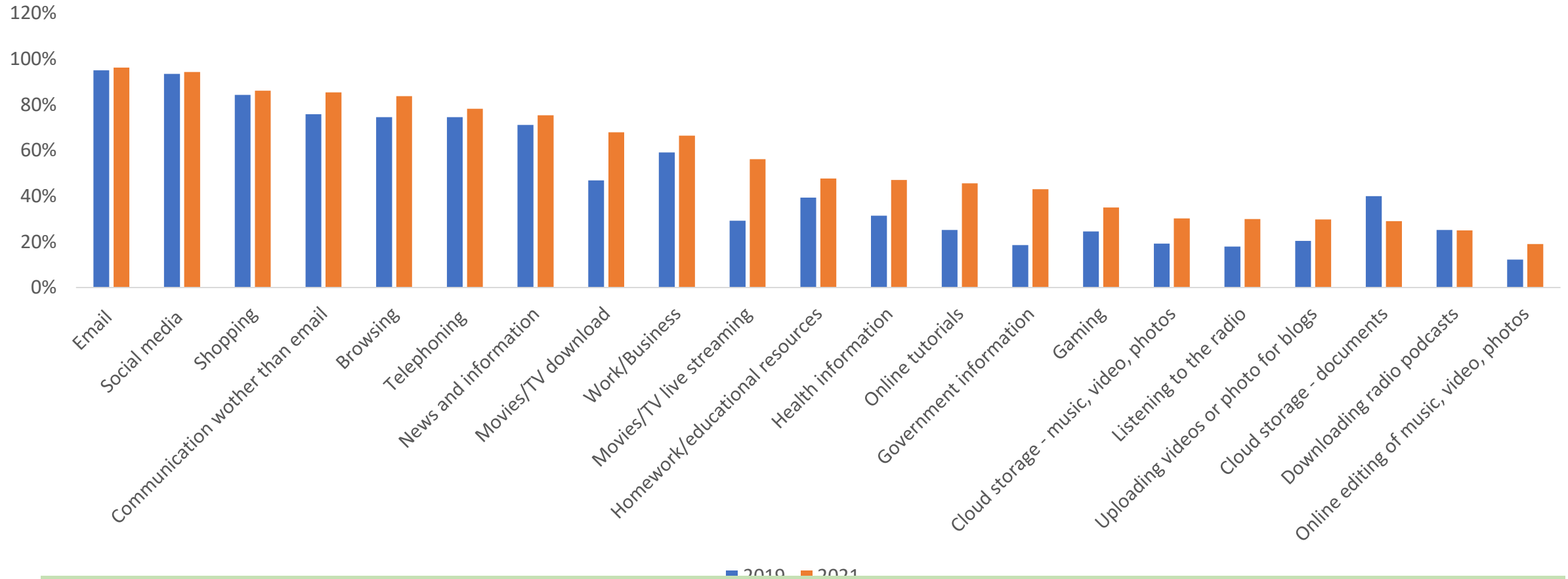
Between 2019 and 2021 there has been:

- A shift towards being online all-day rather than just in the evening
- A small reduction in the use of the After Midnight free window.



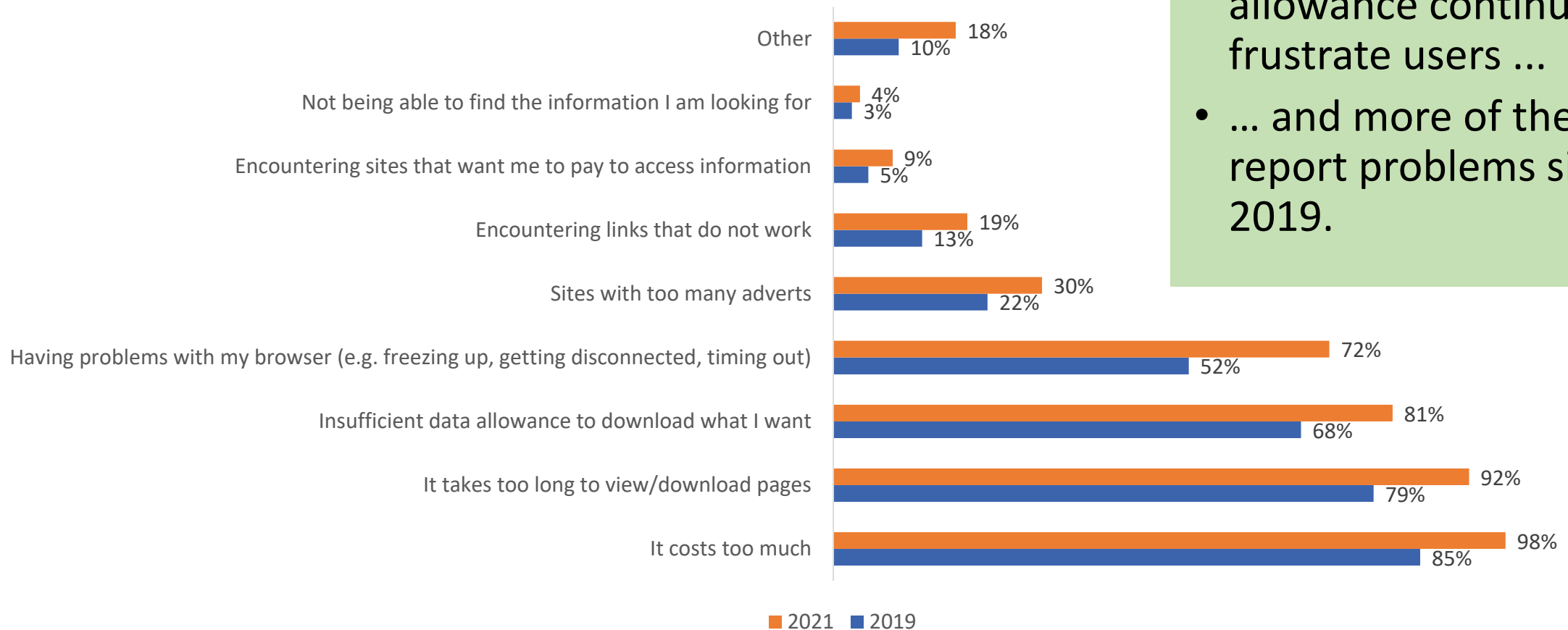
■ 2021 ■ 2019

More varied usage of the Internet in 2021



- There has been a marked rise in some data-intensive applications such as live streaming and gaming

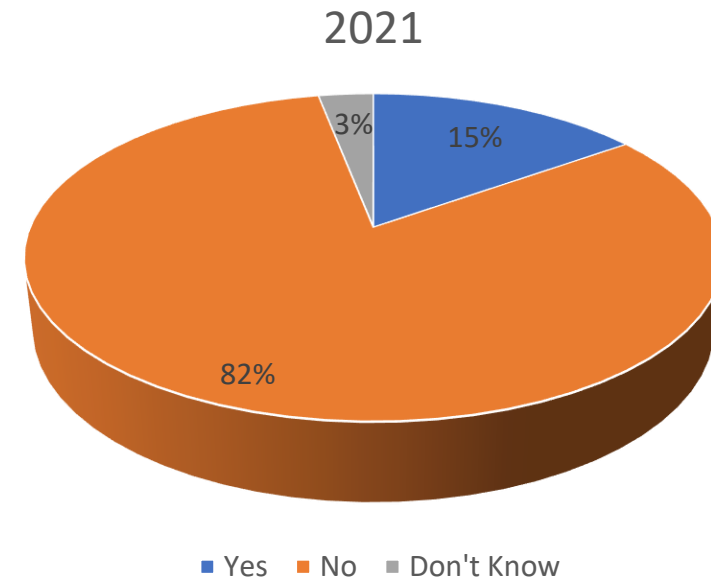
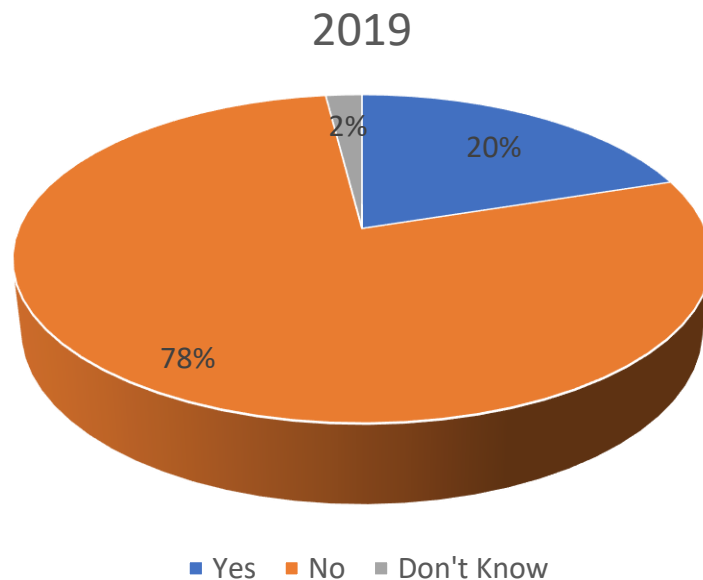
Same problems ... but more of them



- Speed, cost and data allowance continue to frustrate users ...
- ... and more of them report problems since 2019.

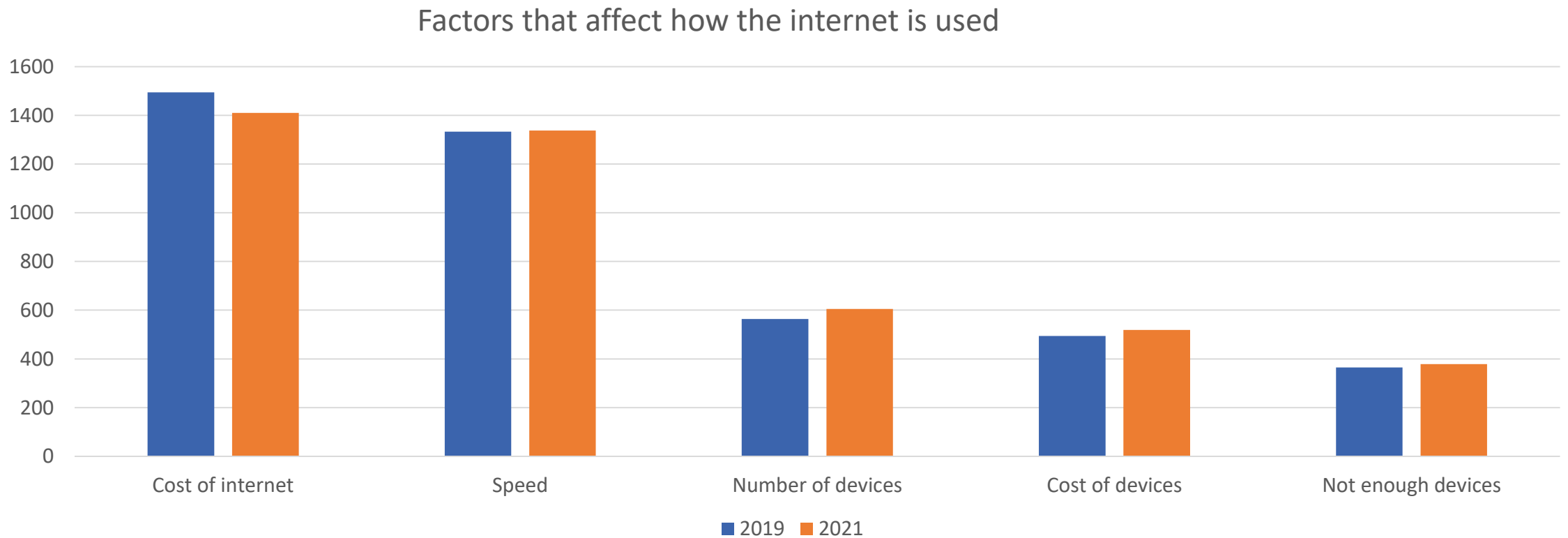
Consumers are more aware of what they cannot do online

Can you do all that you want want online?



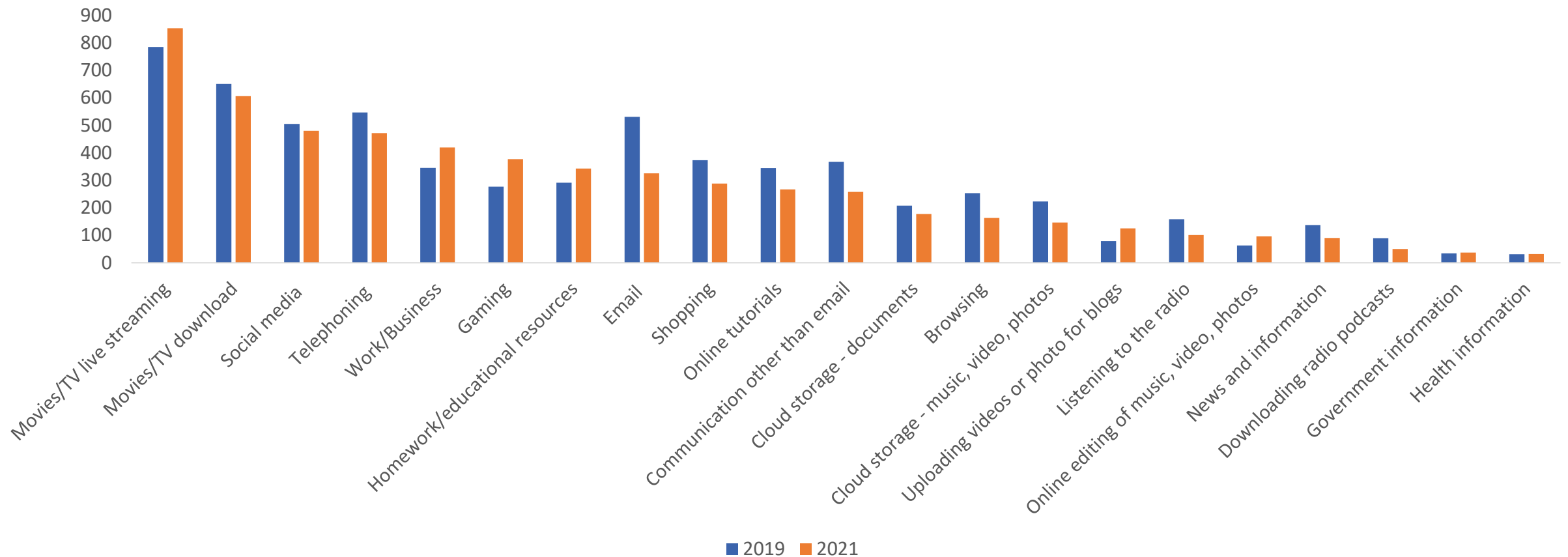
Although data allowances have increased more people say they cannot do all they want online

There is no significant change in the factors affecting usage



Scoring on the basis of: 4 for top priority down to 1 for fourth priority. Scores normalized for samples size.

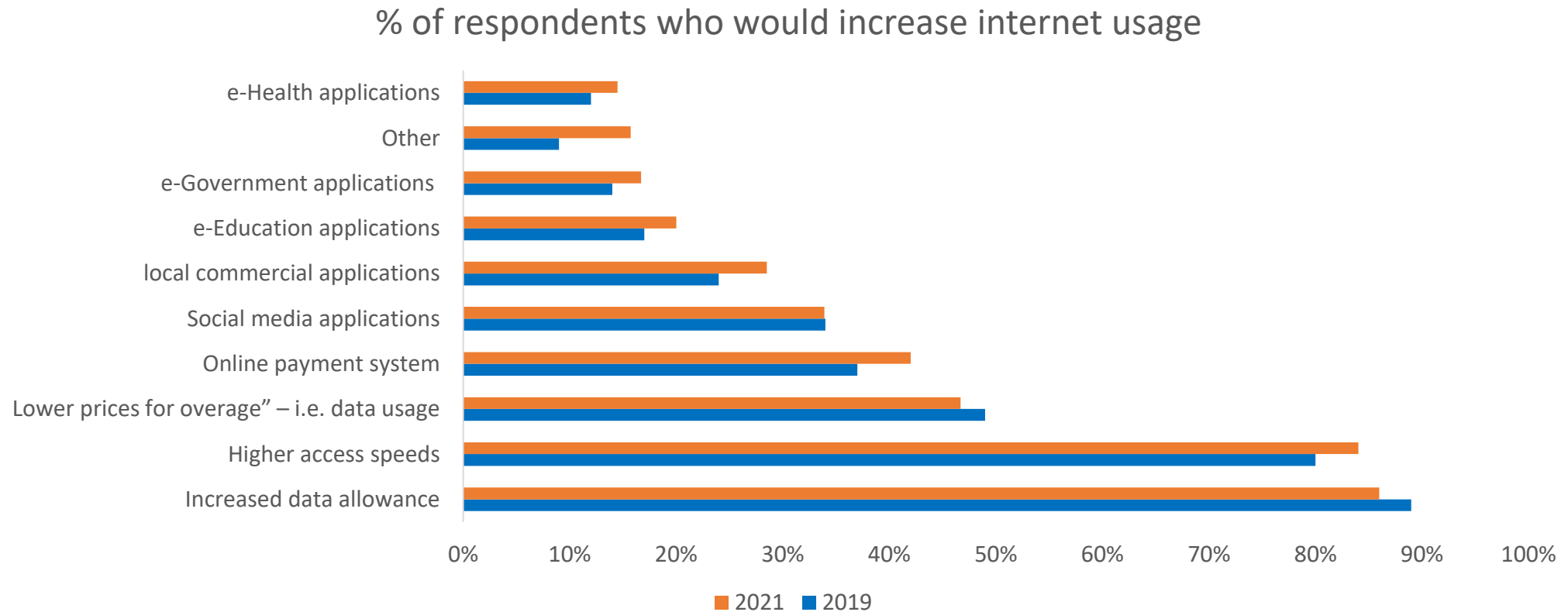
Improved connectivity and capacity has made most apps easier, but consumers are more aware of constraints on high-bandwidth apps



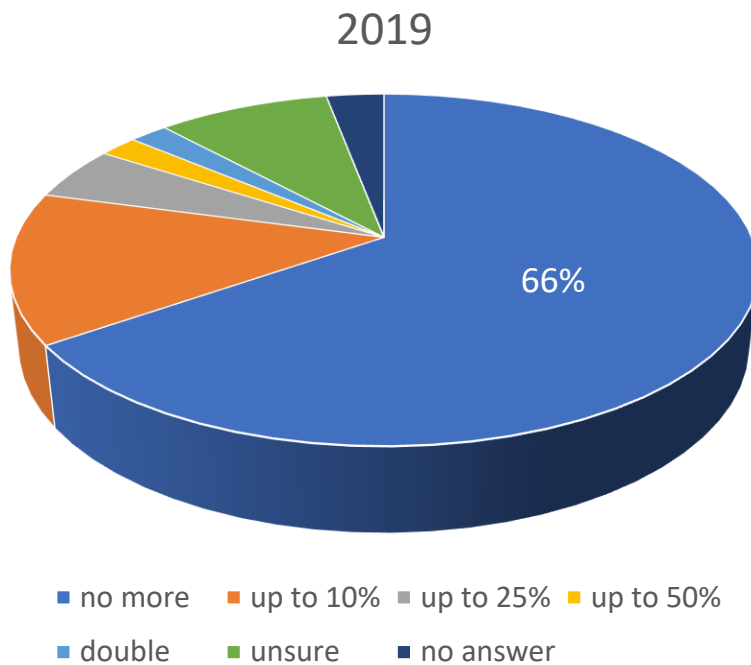
Better: email, shopping, browsing, telephone.

Worse: streaming, work, homework, gaming.

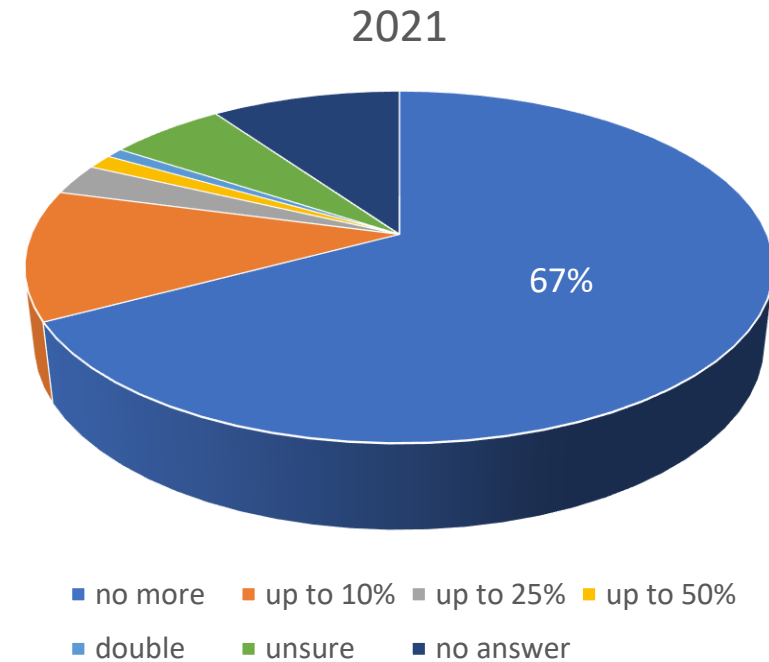
The appetite for increased data allowance and higher data speeds has not subsided



There remains limited willingness to pay more even for “unlimited” broadband

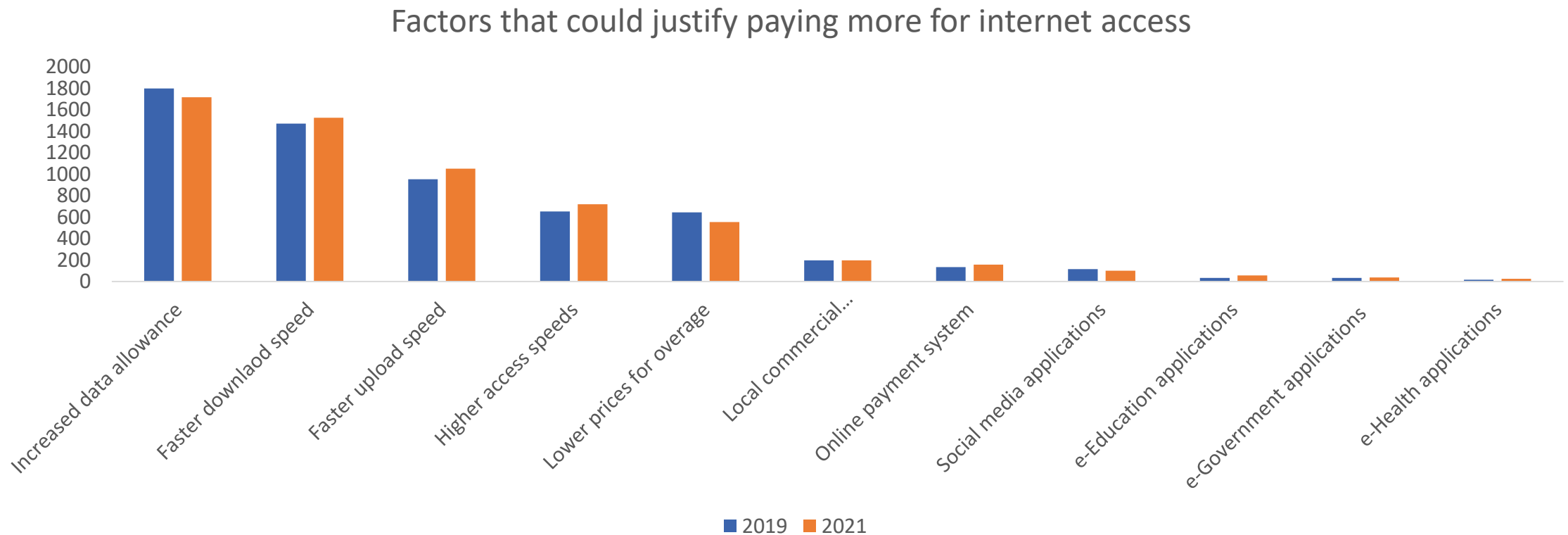


On average willing to spend 5.5% more than £102 monthly broadband spend.



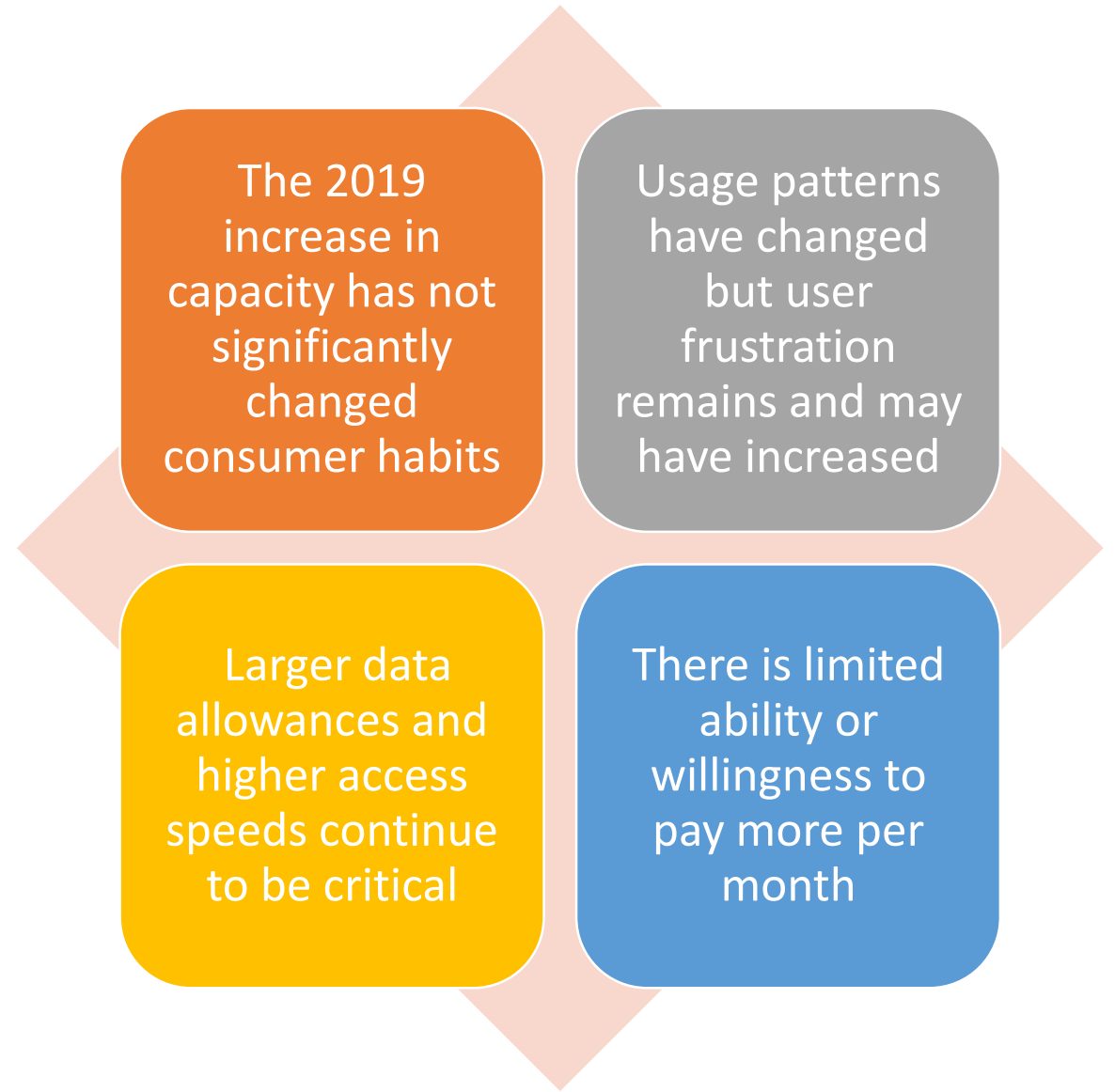
On average willing to spend 4.2% more than £109 monthly broadband spend.

DATA ALLOWANCE and DATA SPEED are the main factors behind users' willingness to pay more



Scoring on the basis of: 5 for top priority down to 1 for fifth priority. Scores normalized for samples size.

Conclusions



Sure Falklands

TDG Briefing

Dec 2021



4G Mobile Expansion



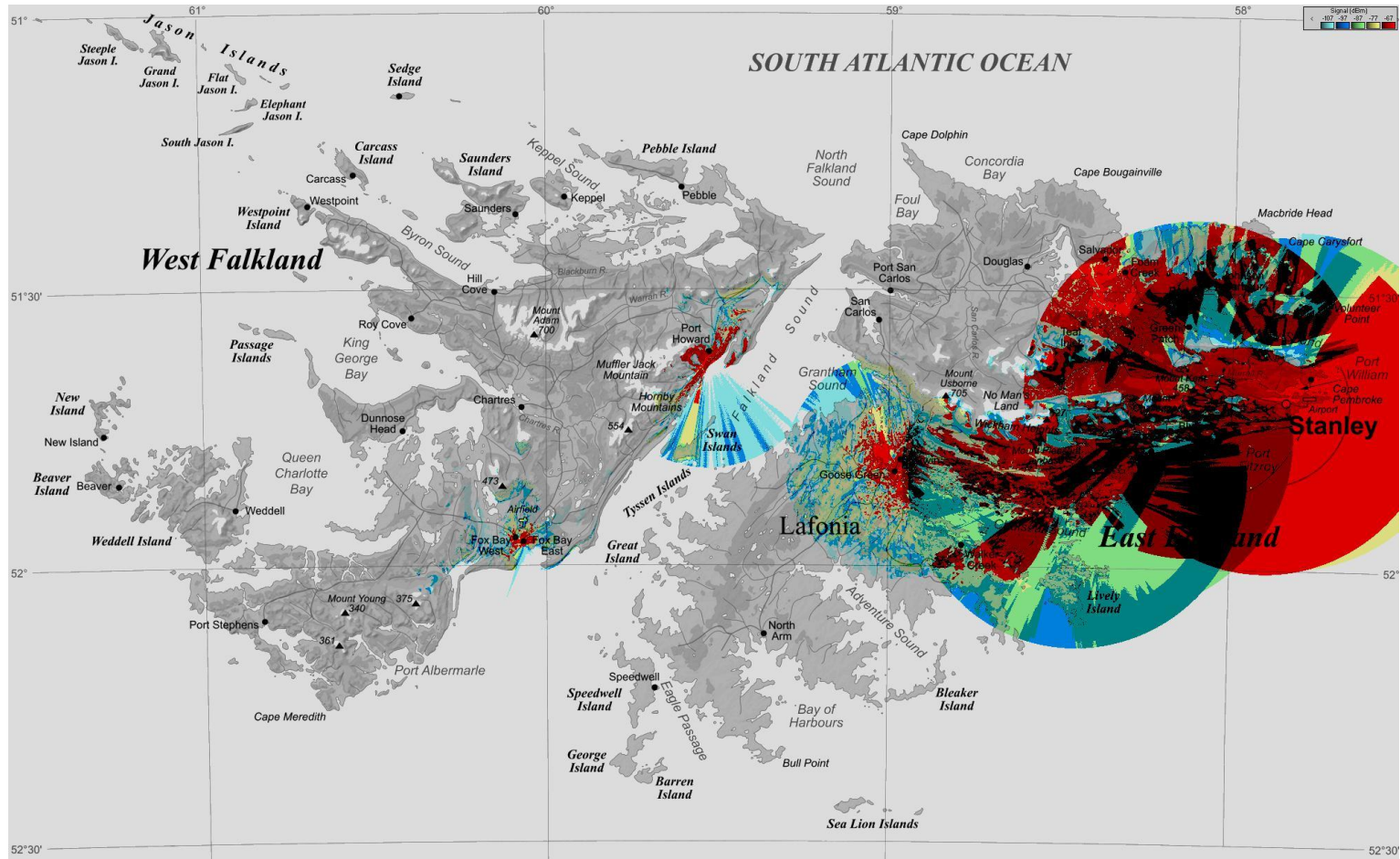
4G Project Competition

4G sites completed

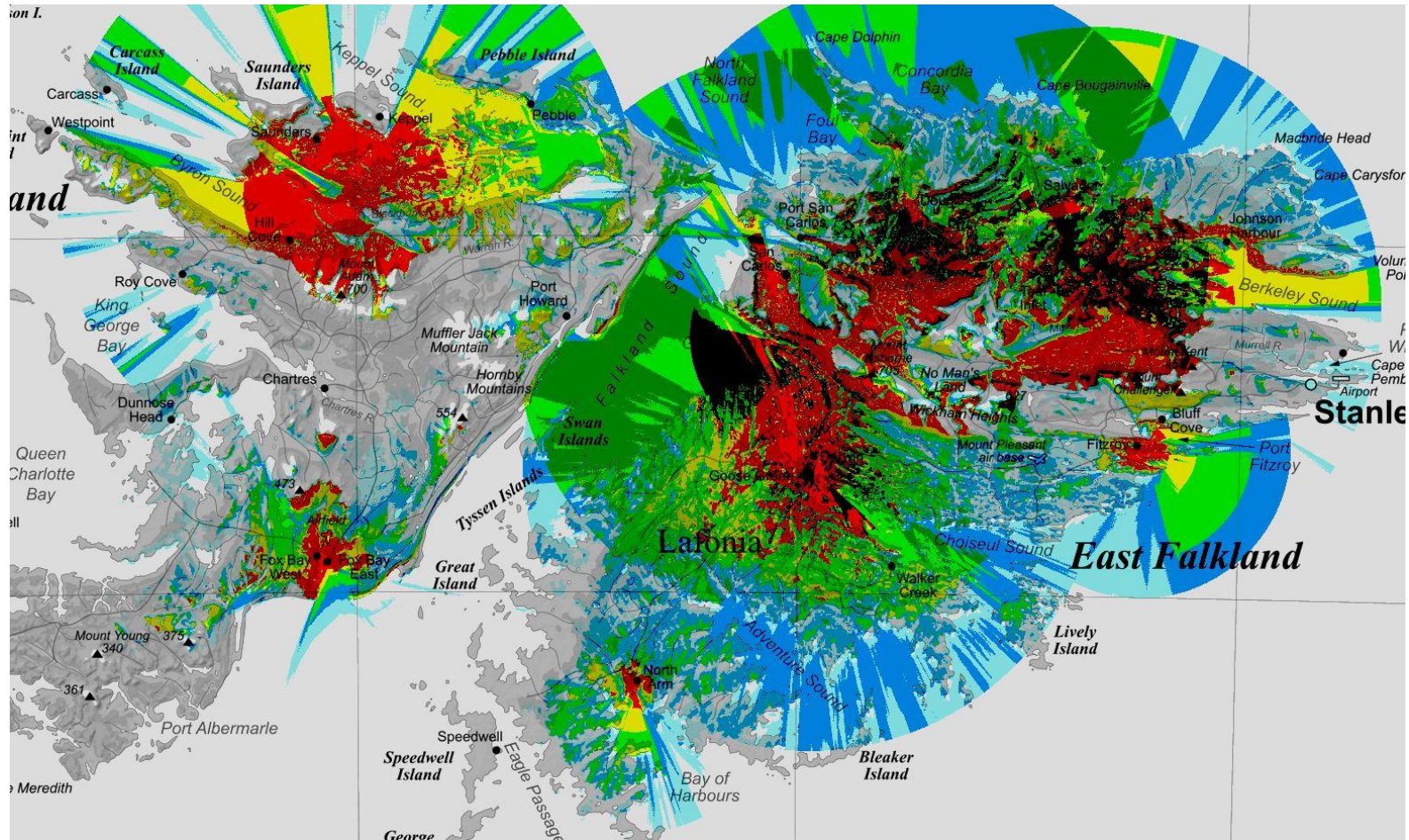
- Goose Green
- Bombilla Hill
- Fitzroy Ridge
- Mount Pleasant Peak
- Fitzroy (redeployed micro)
- North Arm (redeployed micro)
- Foxbay
- Channel Hill
- Malo
- Sussex Mountains
- Mount Pleasant (upgrade)



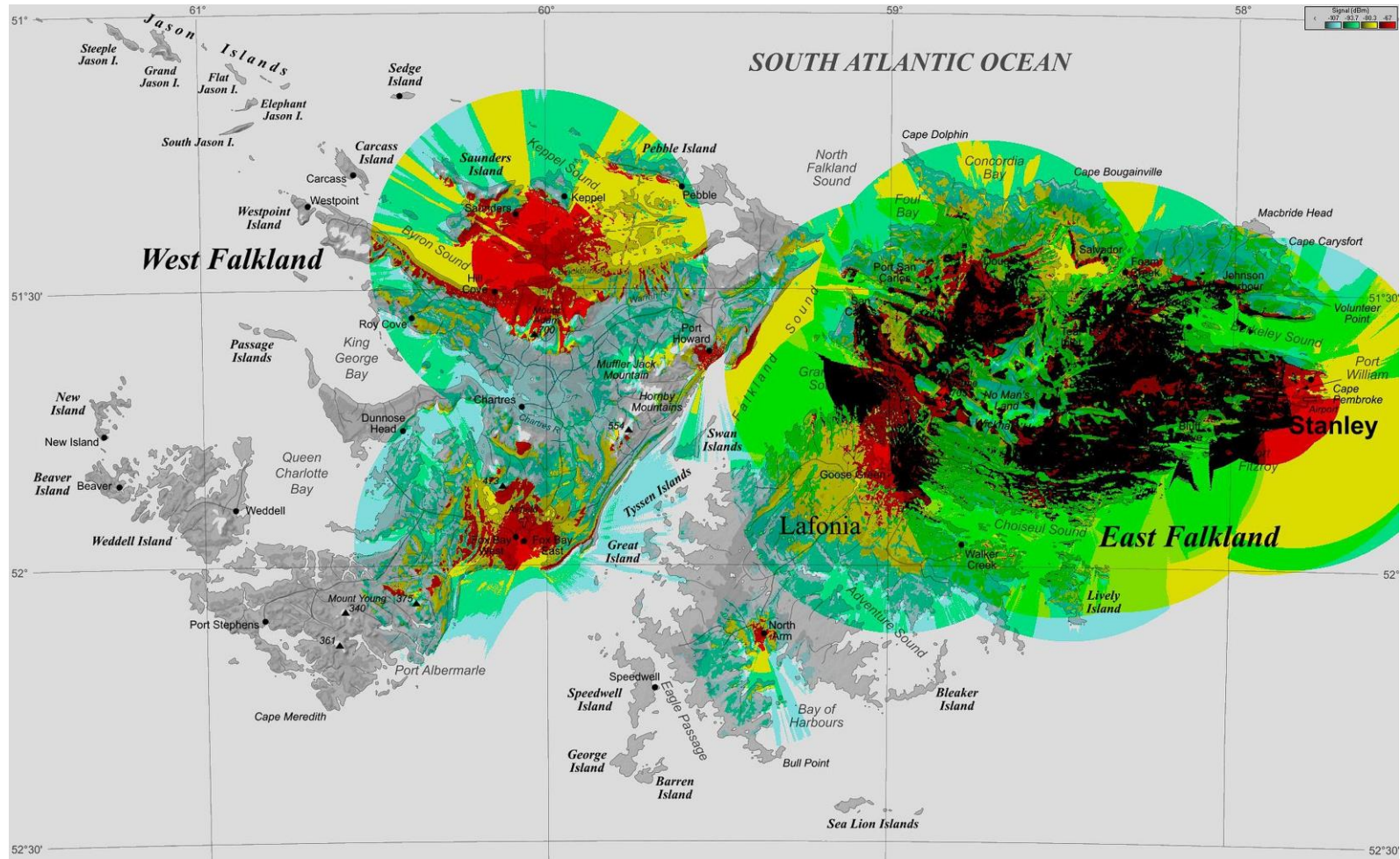
Existing 4G coverage



New 4G Coverage (excludes existing 4G)



New total 4G Coverage with extra Sure sites



2021 Projects

- 4G expansion
- WiMAX replacement
- Rural MSAN expansion
- In Country Transmission links
- QoS Probes
- Fixed Line expansion
- Standby Power/Generators
- Vehicles
- Building and infrastructure

Future Activity

- Continue Camp upgrade works
- Capacity review
- Access Network expansion(Stanley)
- Wi-Fi refresh
- Manage network refresh
- Mobile Expansion 2G/4G
- BAU activity

Internet Utilisation

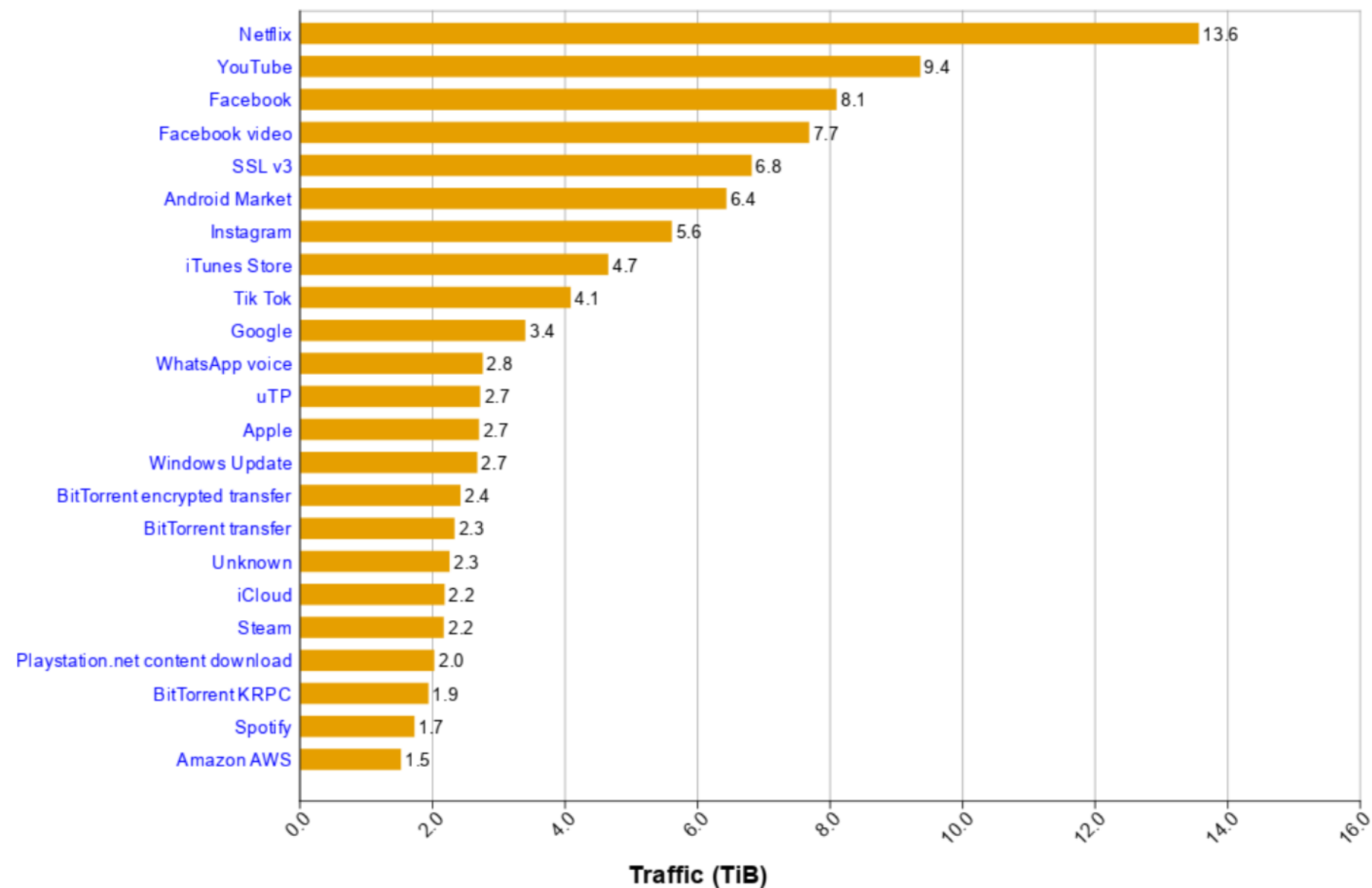


Traffic Statistics – All Services / All Subscribers

Oct 2021

Service

Page 1 of 51
(1170/1170 items)





Questions?



IMS-GIS Data Centre

Services provided and issues faced



Contents

- Aims
- Services Provided
- Open Source Solutions
- Issues Faced
- Current Workarounds
- Working Examples of Issues
- Desired Improvements



Aims

Open data - aids the development of:

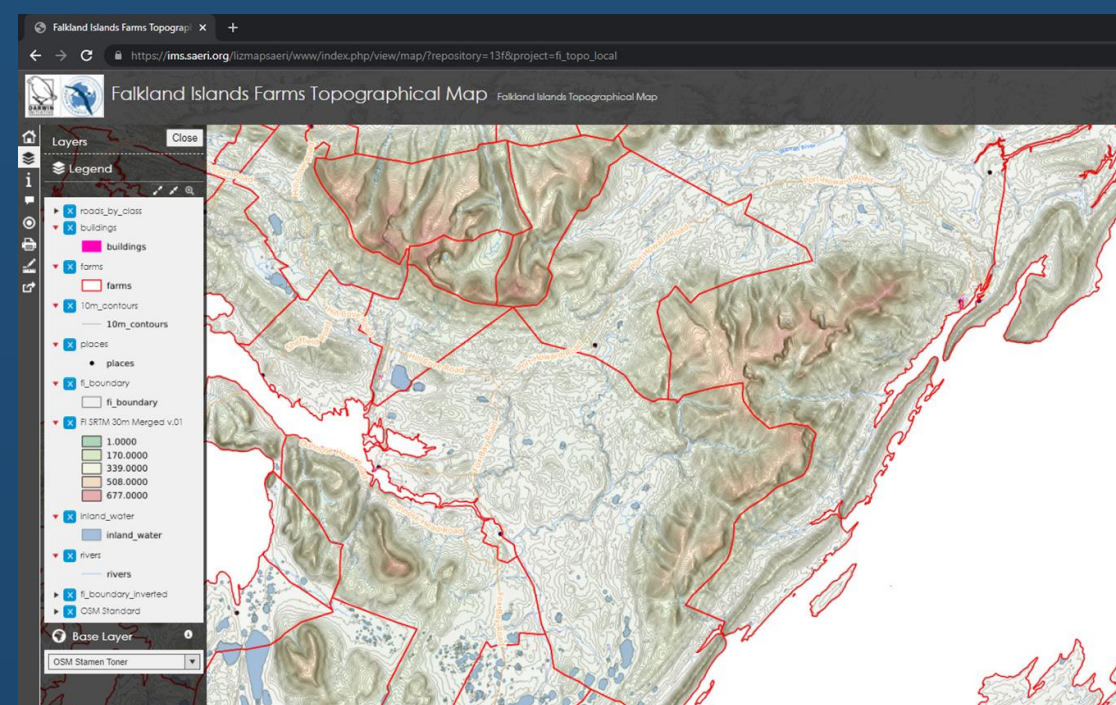
- Research
- Spatial planning processes
- Policy making and sustainable development in the Falkland Islands and other UKOTs

Promoting the value and use of spatial data through guidelines, training courses and open source tools (services) in data:

- Collection
- Documentation
- Analysis
- Access
- Management
- Dissemination

Services Provided

- WebGIS
 - Local and international servers
 - Data visualisation for local organisations/departments/general public
- Database development / maintenance
 - FIG and internal data management
 - Backups to SAERI server

A screenshot of a web application for the 'Accident Report Form (ARF)'. The interface includes a header with the UK flag and the title 'Accident Report Form (ARF)'. Below the header, there is a section for 'Contact Details' with fields for Title, First Name, Last Name, Email Address, Job Role, Company Name, and Phone Number. The 'Vessel Details' section includes fields for Name of vessel, Type of vessel, Contact number for vessel, Flag state, Call sign, RSS/SSR/PLN (port letters and numbers), Length overall (m), Gross tonnage, Hull material, and other registration numbers. The form is designed with a clean, professional layout and includes a 'Form View' button at the bottom.

Services Provided

- GIS Analysis – remote sensing, land classification
- Drone Surveys – digital elevation models, habitat mapping

Steeple Jason, West Falkland

Fine-scale coastal habitat map (Object Based Image Analysis Random Forest classification) derived from WorldView 2 satellite imagery captured on November 14th, 2016.
Satellite imagery courtesy of the DigitalGlobe Foundation.



Services Provided

- Data Portal
- National repository for data / metadata
- Hosted at SAERI + secure backup off-site



Falkland Islands Data Portal

Datasets Organisations Themes About Search

Home / Datasets

Filter by location [Clear](#)

Search datasets...

514 datasets found Order by: Relevance

Burrowing petrels Hummock - partial survey
Plots on the Island of Hummock to count burrow entrances of burrowing petrels plus habitat characteristics.
[XL](#) [SX](#)

Microplastics in the Marine Environment of the Falkland Islands
Filtering seawater using Whatmann glass filter papers and dissecting mussels and limpets to investigate levels of microplastics in Falklands waters and marine life.

Breeding behaviour and conservation of Charadrius falklandicus and Charadrius...
Collection of data related to the reproductive behavior of two species of shorebirds (Charadrius falklandicus and Charadrius modestus). These data consist of identifying of...

Falkland Plateau sediment drifts
Geophysical experiment on the Falkland Plateau. Data collected: multichannel seismic reflection data, multibeam data, sediment echosounding data

Plant Wax Calibration
Plant wax data from plants and surface lake sediments for purposes of producing a stable-isotope plant-wax calibration site

Map files by Slamen Design, under CC BY 3.0. Data by OpenStreetMap, under CC BY SA.

Organisations

- South Atlantic Envi... 166
- Falkland Islands Go... 78
- Falklands Conservation 47
- Premier Oil plc 18
- Elephant Seal Resea... 15
- Antarctic Research ... 14
- Marine and Environm... 9
- University of Maine 9
- Falkland Oil and Ga... 8
- University of Aberdeen 8

Falkland Islands Data Portal

Datasets Organisations Themes About Search

Home / Organisations / Falkland Islands Government / Falkland Islands Natural ...

Falkland Islands Natural Nature Reserves

Followers 0

Organisation

Falkland Islands Government
There is no description for this organisation

License
CC-BY-SA-4.0

Data and Resources

- fi_nature_reserves.zip** ZIP [Explore](#)
- fi_nature_reserves_preview.geojson** GeoJSON [Explore](#)

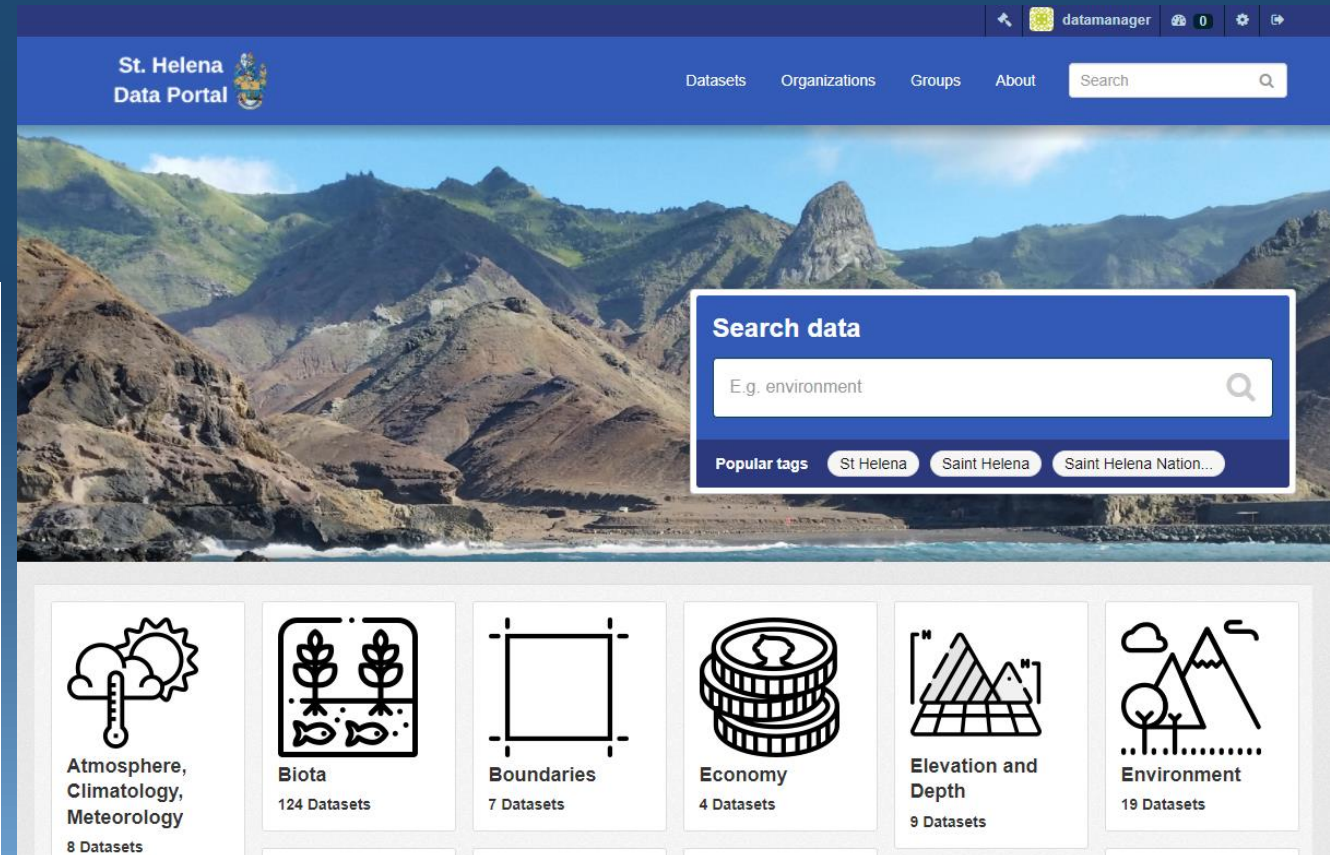
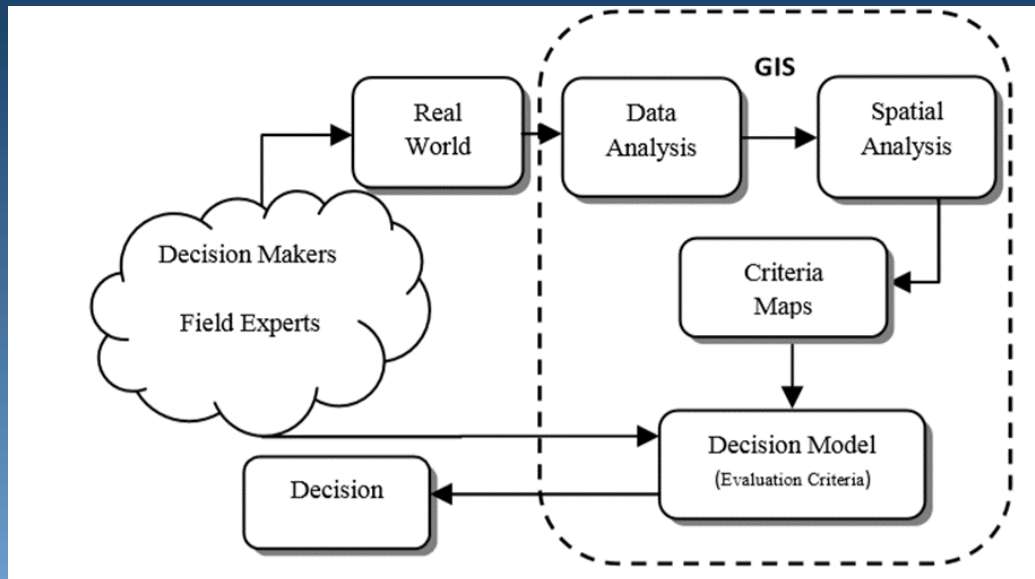
Falkland Islands NNR national nature res... protected area

Additional Info

Field	Value
Last Updated	8 September 2021, 14:46 (UTC-03:00)
Created	30 January 2020, 10:18 (UTC-03:00)
Region	Falkland Islands
Language	eng
Topic Category	Environment; environmental resources, protection and conservation

Services Provided

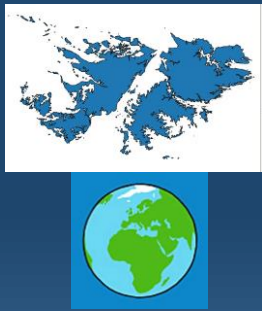
- UKOT Data Portal support (St. Helena, TCI, Montserrat)
- Collaboration between islands – ideas sharing, project support



Open Source Solutions



Data Owners
Data Collectors

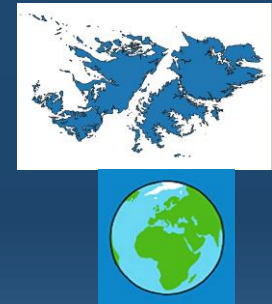


Generate
Spatial Data
→



←
Get data
from services

Data Users



Data access and availability through
data services

(IMS-GIS data centre)

Issues Faced: Internet speed



- Slow downloads (6Mbps)
- Slow uploads (768kbps) – not useful when working on collaborations on the cloud (Google Drive etc.)
- Increases working time on projects – having to wait a day to access a file
- Local data transfer between Falkland Islands organisations is very slow and expensive – the same as international data transfer



Issues Faced: Data Allowance

- Consideration of downloads, e.g. satellite data for remote sensing – files often >1gb
- Poses issues for security updates – often large files and frequent



Current Workarounds

- 2 servers for WebGIS hosting – one local and one international
- Scheduled downloads/uploads overnight (but not always possible)
- Connection to remote machines (Google Earth Engine processing externally)
- Having external parties download and pre-process data (satellite imagery)
- Manually taking data/files to FIG departments/partner organisations



Working Examples of Issues

- Field work data has to be collected offline – can be cached but risks losing data/errors during sync
- Boats logging data – software update and data backups only possible when in port
- Bathymetry data and satellite images need to be sent down physically on a hard drive (which can take weeks and is risky)
- In-situ data collection from Camp – weather data, flux towers, sub-ANTOS etc., not possible due to lack of internet/mobile network in certain areas
- Presenting at conferences or meetings but not using video can be impersonal



Desired Improvements

- No satellite rates for local traffic (Meshnet?)
- Bespoke data packages – for use with the IMS-GIS Data Centre / local collaborators to remove limits on work-related data transfer
- Better local mobile network – especially for field stations/data collection