Jisc

Jisc Funders and Owners Group

Annual report 2015-16

Classification: Confidential

Purpose

1. This paper outlines the progress Jisc made in 2015-16 against funders' priorities.

Action requested

2. The group is asked to consider and comment on Jisc's progress in 2015-16.

Discussion

3. We have kept funders suitably informed of progress against their priorities through reporting and updates at Funders and Owners Group (FOG) meetings as well as through individual reports by sector and by nation as required and meetings.

4. This report provides a UK-wide and sector-wide overview of progress in 2015-16.

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Annex A

Annual Report to Funders 2015-16

Jisc has continued to be an essential part of building both the capability and capacity of the UK further, higher and vocational educational sectors, using the grant-in-aid from its funders. Our activities have supported a wide range of funders' objectives. Through the provision of a world class network, relevant high quality digital content, and sector-specific advice and guidance, Jisc works in partnership with universities and colleges to ensure the institutions we support can not only make the most of the digital opportunities available, but at the same time can make substantial savings compared with doing so individually. In 2015-16, we:

- Developed and operated large-scale **shared services** that individual organisations in higher education (HE), further education (FE) and skills can rely on, such as: connectivity services (Janet Network), access management services (Eduroam), shared data centres, open access support services, business intelligence services, discovery tools and geospatial services
- Selected, negotiated and set up **procurement frameworks** for favourable deals for the sectors we serve with a wide range of IT vendors and commercial publishers including: cloud solutions (eg Microsoft Office 365, Google, Amazon web services), library resources (Jisc collections) and library support services (eg Knowledge base plus+, Journal Usage Statistics Portal)
- Provided **trusted advice and practical assistance** on a range of issues to help make HE, FE and skills more effective and more efficient, for example, customer services teams tailored to regional and national needs, developing digital capabilities, implementing cloud solutions, staying safe and secure and addressing cyber security, and providing training and professional services.

These three areas were underpinned by service enhancements and reviews to ensure our services continue to meet the needs of our members and exploration of future services, in partnership with our members, leading to new services that will be needed by providers in the next few years.

The heads of FE; Research; Student experience; and International at Jisc have made a positive impact. They have ensured that there is a cross-organisation strategy across the Jisc departments and these strategies are implemented across our business operations. They have taken into account the funders and their strategies, policies and business plans in this process.

We have kept funders suitably informed of progress against their priorities through reporting and updates at Funders and Owners Group (FOG) meetings as well as through individual reports by sector and by nation as required and meetings.

FE and skills

Our FE and skills (FES) strategy continued to develop and strengthen. Since January 2016:

- The FES implementation plan was published with clear KPIs for July 2017.
- Jisc became firmly part of the Area Review process in England. Our revised approach for Wave 3, which fell in the reporting period, was received well by the sector. Of the 54 colleges involved in Wave 3 of the Area Reviews, Jisc had already provided support to 12. Jisc approached the remaining 42, and were approached by 23 others not part of Wave 3, and have subsequently provided recommendation reports and/or advice and guidance for 7 (11%) of them. We have rolled out an updated version of this approach to all 58 institutions involved in the Wave 4 Reviews. Note that most support will be provided at implementation stage which colleges from the early waves are now approaching.
- To support apprenticeships, Jisc commissioned a consultant who has set out how Jisc can effectively support the delivery, assessment and tracking and monitoring of apprenticeships and who has highlighted Jisc's role in supporting providers to include digital skills within apprenticeship standards. We have provided this information to DfE's Apprenticeship unit and the new Institute for Apprenticeships. We have already seen changes to the apprenticeship trailblazer guidance which now has a greater technology focus and where Jisc is identified as a support agency for trailblazers.

The Jisc FES strategy recognises the turbulent environment in which FE and skills providers across the UK are operating. We will draw upon the guidance of the external consultant about how technology can make processes around apprenticeships more effective and efficient. We expect this work to drive the need for further Jisc advice, guidance and products and services, and we are already making in-roads here. For example, we are developing continuing professional development (CPD) solutions which recognise the need for digital CPD for staff involved in apprenticeship provision.

Research

Many of our existing services have provided extensive support to research, including:

- Open Access (OA) - for example, a project finished July 2016 to share examples of open access good practice to support universities in implementing OA as efficiently as possible and the new product under development to support the management and monitoring of OA publications and article processing charges (APCs)
- Research data management, e.g. through the monograph project in which over 60 librarians, academics, funders, publishers and sector bodies have identified the core features of a national infrastructure that will help transform the creation, collection, use and preservation of the scholarly monograph.

- Through the provision of Janet as a network specified to meet the needs of research, for example through the Safeshare project in progress to provide higher assurance connectivity over the Janet network and access management mechanisms between research centres.
- For the first shared datacenter in Slough in the last 12 months we have seen an additional three organisations sign up to the framework, and all are working through their migration projects. Imperial College, UCL, King's College, Institute of Cancer Research and the Sanger Institute have all increased their installed footprint, in some cases quite significantly. The University of Bristol have chosen the shared data centre as the home of their newly procured Blue Crystal HPC platform, which once installed will be one of the largest single installations in the Jisc data halls. By the end of 2016 Jisc will have three dedicated data halls for Jisc customers in use.
- The second shared datacentre in Leeds will be in functioning by the end of Q1 2017 with four anchor tenants: the University of Liverpool, the University of Leeds, The University of Sheffield, and Sheffield Hallam University. The contract with the datacenter provider has been signed and the installation of the necessary fibre connectivity and associated equipment is underway. The fibre installation has a long lead time, hence the delay.

Starting in early 2016 we brought together our initiatives to help research into a single strategy for 2016-19 that will :

- Continue the strategic development of the large-scale national and international infrastructure which maintains the UK's leading research position by **upgrading the Janet network backbone**. We will meet the **increasingly complex cyber-security needs, access and identity management and network performance optimisation** for research organisations.
- Realise a robust and sustainable research infrastructure which integrates our current research offer into a coherent suite of services that supports both the research lifecycle and the strategic management of research activity.
- Build upon our current capabilities to **create a dynamic research platform** that places users' needs at the centre and enables various actors to address opportunities around **cultivating digital research** and optimising its impact through **open, robust analytics**.
- Continue to play a **constructively disruptive role in the scholarly publishing market** by moving away from legacy licensing models and supporting a range of open publication models.
- Offer expertise and thought leadership to the research community nationally and internationally through our engagements with sector bodies. We will work with the Government and national E-Infrastructure Groups to ensure that the needs of the UK

research base are recognised as mission-critical requirements for maintaining our position in the global research environment.

- Continue to engage on digital research infrastructures at the international level to guide and influence the development and adoption of global standards and advocate for the sector in the implementation of new research policy.

Student experience

We have taken the same approach to developing a focused strategy for student experience. An experienced project manager from the Futures team has been appointed to ensure that we have identified the core needs of our members for digital support in delivering their teaching and learning and can prioritise the work needed in both delivery of existing services and the inception and development of new ones. In 2016, this has helped us to focus on core areas such as bringing learning analytics services close to market, and to maximise the benefit that teach and learning gets from all relevant services.

The challenges that teaching and education will have to meet to respond to the increasing necessity for digital delivery depend on high quality, fast connections if they are to deliver the efficiencies hoped for. Slow response times will make all of them less effective and much less acceptable to students. The Janet network provides uncontended internet connectivity – the speed of a connection is not shared with others so when a university has a 10Gbit/s connection, that speed is available completely to the university, so students' experience of interaction with live events (one to many or one to one), digital tools and resources will be seamless and very fast.

Students undertaking HE courses at further education colleges (FECs) would be particularly vulnerable, as FEC budgets are very restricted and they would be unlikely to purchase anything more than fairly basic connectivity, especially where they were somewhat remote from large metropolitan markets where there is some level of competition to ensure good price/performance. Janet ensures that all students have access to the same level of service, regardless of geography.

Jisc also supports student experience and high quality learning and increased efficiency across a range of areas, including access to scholarly resources and learning materials, open educational resources (OERs) and impartial advice and guidance on platforms to support online learning. Jisc offers a wide range of digital resources for the FE and HE sectors as well as services that help libraries to deliver an effective and efficient service.

We estimate Jisc secures value, savings and efficiency gains for digital content between £70 million and £95 million annually arising from our negotiations. We assist institutions through commissioning and creating content, negotiations with publishers on their behalf and also by administering payments to publishers.

We are constantly revising and updating the guides provided by Jisc designed to help teaching and support staff make the best use of digital resources. There are approximately 150 guides with around 50 revised since January. As in the January report the two most downloaded guides cover developing students' digital literacy.

The UK Access Management Federation continued to improve student experience and institutional efficiency by providing each student with a single log-on that gives them access to all their institution's resources.

International

The Jisc international strategy (2016-19) has four strategic priorities to support the needs of our customers and funders. They are: to build strategic partnerships in the UK and globally; to translate Jisc's national offer for international markets; to initiate new international services and support for our members; and to create Jisc's future international vision. A portfolio review of Jisc's current international activities and opportunities is underway to inform the development of the strategy.

The Jisc Transnational Education (TNE) support programme (2014-2016) aims to improve support UK institutions established and developing TNE activities (see https://www.jisc.ac.uk/rd/projects/transnational-education for further details). The programme is now moving to become BAU activities. Support to date has predominantly been in support of HE (working with approximately 70 HEIs) in China, Malaysia, South Korea, Malta, Mauritius and the Middle East. Exploratory work is now taking place in Africa and India. A key success has been enhancing connectivity both on and off campus for TNE activities in China through our relationship with CERNET, the Chinese NREN, and commercial providers to supply a 'China Transit' service. This has benefitted every UK HE institution with TNE activities in China.

The programme has resulted in two (connectivity based) services which will be launched in November 2016. There are currently four paying customers for these services; this is expected to increase significantly after the service launch.

Future activities include a collaborative project with AoC and potentially other Government funders to map out international activities for the UK FE sector, to enable Jisc to develop appropriate support. In addition to developing a broader range of TNE services outside of connectivity, work is in progress to tackle the complexity of overseas licensing with a view to providing a better student experience for TNE and equitable access to digital resources.

The implications of Brexit to Jisc are largely unknown at this time, however it is anticipated that TNE in particular will be a growth area above and beyond its current trajectory (13% growth pa). Universities have already spoken up with suggestions of opening outposts and institutions across Europe. More generally, senior Jisc staff have recently been investing time to build collaborative partnerships with our colleagues in the USA (CNI, EDUCAUSE, Internet2), Canada (Canarie) and Australia (AARnet).

Engagement architecture

In 2015/16, Jisc's member-facing teams and strands of work were integrated into one team under a Sales and Customer Relationships directorate. This was intended to help senior management focus on consolidating and improving performance. The new directorate is led by Tim Marshall, who became Executive Director, Sales and Customer Relationships alongside his role as managing director, Jiscom.

The Marketing and Communications directorate, led by Robert Haymon Collins, continued to support Jisc's focus on members. This area incorporates our product and service management process and product lifecycle. The team has worked with customers and stakeholders while at the same time Jisc's internal sector intelligence team has helped to ensure an increasingly 'member first' approach to our activities and to get a clear picture of trends and developments and to solutions that respond to their needs.

To help bring greater focus to our influencing work we have also developed a public affairs strategy and plan.

Commercial revenue development

Jiscom (Jisc Commercial Limited) is the main commercial arm and a separate, but wholly owned, subsidiary of Jisc. It exists for the sole purpose of supporting the Jisc public service mission by maximising the contribution it makes to Jisc.

There is now a well-qualified and structured sales pipeline that puts the company in a good position to achieve sales targets set for 15/16 and gives a very strong platform for future financial year.

Jiscom has recruited a strong team of 7 people (3 permanent Jisc staff and 4 contract); MD, Director of Sales and Business Development, Business Operations and Sales Support Manager, Commercial Lead, Management Accountant, Senior Solutions Architect and Pre-Sales Consultant and a Sales Account Director. This has enabled the development of a sales pipeline and the capacity to respond to complex customer needs.

The resources now in place, approved by both the Jisc and Jiscom boards, will support the acceleration of revenue generation. Deals have been signed with Goonhilly Earth Station – a blue riband win in the South West and Dimension Data which opens up a significant sales channel for cloud solutions.

A Jisc business development project to identify other services where we may be able to generate revenue from selling services to non-core users (especially overseas) will be concluding soon, and will make recommendations about what Jisc will be able to do to exploit some of its assets in new ways.

Collaboration

We continued to engage nationally and internationally, fostering good relationships with partners and organisations including Universities UK, The Association of Colleges, Guild HE, etc. The M5 consortium (Jisc, HESA and QAA) began to make progress with initial meetings and a memorandum of understanding and the drafting of a data sharing agreement. We worked closely with RUGIT in order to demonstrate a desire for Jisc to remain strong and be ubiquitous.

Mission and delivery

We have simplified the various different approaches to describing what we do into the three ways we deliver our services:

- Shared services
- Sector deals
- Advice and guidance

There are substantial new activities being undertaken in each of these areas to ensure that Jisc will be able to offer the range of services required to meet funder objectives in the medium term as well as today.

The SSU has engaged with a wide range of stakeholders in universities and colleges as part of the development process for a substantial review and update of our Value, Savings and Efficiencies to ensure that the outcome meets the need of different members and has credibility with its audience.

Shared services

Key developments in shared services are:

- A significant mid-term upgrade to the Janet network
- The portfolio of security services is continually being enhanced (see https://www.jisc.ac.uk/network/security) including investment in security following a series of Denial of Service (DDOS) attacks
- The learning analytics project has now reached alpha stage: there are 50 universities and colleges signed up to the initial phases of the implementation (https://www.jisc.ac.uk/rd/projects/effective-learning-analytics).
- The application and learning resource platform for Jisc and other content enabling practitioners to easily find high quality applications and resources to support their teaching is currently being piloted (https://www.jisc.ac.uk/rd/projects/app-and-resource-store).
- Continued development of new Managed Services for trust and identity.
- The wide-ranging "Research at Risk" project was completed at the end of July and has led to the Research data network (https://www.jisc.ac.uk/rd/projects/research-at-risk).

Sector deals

Key sector deals achieved (detail on associated savings are available in a later section of this report), or in negotiation, are:

- Delivered 100 renewed affordable publisher agreements; which has meant ongoing negotiations with Elsevier to achieve a satisfactory proposal
- Continuation of ongoing negotiations with publishers on the cost of e-resources to increase or maintain savings on the costs of subscriptions and open access.
- The continuation of national agreements and frameworks for technology services, including cloud services, Tableau, BoardPacks and Prevent web filtering.

- The continuation of meaningful offsetting schemes in place with major journal publishers.

Advice and guidance

Key developments and events in advice and guidance include:

- Major commitment to supporting FECs with the Post 16 and training institutions area review process begun late 2015.
- The continuation of HM Government Workshop to Raise Awareness of Prevent (WRAP) as live online facilitated training sessions, helping customers to meet mandatory staff training required by the Prevent Duty. Jisc trained over 1,500 delegates from HE, FE and Skills between January 2016 and August 2016.
- Jisc continues to focus on providing advice on security; it has organised a two day conference to take place in November (https://www.jisc.ac.uk/events/security-conference-01-nov-2016). This is for network and security professionals in UK higher and further education to network with peers, share best practice and address common challenges, whilst also learning more about emerging trends and how Jisc is supporting members through our range of security products and services.

Key performance indicators 2015-16

Value, savings and efficiencies

Below is a short summary of the Value, Savings and Efficiencies (VSE) that Jisc delivers across the UK.

Element	Definition	Amount (£ Million)
Value	Value of services where customers would be unlikely to pay market rates but still get considerable benefit from using the service	£44
Savings	Where there is a reasonable expectation that the customers would have paid market price to access or obtain the service	£108
Efficiencies	Other costs saved for customers, which are often the costs of the transaction	£19
Subtotal		£171m

There have been a number of changes in the way we estimate this. We have taken a more cautious approach to the savings from Digimap; while the overall value is rising, we have reduced the amount we consider a safe claim to 25% of the total to reflect strategic changes to the arrangements for Digimap that may result in a new structure and we have taken the view that it is better to reflect this stage by stage rather than in one single drop.

We have also adjusted the VSE to take into account a fall in prices in the connectivity we purchase, and this reduces the savings to the sector.

There are, however, increased savings from Jisc Collections as historic underestimates have been addressed, and further savings to come: we are awaiting reliable data on usage that would allow us to work out value from some suppliers of high-value resources. Estimating would be unsafe as we do not have a good time series to work from.

We are currently reviewing our VSE methodologies, and have identified areas where we may be able to claim further efficiencies, particularly when considering staff time saved through the use of Jisc services. We are consulting a number of internal and external stakeholders to assist in the validation of the numbers used in this approach, and have so far received a generally positive response regarding the validity of the methodologies. However, we have to be careful not to double-count the benefits.

Efficiencies not yet included	We have analysed the Jisc Collections and Janet Network services for efficiencies, we have not included in the calculation in the past: they allow members to avoid a significant amount of staff cost, reflected in this figure. Behind this is a banded model, reflecting costs avoided for specialist staff in IT departments the library at different levels for small to large HEIs and colleges. The basic principles of the model and the metrics we might use (employment costs and number of staff) have been validated by a number of IT directors and librarians. There is a potential element of double-count between this model and the current ones, and we are in the process of identifying and validating this.	£44m
Alternative CSIRT Value figure	The current CSIRT value figure we have been using totals at £22 million and is based on a BIS survey of the costs to business of dealing with security breaches. Based on suggestions from some stakeholders and consultation of expert colleagues within Jisc, we are also considering a different methodology based on costs avoided by members not having to maintain some cybersecurity resources (although we assume that there will be local issues and the we cannot substitute for their entire CS costs). We have estimated that the efficiency savings gained through CSIRT are closer to £42 million. This is currently being validated externally by IT directors of a range of member organisations This approach would replace the current one entirely as use of both would result in a clear double-count.	Extra £20m
Total extra		£64m

Table 1: VSE savings across the UK

We believe this is a conservative figure, especially in reporting efficiencies. We will be reviewing and strengthening it service-by-service over the next few months.

Usage of services

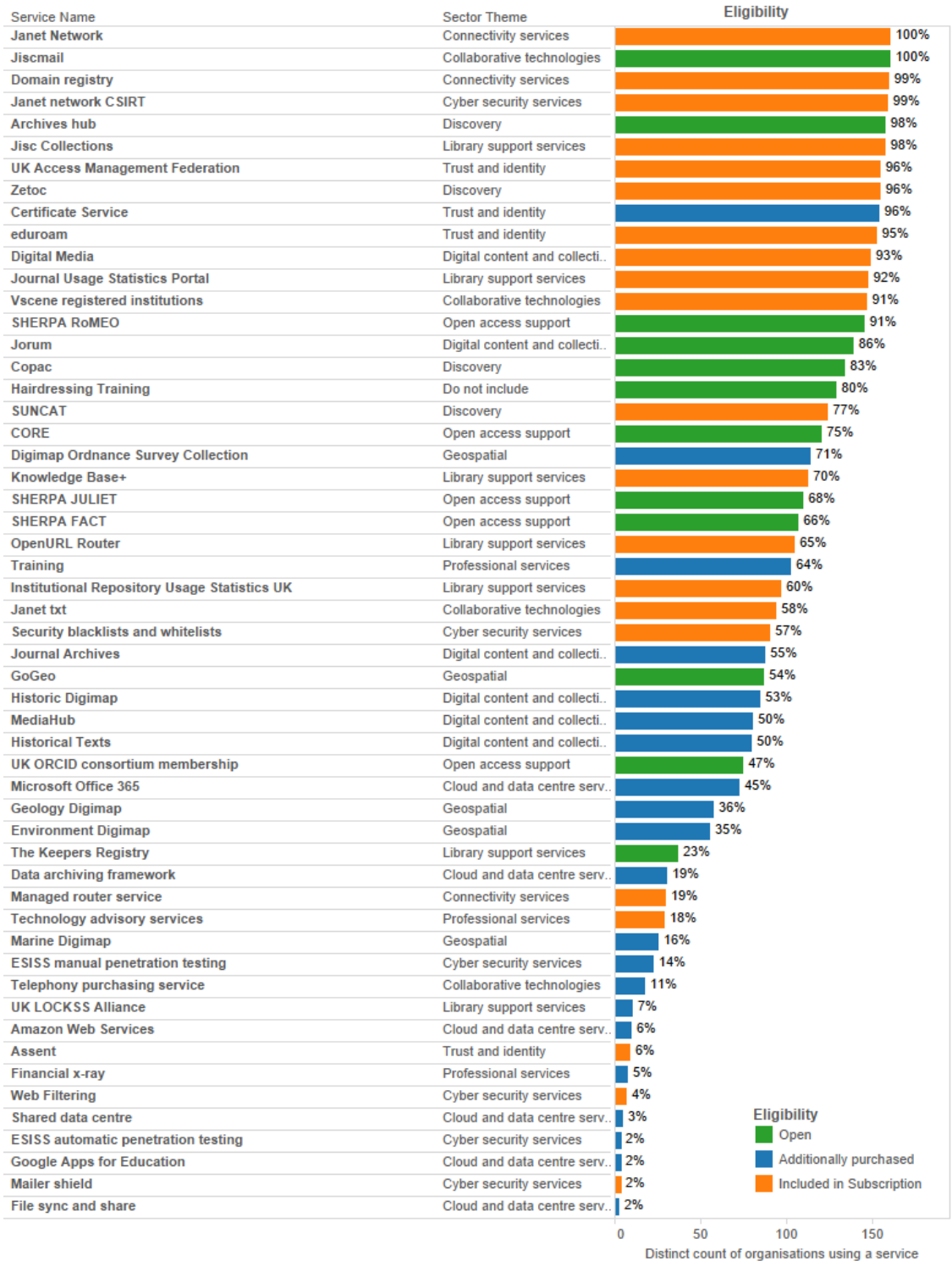
Our baseline for the number of customer organisation we deal with can be broken out by "persona".

Sector	Customer persona	England	N Ireland	Scotland	Wales	Grand Total
FE	Adult education colleges	7				7
	Independent specialist colleges	53			2	55
	Large GFEC	29	5	10	7	51
	Sixth form colleges	94				94
	Small GFEC	200	1	16	7	224
	Super college	2				2
	Independent training provider	86				86
HE	Business engaged	25		2	2	29
	Modern and diverse offerings	24	1	1	1	27
	Research intensive	24	1	7	2	34
	Small and specialist	38	2	5		45
	Vocational and applied research	21		3	3	27
	Grand Total	603	10	44	24	683

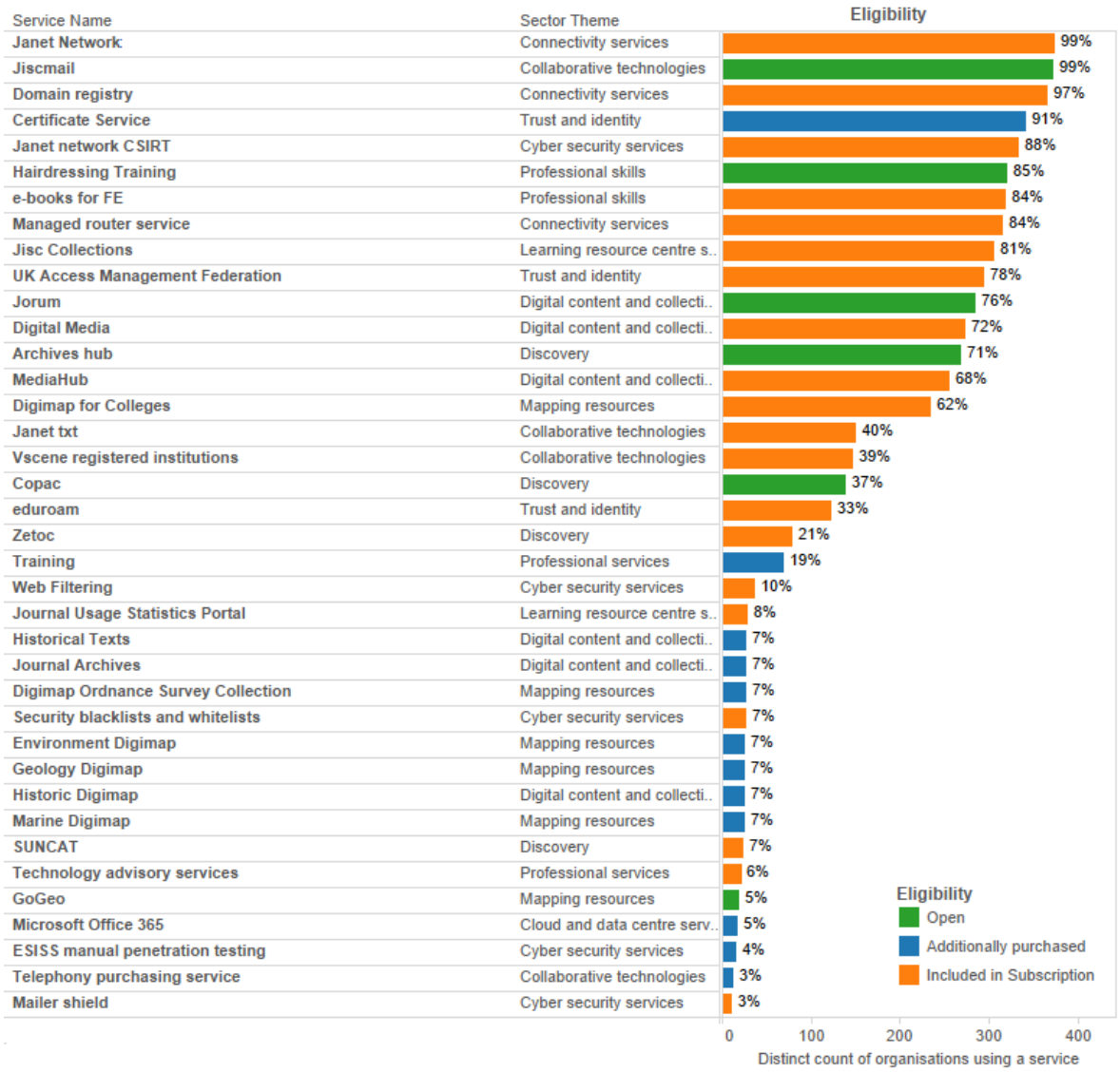
Table 2: Institutions data from Sector Intelligence collected between 1 Aug 2015 and 31 Jul 2016

Use of all services by sector

Services used by HEIs



Services used by FE Colleges

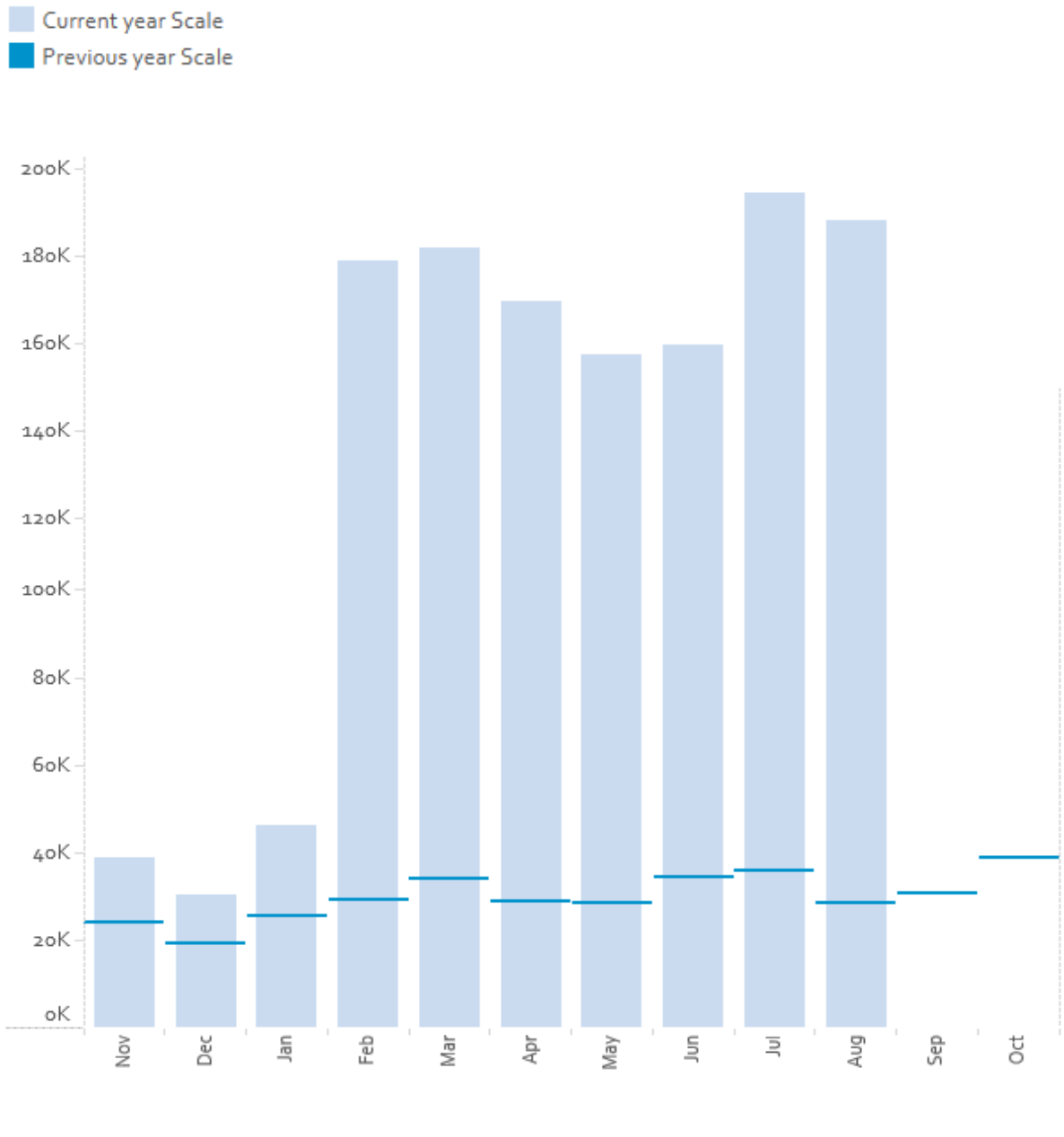


Notes:

Open eligibility means a service available to any person or institutions.

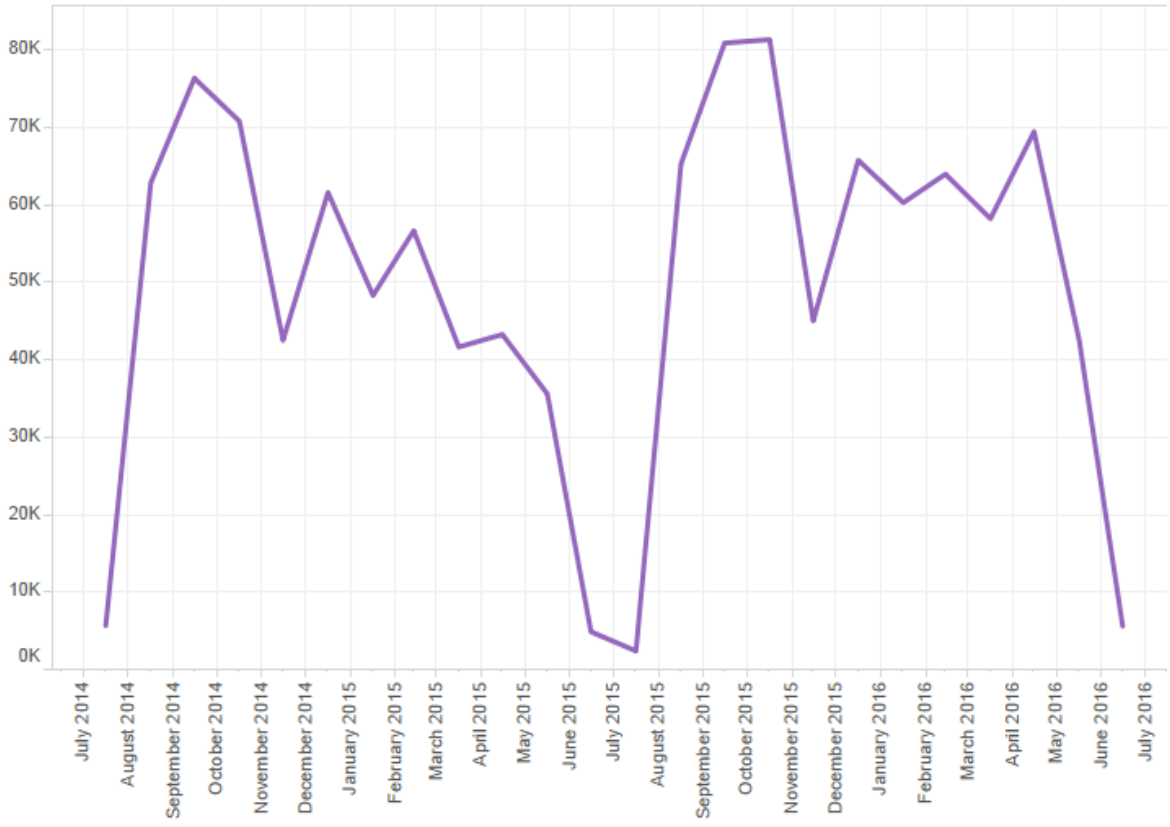
Trend analysis: SHERPA RoMEO

SHERPA RoMEO is an online resource that aggregates and analyses publisher open access policies from around the world and provides summaries of self-archiving permissions and conditions of rights given to authors on a journal-by-journal basis. Over the past year the number of subscriptions has gone up by 6% in HEI; however the number of searches in the UK domain has been rising month on month at a much higher rate than expected, as shown in the figure below (note that we have not received the figures for September and October yet). This illustrates how useful the OA services Jisc provides are; and how they are being taken up without a major advertising campaign or a revision of the service.

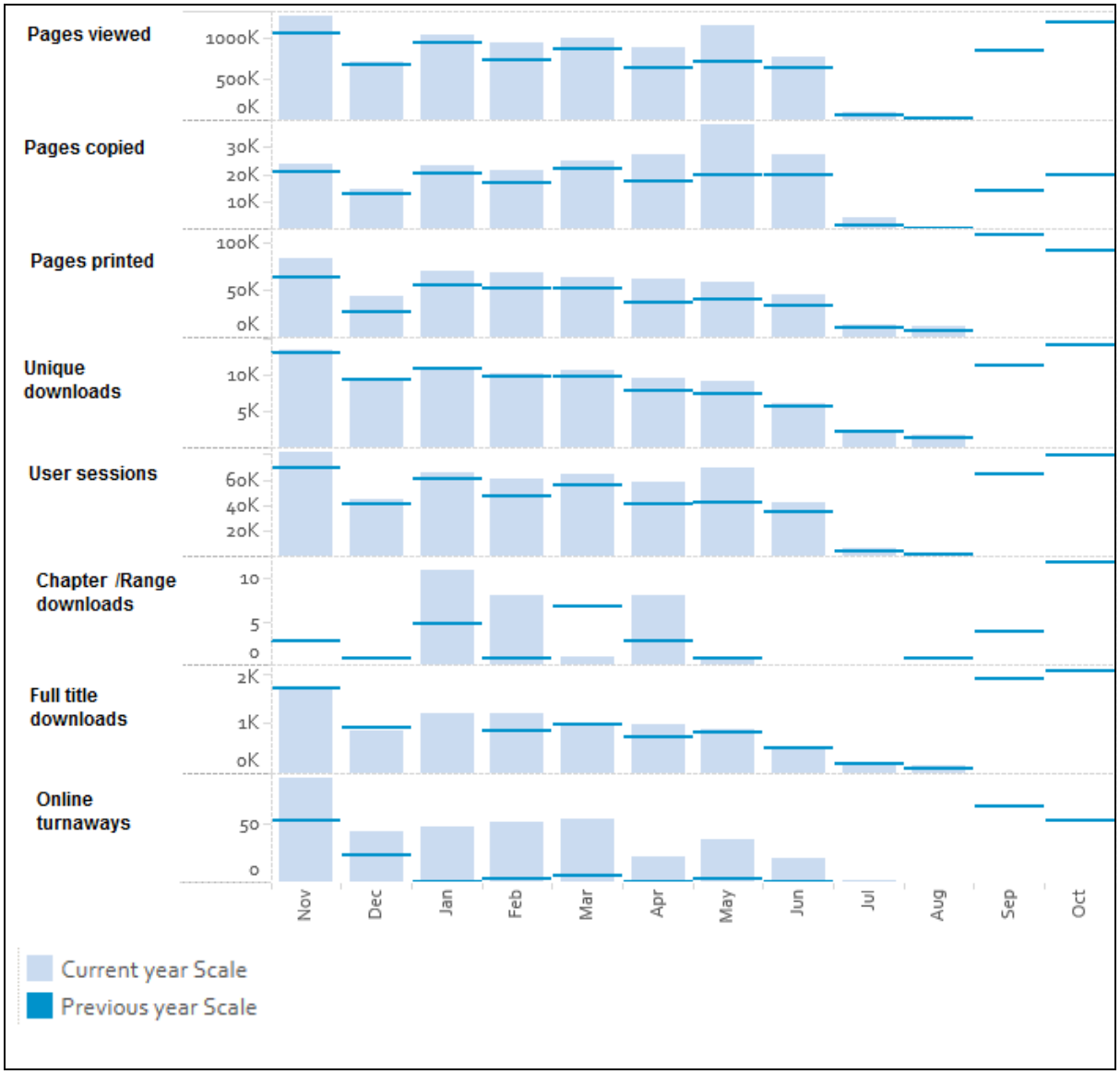


Trend analysis: e-books for FE

e-books for FE offers a collection of curriculum-mapped e-book titles, chosen through extensive community consultation. The number of subscriptions to e-books for FE has decreased slightly; however there has been an increase in the usage of e-books for FE. The first diagram below shows the number of sessions held in UK FE institutions; a comparison of the current year with the previous month against month shows a consistent increase in session numbers.



When examined further this increase is reflected across all the measures collected for e-books for FE. This would suggest that they are being integrated into the curriculum within FE.


Pages viewed
1000K
500K
0K
Pages copied
30K
20K
10K
Pages printed
100K
50K
0K
Unique downloads
10K
5K
User sessions
60K
40K
20K
Chapter /Range downloads
10
5
0
Full title downloads
2K
1K
0K
Online turnaways
50
0
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Current year Scale
Previous year Scale

Shared services

Value, Savings and Efficiencies

Shared services are a key driver for the HE and FE in meeting demands for ever-greater efficiencies. They are powerful ways to address market failure and provide highly-adapted services that generic commercial supplier strategies are not able to offer, especially in a comparatively small market.

HE	FE
£74m	£23m

Technologies	Digital Resources
£77m	£20m

Usage measure for network

Network usage: 12 month view

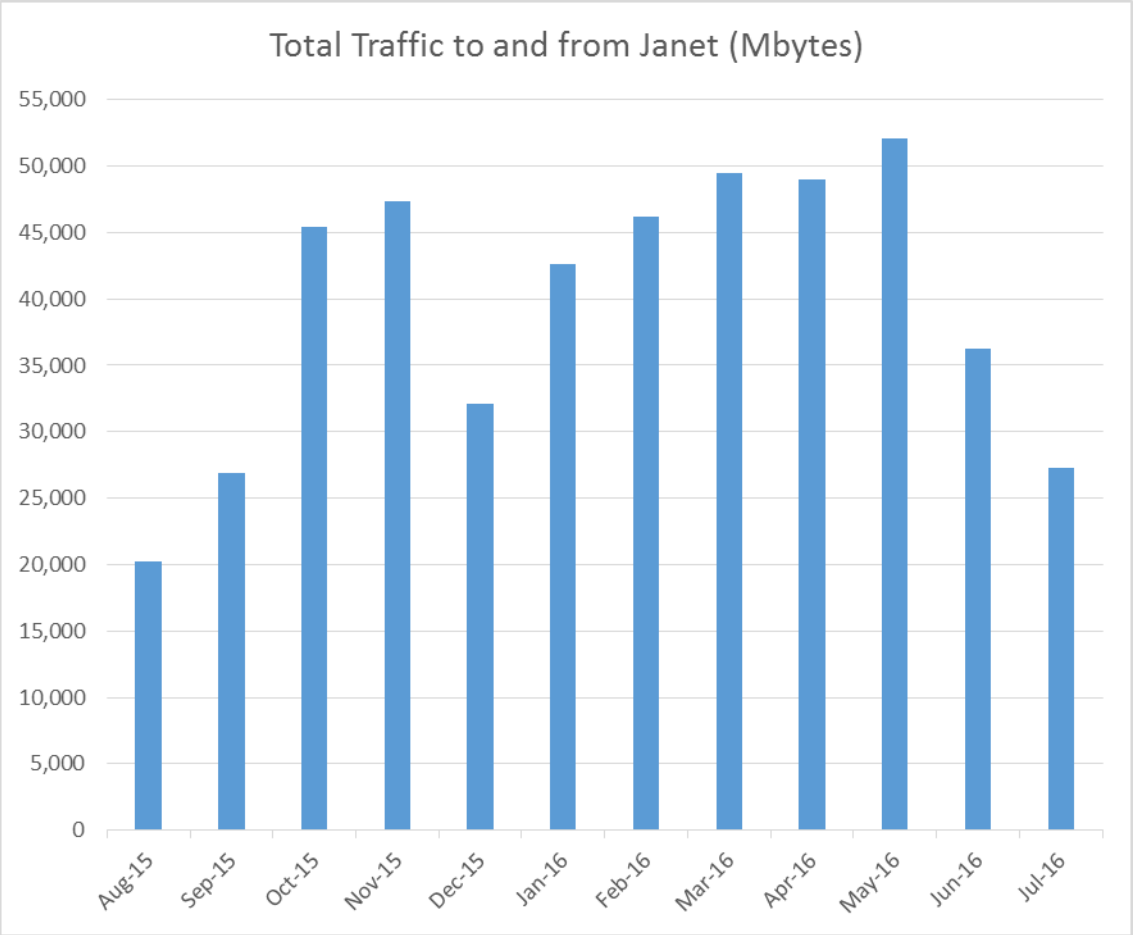


Figure 1: Total traffic to and from Janet (Mbytes) from August 2015 to July 2016

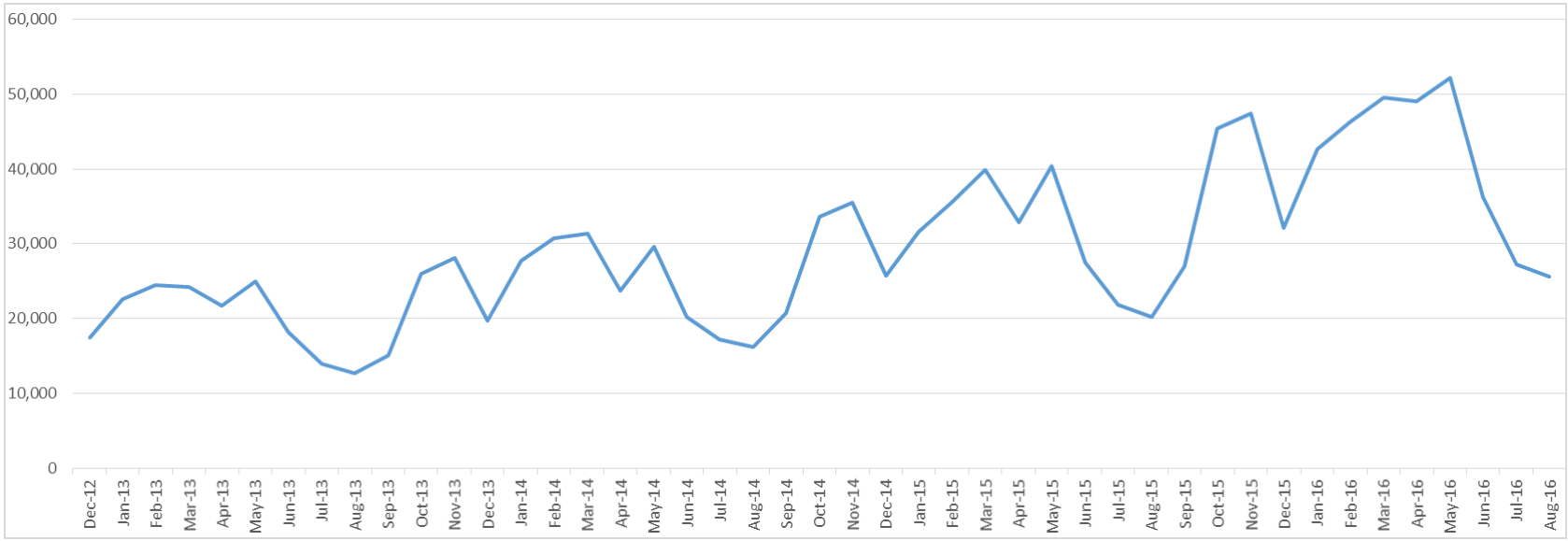


Figure 2: Total volume of traffic, both to and from Janet, for all HE and FE institutions December 2012 to August 2016 in terabytes

Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14
17,416	22,616	24,504	24,277	21,671	25,007	18,244	13,964	12,658	15,091	25,965	28,059	19,750	27,717	30,752

Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
31,372	23,729	29,632	20,224	17,278	16,211	20,755	33,682	35,496	25,711	31,626	35,661	39,847	32,866	40,378

Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16
27,502	21,891	20,233	26,933	45,426	47,339	32,091	42,607	46,215	49,464	49,001	52,098	36,208	27,293	25,571

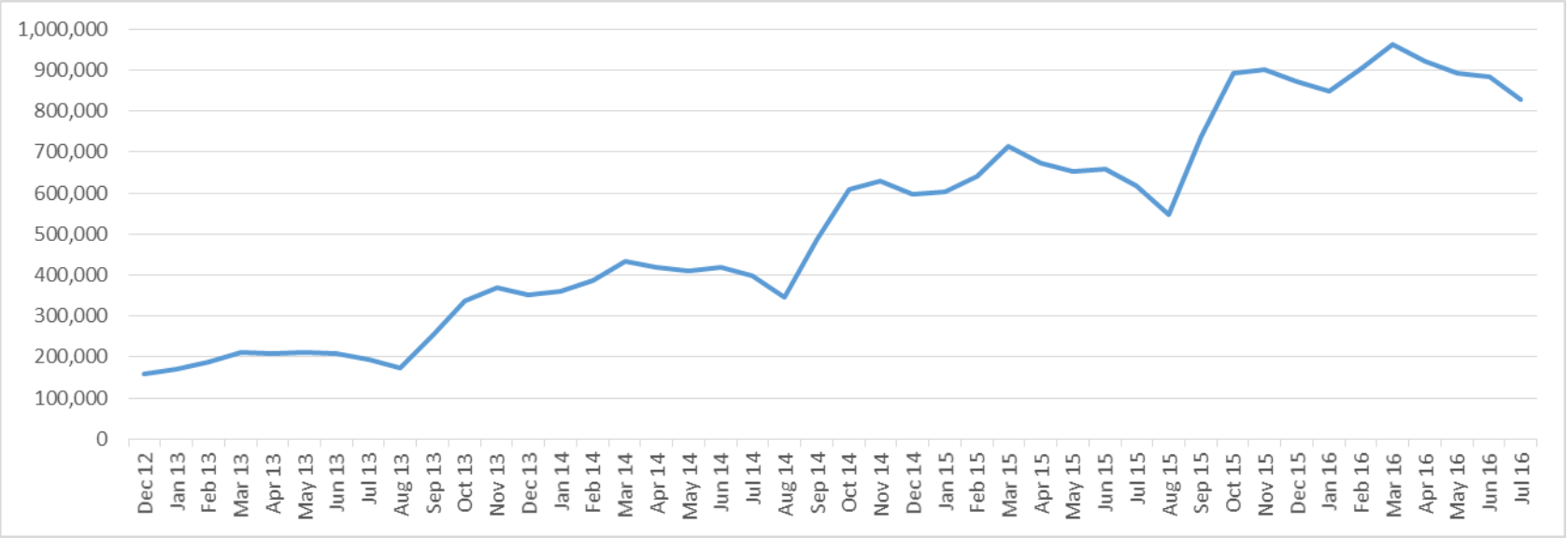


Figure 3: Eduroam usage December 2012—July 2016 - Monthly Unique Client Counts (based on calling-station-ID attribute) access-accept figures

Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14
159,949	168,904	187,121	210,097	207,007	211,070	208,381	194,646	173,102	251,642	337,019	368,270	352,207	360,574	387,644

Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
434,754	418,790	410,218	418,116	397,579	347,175	487,437	608,131	628,320	596,806	604,324	641,887	713,204	673,002	651,995

Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16
658,284	618,013	546,711	736,460	891,975	902,123	871,285	848,634	903,685	963,442	922,828	892,942	883,552	829,098

There has been over 100% increase in Janet traffic comparing August 2013 and August 2016; with traffic reaching a peak of over 52,000 terabytes in May 2016.

Eduroam use has been approximately doubling year on year; with an increase of 134% between July 2015 and July 2016.

Resilience

Of the 1000+ Jisc Members connected to the Janet network 234 have a resilient Internet service. This means that their service is provided by two or more connections to Janet. When a failure occurs to a resilient service internet traffic will normally automatically re-route to accommodate the failure and ensure service is uninterrupted. This ensures that the fundamental activities of our members such as Research or Teaching and Learning can continue and are significantly less likely to be disrupted.

An analysis of members who have resilience shows that of the 1400 outages affecting them, only 207 resulted in a loss of service to end users. A total of 408 days of service downtime, or nearly 2 days per institution (on average), was avoided due to resilience. Note this is for outages *per service*, and includes only data for resilient services. So if an outage affected 10 customers, then it will register 10 times in the total[1].

The Janet SLC (Service Level Commitment) offers 99.7% availability over a 12 month period (based on incidents outside of our member's control). Over the last two years the value of resilience can be clearly seen. On average those with resilience achieve better than 99.99% availability (or 50 minutes of downtime per year) while those without achieve 99.95% (nearly 5 hours of downtime per year). Also probability suggests that those members with resilience can expect a service outage on average every 7 years, while whose without resilience can expect on average one every 18 months.

The statistical details are provided in the following two tables.

[1] This is distinct from the data in Annex A (also seen in FOG 16(11) Annex A) which describes Jisc's ability to respond quickly and minimise the downtime resulting from faults. In this view, each incident counts only once, regardless of how many customers were affected, and is not restricted to just services with resilience hence the different figures.

In Prior 12 Months	
Total Number of Outages on Services with Resilience (where a connection to a resilient service incurred a failure)	1400
Total Duration of Outages on Services with Resilience	432 days 0 hours 0 mins
Total Number of Occurrences Resilience Utilised (where service was maintained)	1193
Total Amount of Time Saved	407 days 19 hours 4 mins

Table 3: Time saved due to resilience in last 12 months

In Prior 24 months	Overall	Resilient	Non-Resilient
Connectivity services to an institution	1,109	234	875
Total SLC Faults	1,454	65	1,389
12 Month Rolling Availability	99.95%	>99.99%	99.95%
Mean Time to Restore Service	5h 41m	3h 44m	5h 47m
Faults per Service per Year	0.66	0.14	0.79

Table 4: Availability and time to restore services in last 12 months

Innovation and the development of new services

We understand the importance of innovation and the role it plays in maintaining the world class position of the UK education sectors. Jisc is continuing its record of excellence in the development of innovative and novel services. The Jisc Futures team's work in identifying and prototyping new services is complemented by work being undertaken in its Technologies and Digital Resources directorates. There are currently 36 projects underway, or recently archived, and thirteen of these are likely to lead to a new service. While nine are expected to lead to enhancements of existing services, five are considered as beta-stage developments and therefore already in use by test users and close to roll-out to the full sector. The reminder are at the prototype or pilot stage and are at an earlier stage of development. The risk portfolio is mixed, but only six are regarded as "highly experimental". For details see https://www.jisc.ac.uk/rd/projects.

Sector deals

Value, Savings and Efficiencies

HE	FE
£67m	£5m

Technologies	Digital Resources
£1m	£72m

Jisc's sector deals are have a significant impact on the sector's ability to acquire the technology and resources it requires. It deals with the largest and most significant suppliers in each market to achieve large-scale savings.

Significant sector deals recently completed include:

- Major learned society publisher -proposed unacceptable price rises averaging over 10%. Jisc coordinated protest to President of the society, got institutions on board and brought the price down to a 3% increase, lower than the rise in the final year of the current agreement.

- Commercial education publisher: Jisc did not have a deal with this publisher, but protests at a new pricing model which would have meant a reduction in access and 100%+ price rises were brought to our attention by institutions and professional associations. We coordinated a formal response to chair of the publisher's editorial board, which in turn sparked a small boycott by institutions. The publisher is now working with Jisc on a new model, but took immediate action of reducing pricing by a factor of 5.

The 2016 Serials Price Projection Report from EBSCO Information Services advises that the overall effective publisher price increases for academic/medical libraries are expected to be the range of 4 to 6 percent (before currency impact). Jisc Collections is restricting prices to below this level. In some cases this year the initial publisher proposal has been for double digit price rises that Jisc Collections has reduced to 3-4%.

Advice and guidance

A new CRM infrastructure and workflows are currently being developed and when fully operational will help provide the level of data needed to estimate VSE and other delivery and impact KPIs.

Advice and guidance currently has strong but not exclusive focus on FE, especially given the Area Reviews. The customer Services team and specialist advisers are working on an ongoing basis with FE colleges ensure they benefit from the full range of Jisc resources and expertise.

To support apprenticeships we have provided information, including digital skills, to DfE's Apprenticeship unit and the new Institute for Apprenticeships. This has already led to changes to the apprenticeship trailblazer guidance which now has a greater technology focus. This complements the FE and Skills strategy.

Guides

Jisc supported universities and colleges by developing a range of guidance and best practice information for download free of charge. 154 guides were updated or made available from the Jisc

website in the period 2015-16. There were thousands of sessions viewing these and archived guides, and they are an important and cost-effective way of providing advice and guidance for those in HE, FE and skills.

Five of these guides constituted over 20% of all guide views between 1 August 2015 and 31 July 2016, "Developing students' digital literacy" being the most popular of the guides.

Guide	URL	Latest update
Developing digital literacies	https://www.jisc.ac.uk/guides/developing-digital-literacies	16-Dec-14
Developing students' digital literacy	https://www.jisc.ac.uk/guides/developing-students-digital-literacy	22-Sep-15
Using assistive and accessible technology in teaching and learning	https://www.jisc.ac.uk/guides/using-assistive-and-accessible-technology-in-teaching-and-learning	23-Jun-15
Transforming assessment and feedback with technology	https://www.jisc.ac.uk/guides/transforming-assessment-and-feedback	20-Apr-16
Change management	https://www.jisc.ac.uk/guides/change-management	archived May 16

Table 5: Top five guide between 1 August 2015 and 31 July 2016[2]

Jisc events

The following tables show the most visited face to face events organised by Jisc between 1 August 2015 and 31 July 2016[3].

[2] The Google Analytics figures are not included because the report is limited to 500,000 randomly sampled sessions at the profile level for its calculations. Furthermore the percentage of visits both reports are based on is approximately 50%. However, they do reflect the order of sites visits and a reasonable approximation of proportion of visits.

[3] Note that these events are only those centrally organised, training organised by Account Managers or through Futures etc are not included. Furthermore, these are the numbers registered, not necessarily the number attended although a system is being implemented to register attendees on the day.

Face to face event	FE	HE	Jisc	Other	Grand Total
Connect more with Jisc (all regions)	279	252	161	335	1027
Jisc Digital Festival 2016	151	333	143	251	878
Networkshop44	13	192	55	115	375
Jisc stakeholder forum January 2016	31	61	1	14	107
Jisc and the Coalition for Networked Information (CNI) conference		41	1	56	98

Table 6: Top Jisc face-to-face events

Online events	FE	HE	Jisc	Other	Grand Total
Preparing students for employability in a digital age webinar	102	219	13	106	440
Inspection performance: Changes to the Ofsted Common Inspection Framework	60		20	169	249
HEDIIP New subject coding system webinar		196	3	24	223
Making your digital resources easier to discover	16	106	5	104	231
Leap into maths webinar	92	2	4	100	198

Table 7: Top Jisc online events

The category 'Other' refers to skills providers and attendees that did not provide sector data; from August 2016 the booking system has been revised so that this data will be mandatory.

Student summer of innovation

The student of summer innovation (SOSI) competition awards successful entrants a grant and support from Jisc to develop their education technology ideas. In 2015 it was redesigned to make it more inclusive, and to fit with the need to produce more products. Jisc also ran a pilot with AELP to develop ideas for apprenticeships. Following the competition, Jisc supported seven projects with development funding:

- **Augmented Reality App**, London School of Economics
  An augmented reality app to provide visitors and students with digital content enhancing campus experience
- **Mappademia**, University of Manchester
  A software tool which allows small project groups to generate their own mapping applications
- **Stuiz**, University of Bath
  Stuiz allows students studying similar courses to compete against each other in quizzes with course-specific content
- **Your Book List**, University of Glasgow
  Connects students buying and selling books at the same university to get the best deal

- **arHive; The collective archive**, University of Leicester
  A collective archive of high-quality crowdsourced scanned pages uploaded to a cloud service to share knowledge
- **Know it Wall**, University College London
  A virtual place for academics to popularise their research
- **Survey Exchange**, University of Central Lancashire
  Survey Exchange enables students to find all the answers they need for their surveys using a unique point system

Preparations for SOSI 2016 were made with fifteen student teams and mentors (totalling over 60 people) attending the design sprint. Seven projects were selected to work with Jisc including a platform to showcase research and an app to sell second hand books. Five ideas will be developed into apps: augmented reality induction; media mapping; survey exchange tool for undergrads; a competitive quiz; and social networking digitisation for researchers and archivists. Jisc also started negotiating to purchase IP and continue *Call for Participants* (taking part in research). We reached agreement for a share of *potential.ly* (profiling for employability) and we are close to reaching a similar position with *Unitu* (enhanced student feedback), for investment of scale £100K each. We will work with Jiscom to improve the sustainability and reach of SOSI in 2017 and beyond.

Management of 'ac.uk' internet domain

There are currently 4969 ac.uk internet domain names registered. An overview of activity in respect of the domain can be found below:

	Active domains removed	Domain requests accepted	Domain requests rejected	Appeals against rejection	Domains renewed
Sep 2015 – Aug 2016	52	245	76	0	2,916

Despite changes made to the eligibility and the appeals process in 2015, the registration process continued well with the expected level of activity during the year in respect of applications and renewals, and no formal appeals against decisions.