

A young man with short brown hair and a light beard is looking down at an open red book he is holding. He is wearing a grey and blue striped sweater. The background is a library with bookshelves filled with books of various colors. The lighting is warm and focused on the man and his book.

Library & Information Spend Predictions for 2020

Results from a Telephone Survey

Research Study undertaken Ipsos MORI and PCG

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1 Executive Summary

1.1 Why the survey was conducted

The Scientific, Technical, Medical and Healthcare (STM&H) information market is large consisting of a range of information tools, services and content types serving a diverse range of needs within institutions. The Library and Information Spend survey is conducted on an annual basis. It is hoped that this information will provide an understanding of the trends impacting the purchasing decisions of scientific, technical and medical information for leading institutions and organisations globally.

1.2 What was done

- A global telephone survey was carried out at 701 institutions across North America, South America, Europe, Asia Pacific and Middle East & Africa.
- Senior librarians and information officers with control over and knowledge of library and information services budgets for 2020 were contacted in order to understand current industry trends and predict future purchasing behaviour.
- Institutions approached included academic institutions, hospital/trusts, medical schools, governments and corporations. Academic institutions were categorised by their size and high level information needs.
- Quotas for this study were set to reflect the global contribution to library and information spend by region and type of institute. Small scale imbalances in the final profile achieved were adjusted by weighting at the analysis stage.
- It should be noted that some participants could only give broad indications as to what they expected to occur in regard to next year's budget.
- Please note that an edited version of this report will be made public and shared with participants.

2 Summary of Results

Budget trends in 2020 by type of Institution

Budget	Academic Institutes			Corp.	Gov't	Hosp/ Medical	Total
	Top	Middle	Lower				
Overall	↑ 0.5	↑ 2.9	↔ 0.0	↑ 2.9	↔ 0.5	↑ 3.6	↑ 2.4
Materials & Info spend	↑ 1.3	↑ 1.7	↑ 0.7	↑ 1.4	↔ -0.2	↑ 0.8	↑ 1.0
- Serials	↑ 0.5	↑ 0.8	↓ -0.5	↔ 0.4	↑ 2.1	↑ 0.8	↑ 0.6
- Books	↔ -0.2	↑ 1.4	↑ 1.8	↔ 0.2	↑ 0.7	↑ 2.6	↑ 1.5
- Medical info tools						↑ 4.1	↑ 4.1
- Abstracting & indexing	↑ 1.6	↔ -0.2	↔ 0.1	↑ 2.9	↑ 2.8		↑ 1.2
<i>n</i>	79	89	106	89	43	295	701

NB: Arrows green or red indicate change greater than 0.5%

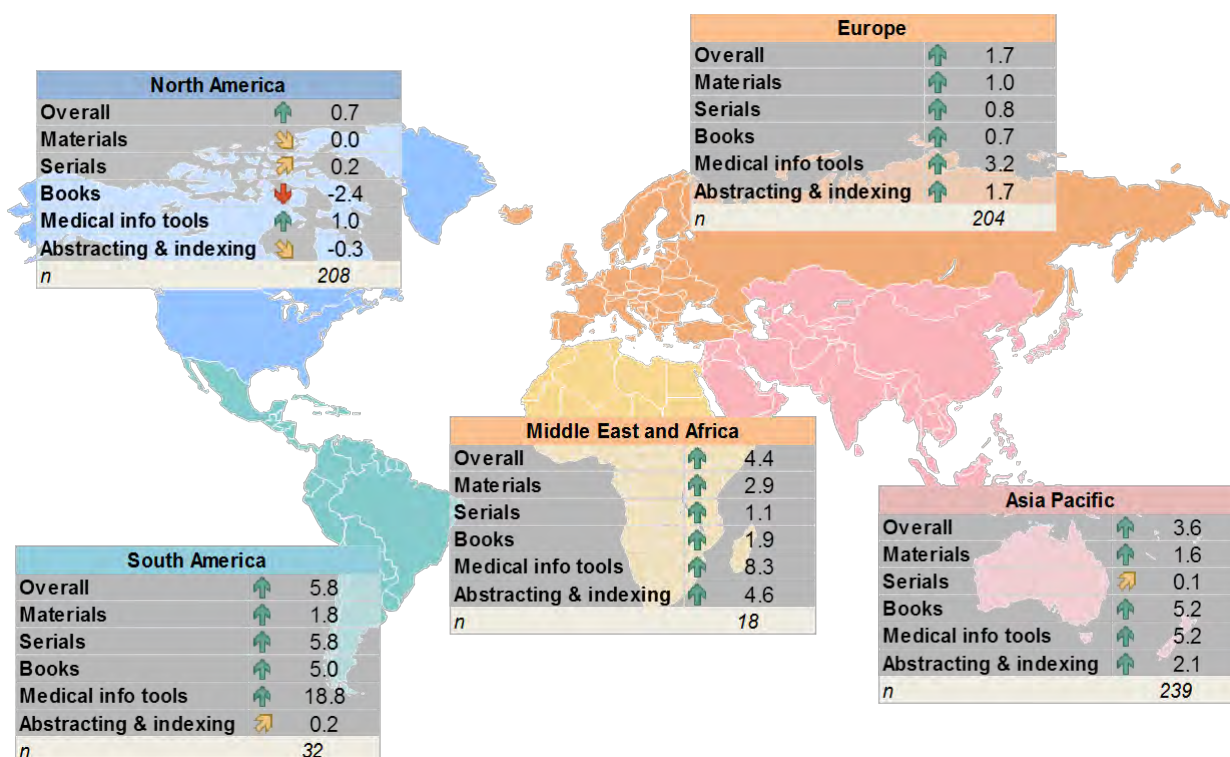
When reviewing the results of this survey, please note that all forecasts for future budget changes are based on predictions from librarians and information officers, and previous analysis suggests that participants may have a tendency to underestimate budgets.

- **Overall Spend** (which includes operation expenditure, salary costs as well as materials) are set to **increase by 2.4%** (in 2018 a 1.0% increase was forecast).
 - All regions forecast some form of budget rise, however, the scale of these varied.
 - Limited increases to overall library budgets are predicted in North America (0.7%), and Europe (1.7%).
 - Projected increases were higher in Asia Pacific (3.6%), the Middle East & Africa (4.4%) and South America (5.8%). It is important to note that data for the Middle East & Africa and South America are based on relatively small base sizes, and therefore should be treated with caution throughout the report.

- The largest rise is predicted within the Emerging countries subset, where overall budgets are forecast to grow by 7.2% in 2020. Much of this is being driven by increases in budgets amongst Medical institutes (12.8%).
- At an institution level across all regions, the most significant increases were noted across Mid-Tier Academic institutes (2.9%), Corporate institutes (2.9%) and Medical institutes (3.6%). Other sectors were largely flat.
- Considering qualitative predictions, 33% of institutes expect their budget to increase (up from 26% in 2018), 48% to remain static, while 14% expect these to decrease.
- **Materials and Information Spend** (all information content provision) are predicted to **increase by 1%** (A 1.1% increase was predicted in 2018).
 - Modest increases are forecast in Europe (1%), Asia Pacific (1.6%) and South America (1.8%), rising to 2.9% in the Middle East & Africa.
 - The exception to this trend is North America (0%), where budgets are expected to remain static in 2020. This was broadly consistent by type of institution, with the two largest sector reporting flat budgets (Academic institutions, -0.1%, and Medical institutes, 0.2%).
 - Across segments, Academic institutions overall are forecasting a 1.2% budget rise, which is partly driven by Mid-Tier institutions (1.7%). Similar growth is expected in Corporations (1.4%) and Medical institutes (0.8%). Government budgets are the exception to this trend and are expected to remain static.
 - Qualitatively, 34% of institutes predict that their materials budget will rise, 45% believe it will remain static. 16 % anticipate a decrease.
 - Overall, Academic institutions that teach Medicine, Nursing and Allied Health subjects spend 23% of their current materials budget on these subject areas.
 - For 2020, such institutions expect to increase spending on these subject areas by 1.8%, with more growth stemming from Mid-tier institutions (2.9%).
- **Serials budgets** are forecast to **increase by 0.6%** (a 1.1% increase was predicted in 2018)
 - North America predicts a 0.2% increase for serials, compared to -0.2% decrease in 2018. Within North America, Top-Tier Academic institutions predicted the largest decline (-1.7%).
 - European budgets will rise by 0.8%, broadly in line with the 2018 budget estimates (0.5%). Asia Pacific was static at 0.1%.
 - 33% of institutions expect an increase in serials budgets. 48% believe it will remain static whilst 15% predict a decrease in spend, which is very much in line with the 2018 findings.
- **Book expenditure** is forecast to **increase by 1.5%** (an increase of 0.3% was predicted in 2018 when the study was last run).
 - This is the largest projected increase for the books budget since the 2014 predictions. This appears to be partly driven by Emerging markets, and the inclusion of more Medical institutions within the research.
 - Europe expects an increase of 0.7%, with higher estimates predicted in Asia Pacific (5.2%), South America (5.0%) and the Middle East & Africa (1.9%). Within Asia Pacific, much of this growth is driven by Medical Institutes (8.9%).
 - North America shows a decline of -2.4% and continues the downward trend noted in 2018. Medical/Health (-3.7% decrease) is the hardest hit segment in North America.
 - Book budgets are set to rise by 8.9% amongst the Emerging countries subset, with Medical institutes (15.3%) once again influencing this overall trend.
 - Small increases are predicted by Academic institutions (1.0%) and Government (0.7%), whilst Corporate budgets are flat (0.2%).
 - The majority (59%) of institutes believe their budgets will remain static, similar to observations in 2018. 21% predict that budget expenditure for 2020 will increase while 17% predict a decrease.

- On average, 24.7% of existing (2019) book budgets are spent on e-books, a slight decline on the 2017 estimate (27.5%). E-book expenditure is predicted to increase by 4.9%: and this trend is largely being driven by Corporate (11.1%) and Academic (4.6%) institutions, as well as those within the Emerging countries subset (6.5%).
- **Medical Information Tools** – Clinical Reference systems were the most widely used of the tools, with 4 in 5 of Hospitals using.
 - Diagnostic or Advanced Clinical Decision Support tools and Patient Engagement tools were less prevalent, with 1 in 3 using such tools.
 - 2020 budgets were expected to increase by an average of 4.1% in this area, but it was noted that budgets were lower in North America with a 1% increase projected.
- **Research Data Management** – the most widely provided tool is Institutional Repositories, with 46% of institutes providing this, rising to 67% amongst academic institutes. RDM, CRIS and Research Performance Analytics tools were less likely to be provided (by 21%, 21% and 25% of institutes respectively).
- **'Open Access'** fees are being paid for this from the materials budget by 22% of institutes (a 6% percentage point rise from last year). This is more prevalent in Europe where 40% do this, compared to 20% in North America and 7% in Asia Pacific.
- **A&I Services** are provided by 85% of institutes, similar to 2018 (88%). Budgets here are expected to rise by 1.2%, however the majority of institutions believe their budget will remain static. Most institutes (72%) take two or more services, with 34% taking 4 or more.

Budget trends in 2020 by Region*



* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

3 Overall Library & Info spend broken down

3.1 Academic institutes library expenditure

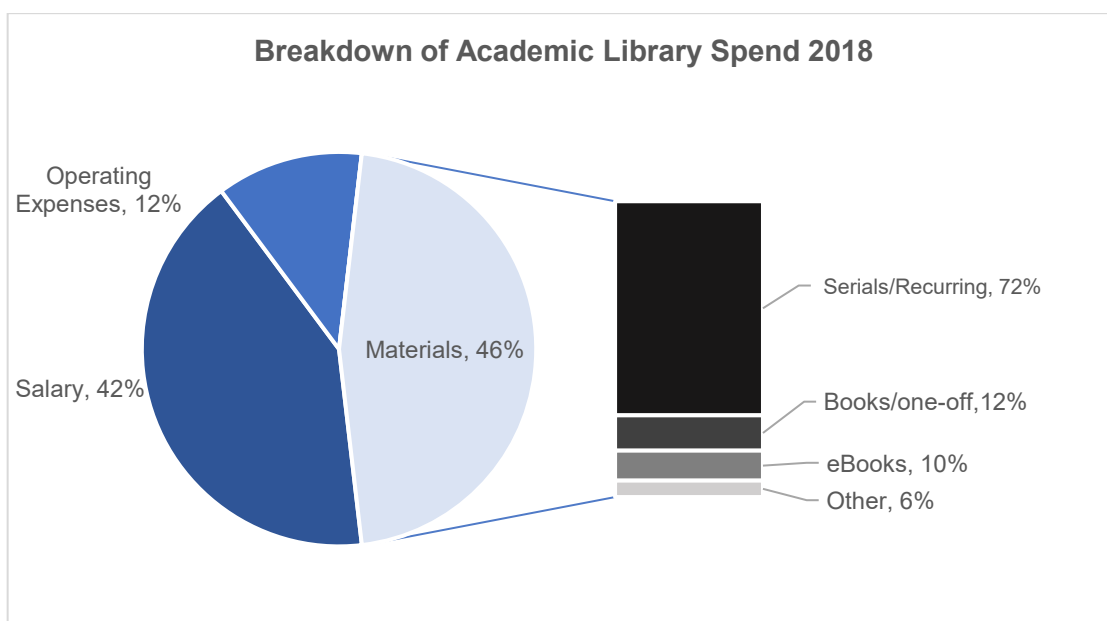
The overall library budget includes the ongoing costs of maintaining a library, salary, materials and operating expenditure.

A review of the Association of Research Libraries (ARL) statistics provides an idea of how library budgets break down in the Academic institutes for North America.

The ARL statistics include details of collections, expenditures, staffing, and service activities for its member libraries and the majority of the libraries are large North American academic institutes.

The latest data is from 2018¹. 116 university libraries reported a combined expenditure of \$3.6 billion. This expenditure broke down into: Materials (46%), Salaries (42%) and other operating expenditures (12%) - see chart below.

Spend on information content, tools and solutions is normally (but not always) part of the Materials budget. The Materials budget further broke down into ongoing resource expenditure (72%) and one-time resource expenditure (22%), with the rest being allocated to collection support. It is worth noting that the ARL no longer classifies expenditure in terms of serials or books, they changed their approach in 2012. However, when looking at their definitions and the amount of expenditure this classification represents when compared to previous periods, it is pretty clear most of the expenditure associated with ongoing resources will be traditional journal subscriptions.



4 Methodology

A total of 701 telephone interviews were conducted between August and November 2019.

Individuals with responsibility for the administration of budgets for libraries or information services were recruited from 6 main categories of institution:

1. Academic* Low-Tier: 500 to 9,999 full time students.
2. Academic* Mid-Tier: 10,000 to 24,999 full time students.
3. Academic* Top-Tier: 25,000+ full time students.
4. Medical: Both public and private hospitals and medical trusts, including those providing primary care and/or secondary care.
5. Government: government departments, public sector bodies/agencies.
6. Corporate: Commercial companies having 200+ employees, with a R&D function (e.g. Pharma, Engineering, Oil/Gas, Technology).

* Academic Institutions include universities and other higher academic institutions, including medical schools attached to the university. Classification of Tier was based on the number of full time students, provided by participants.

Interviews were conducted in 37 countries, across 6 regions – North America, Europe, Asia Pacific, South America and Middle East & Africa.

The full list of markets included was as follows: Canada, USA, Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Poland, Portugal, Romania, Russia, Spain, Sweden, Switzerland, UK, Australia, China, India, Japan, South Korea, Malaysia, New Zealand, Taiwan, Argentina, Brazil, Chile, Colombia, Mexico, Venezuela, Israel, South Africa, Turkey.

A standardised 20-minute questionnaire was used in all markets, and translated into 17 different language options.

Quotas were adopted on type of institution and region, and a full breakdown of the final sample has been included on following page. The reported data has been weighted back to the original quota targets to adjust for small scale imbalances in the final distribution of interviews.

Within the following report, we have included a combined measure of all Academic institutions, combining the responses from Top, Middle and Low-Tier institutions.

Where appropriate, we have also included a subset of markets called 'Emerging countries'. This includes the following markets: India, China, Czech Republic, Poland, Romania, Russia, Argentina, Brazil, Chile, Colombia, Mexico, Turkey, South Africa and Venezuela.

The overall margin of error is approximately $\pm 3.7\%$, based on the total sample size of 701 (e.g. if 50% of the overall sample claim to use a particular information tool, the actual proportion is likely to lie between 46.3% to 53.7%).

4.1 Sample collected

The final sample breakdown was as follows:

Region	Country	Academic Tier 1	Academic Tier 2	Academic Tier 3	Hospitals	Govt.	Corporate	Total	%
North America	Canada	3	2	2	6	1	2	16	2%
	USA	26	23	23	82	14	24	192	27%
	Total	29	25	25	88	15	26	208	30%
Europe	Austria	1	1	1	3	0	1	7	1%
	Belgium	2	1	0	3	0	1	7	1%
	Czech Republic	2	1	0	3	0	1	7	1%
	Denmark	0	1	0	2	0	0	3	0%
	Finland	0	0	0	2	0	0	2	0%
	France	7	1	1	10	2	3	24	3%
	Germany	5	5	15	17	3	4	49	7%
	Hungary	0	0	0	0	0	0	0	0%
	Ireland	0	0	0	2	0	1	3	0%
	Italy	4	1	2	7	1	1	16	2%
	Netherlands	2	0	1	3	0	1	7	1%
	Poland	1	1	1	3	0	1	7	1%
	Portugal	0	0	0	2	0	1	3	0%
	Romania	1	2	0	3	0	1	7	1%
	Russia	4	3	2	7	1	2	19	3%
	Spain	2	1	1	5	1	1	11	2%
	Sweden	1	1	1	3	0	1	7	1%
Switzerland	1	1	0	3	0	1	6	1%	
UK	3	3	0	10	1	2	19	3%	
Total	36	23	25	88	9	23	204	29%	
Asia Pacific	Australia	1	2	0	5	1	1	10	1%
	China	11	14	14	22	4	13	78	11%
	Hong Kong	0	0	0	0	0	0	0	0%
	India	4	2	4	10	2	3	25	4%
	Japan	9	7	2	39	5	8	70	10%
	South Korea	0	0	0	2	0	1	3	0%
	Malaysia	0	0	0	4	0	0	4	1%
	New Zealand	7	4	2	10	3	4	30	4%
	Taiwan	2	5	1	8	1	2	19	3%
	Total	34	34	23	100	16	32	239	34%
South America	Argentina	2	1	1	2	0	1	7	1%
	Brazil	1	2	2	6	1	2	14	2%
	Chile	0	0	0	1	0	0	1	0%
	Colombia	0	0	0	1	0	0	1	0%
	Mexico	1	1	1	2	0	1	6	1%
	Venezuela	0	0	0	2	0	1	3	0%
Total	4	4	4	14	1	5	32	5%	
Middle East and Africa	Israel	1	0	0	2	0	1	4	1%
	Saudi Arabia	0	0	0	0	0	0	0	0%
	South Africa	1	2	1	2	0	1	7	1%
	Turkey	1	1	1	1	2	1	7	1%
Total	3	3	2	5	2	3	18	3%	
Total	N	106	89	79	295	43	89	701	100%
	%	15%	13%	11%	42%	6%	13%	100%	

5 Overall Spend

5.1 Overall Spending Predications for 2020

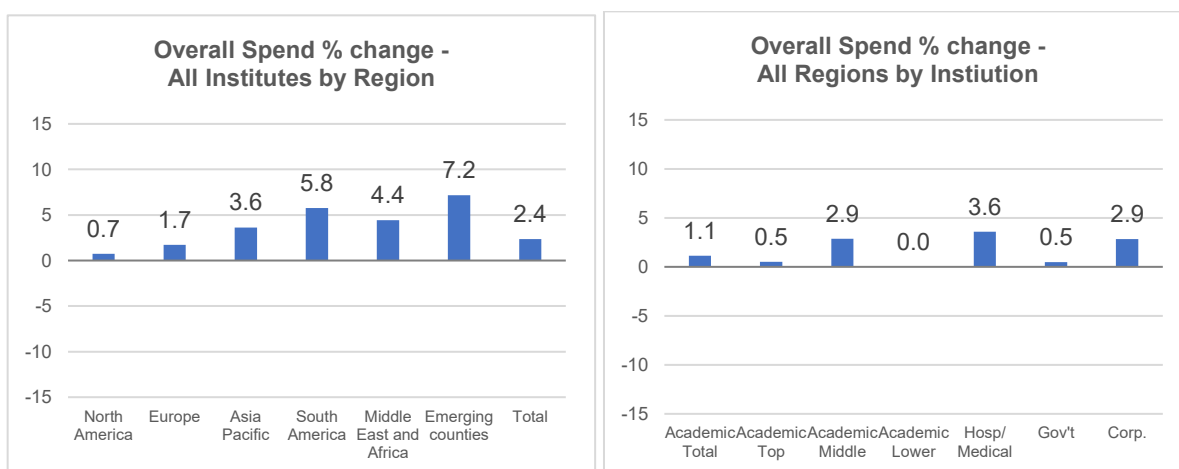
All librarians and information officers were asked if they expect their overall spend for 2020 to increase, remain the same or decrease when compared to their 2019 budget. This refers to the overall budget spent and includes salaries, operating or maintenance costs and materials costs (e.g. books, book series, journals and information tools).

Overall spend is predicted to increase by 2.4% in 2020. This represents an increase from 2018, and is driven mainly by predicted growth in Hospitals and Medical Trusts (3.6%), and institutions within Emerging countries (7.2%).

All regions are predicting some form of increase; however, this varies by geography. More modest increases are predicted in North America (0.7%) and Europe (1.7), whilst greater rises are estimated in Asia Pacific (3.6%) and South America (5.8%)*.

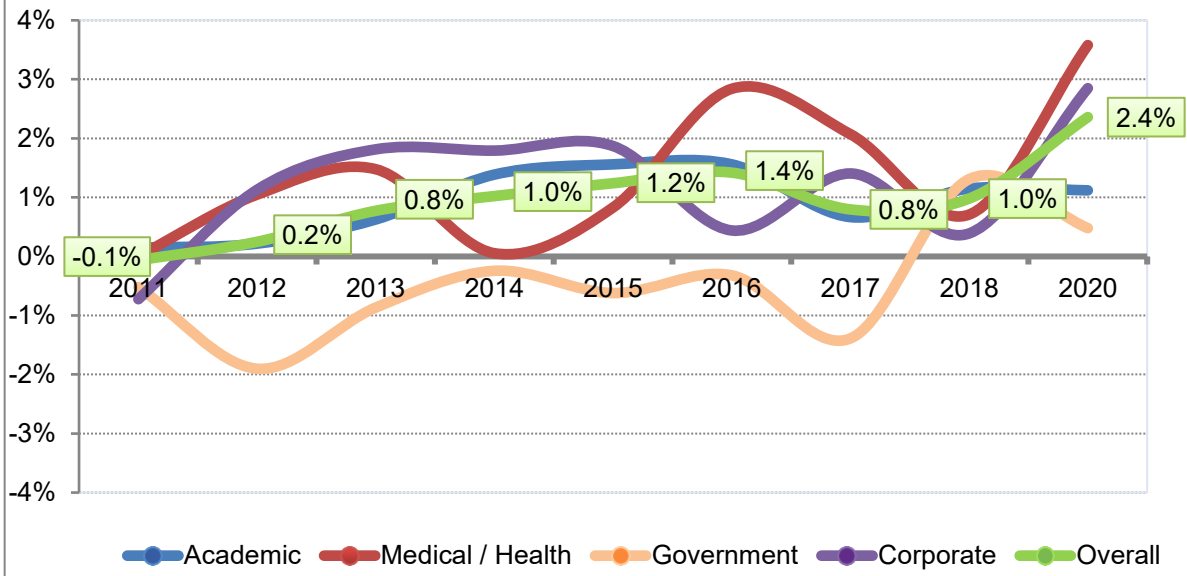
- Academic institutions, at a total level, are expecting an increase of 1.1% and much of this stems from budget increases in Mid-Tier Academic institutions (2.9%). Overall budgets are also expected to increase within Corporate institutions by 2.9%.

Qualitative forecasts indicate that 48% of all institutional budgets will remain static. A third (33%) of institutes predict budget growth in 2020, which is an increase from 26% in 2018. 14% of institutes are expecting a decrease in overall budget size (vs 17% in 2018). These figures are broadly comparable between the different regions. The most notable differences exist within Emerging countries, with 50% of institutions predicting a budget rise.



* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

Overall Spend Forecasts for 2011 to 2020



Budget change for 2020 - Overall Spend						
Region	Organisation	Base*	Qualitative Predictions			Quantitative Predictions
		n	% respondents predicting			% Budget Change
			Increase	Static	Decrease	
North America	Academic Top	25	20%	64%	16%	0.0
	Academic Middle	25	32%	44%	20%	0.2
	Academic Lower	29	17%	52%	31%	-0.2
	<i>All Academic</i>	79	23%	53%	22%	0.0
	Medical/Health	88	38%	49%	13%	1.1
	Government	15	40%	27%	33%	-4.3
	Corporate	26	50%	27%	19%	4.7
	Overall	208	34%	46%	19%	0.7
Europe	Academic Top	25	32%	52%	4%	1.0
	Academic Middle	23	13%	70%	17%	0.0
	Academic Lower	36	28%	56%	6%	1.3
	<i>All Academic</i>	84	24%	59%	9%	0.7
	Medical/Health	88	25%	64%	9%	1.4
	Government	9	33%	33%	22%	5.8
	Corporate	23	48%	39%	9%	3.5
	Overall	204	28%	57%	10%	1.7
Asia Pacific	Academic Top	23	39%	48%	9%	2.0
	Academic Middle	34	32%	41%	12%	5.1
	Academic Lower	34	26%	32%	38%	-0.9
	<i>All Academic</i>	91	33%	40%	20%	1.9
	Medical/Health	100	41%	49%	8%	6.3
	Government	16	19%	69%	6%	1.0
	Corporate	32	38%	41%	16%	0.7
	Overall	239	36%	46%	13%	3.6
South America	Academic Top	4	0%	75%	25%	-11.3
	Academic Middle	4	50%	25%	25%	22.5
	Academic Lower	4	25%	50%	25%	-2.5
	<i>All Academic</i>	12	25%	50%	25%	2.9
	Medical/Health	14	57%	43%	0%	11.4
	Government	1	0%	0%	100%	-2.0
	Corporate	5	40%	0%	60%	0.0
	Overall	32	39%	37%	25%	5.8
Middle East and Africa	Academic Top	2	50%	0%	0%	10.0
	Academic Middle	3	33%	67%	0%	0.3
	Academic Lower	3	67%	33%	0%	5.0
	<i>All Academic</i>	8	50%	33%	0%	4.1
	Medical/Health	5	20%	40%	0%	3.3
	Government	2	50%	50%	0%	2.5
	Corporate	3	67%	33%	0%	8.3
	Overall	18	40%	37%	0%	4.4
Emerging Countries	Academic Top	27	42%	41%	3%	2.8
	Academic Middle	30	33%	54%	4%	9.3
	Academic Lower	29	42%	33%	19%	1.9
	<i>All Academic</i>	86	39%	43%	8%	4.7
	Medical/Health	65	62%	32%	3%	12.8
	Government	10	32%	45%	23%	1.6
	Corporate	28	58%	18%	20%	2.9
	Overall	189	50%	36%	9%	7.2
Overall	Academic Top	79	30%	53%	10%	0.5
	Academic Middle	89	28%	50%	16%	2.9
	Academic Lower	106	25%	45%	25%	0.0
	<i>All Academic</i>	274	28%	50%	17%	1.1
	Medical/Health	295	36%	52%	9%	3.6
	Government	43	29%	42%	24%	0.5
	Corporate	89	45%	34%	16%	2.9
	Overall	701	33%	48%	14%	2.4

* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

6 Materials and Information Spend

6.1 Breakdown of Materials and Information Spend

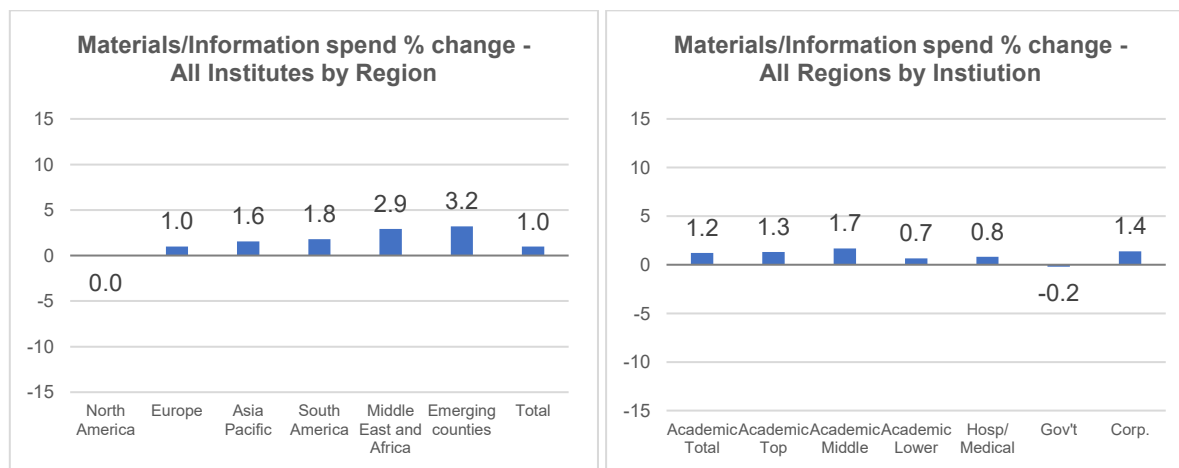
All librarians and information officers were asked about their current materials and information spend, and expectations for 2020.

6.2 Materials and Information Spend Predications for 2020

Overall materials spend is set to increase in 2020 by 1%, which is closely aligned with the previous 2018 forecast (1.1%).

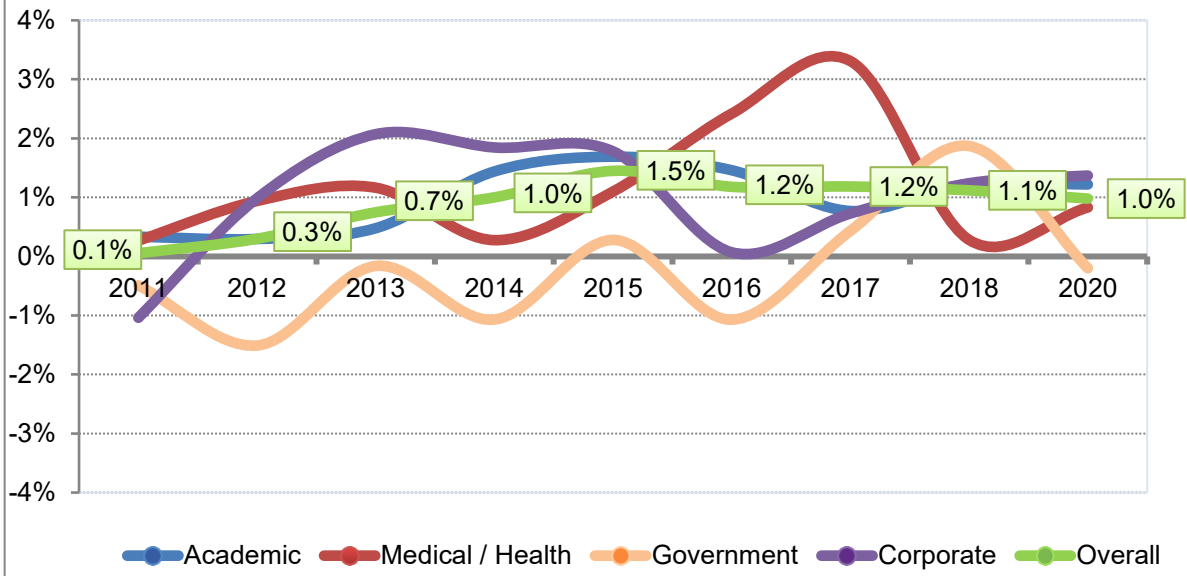
- In North America Materials budgets are predicted to remain static in 2020, whilst all other regions have estimated growth in this area. Small increases are forecast in Europe (1%) and Asia Pacific (1.6%), whilst larger rises are estimated in South America (2.9%) and the Middle East & Africa (3.2%)*.
- Predictions between the different types of institution are closely aligned, with an increase of 1.2% anticipated across all Academic institutions, and 1.4% amongst Corporate institutions. Hospital and Medical Trusts estimate a rise of 0.8% and Government institutions are set to remain static.

Qualitative forecasts suggest that 45% of Material budgets will remain static, with 34% of institutes predicting growth in this category for 2020 (an increase from 26% in 2018). 16% of institutes are expecting a decrease in the overall materials budget size, which is comparable to the budget forecast for 2018. Half of institutions (50%) in Emerging countries are predicting some form of rise to their Materials budget.



* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

Materials and Information Spend Forecasts for 2011 to 2020



Materials and Information Spend change for 2020						
		Base*	Qualitative Predictions			Quantitative Predictions
			% respondents predicting			
Region	Organisation	n	Increase	Static	Decrease	% Budget Change
North America	Academic Top	25	20%	60%	20%	-1.0
	Academic Middle	25	52%	32%	16%	1.0
	Academic Lower	29	31%	48%	21%	-0.4
	<i>All Academic</i>	<i>79</i>	<i>34%</i>	<i>47%</i>	<i>19%</i>	<i>-0.1</i>
	Medical/Health	88	24%	53%	20%	0.2
	Government	15	33%	33%	33%	-2.5
	Corporate	26	38%	38%	23%	0.9
	Overall	208	30%	48%	21%	0.0
Europe	Academic Top	25	40%	48%	4%	1.7
	Academic Middle	23	22%	57%	17%	0.1
	Academic Lower	36	33%	31%	19%	1.5
	<i>All Academic</i>	<i>84</i>	<i>32%</i>	<i>45%</i>	<i>14%</i>	<i>1.1</i>
	Medical/Health	88	26%	57%	10%	0.8
	Government	9	33%	11%	22%	0.5
	Corporate	23	43%	39%	17%	1.7
	Overall	204	31%	47%	13%	1.0
Asia Pacific	Academic Top	23	57%	26%	17%	2.8
	Academic Middle	34	47%	26%	15%	3.2
	Academic Lower	34	32%	29%	29%	0.4
	<i>All Academic</i>	<i>91</i>	<i>45%</i>	<i>27%</i>	<i>21%</i>	<i>2.1</i>
	Medical/Health	100	32%	51%	11%	1.2
	Government	16	31%	63%	0%	1.7
	Corporate	32	41%	44%	13%	1.1
	Overall	239	38%	42%	14%	1.6
South America	Academic Top	4	0%	75%	0%	0.0
	Academic Middle	4	50%	0%	25%	10.3
	Academic Lower	4	50%	25%	25%	1.5
	<i>All Academic</i>	<i>12</i>	<i>33%</i>	<i>33%</i>	<i>17%</i>	<i>3.7</i>
	Medical/Health	14	21%	64%	7%	1.0
	Government	1	0%	0%	100%	-4.0
	Corporate	5	60%	20%	20%	3.6
	Overall	32	29%	42%	20%	1.8
Middle East and Africa	Academic Top	2	50%	50%	0%	4.5
	Academic Middle	3	33%	33%	33%	-2.7
	Academic Lower	3	67%	33%	0%	5.0
	<i>All Academic</i>	<i>8</i>	<i>50%</i>	<i>39%</i>	<i>11%</i>	<i>2.3</i>
	Medical/Health	5	60%	40%	0%	3.4
	Government	2	50%	50%	0%	4.0
	Corporate	3	67%	33%	0%	2.7
	Overall	18	56%	39%	4%	2.9
Emerging Countries	Academic Top	27	54%	32%	8%	4.0
	Academic Middle	30	45%	31%	10%	4.3
	Academic Lower	29	49%	24%	17%	3.2
	<i>All Academic</i>	<i>86</i>	<i>50%</i>	<i>29%</i>	<i>11%</i>	<i>3.9</i>
	Medical/Health	65	45%	38%	9%	2.7
	Government	10	41%	23%	23%	1.6
	Corporate	28	64%	25%	11%	3.1
	Overall	189	50%	32%	11%	3.2
Overall	Academic Top	79	38%	45%	13%	1.3
	Academic Middle	89	41%	36%	17%	1.7
	Academic Lower	106	34%	35%	23%	0.7
	<i>All Academic</i>	<i>274</i>	<i>38%</i>	<i>39%</i>	<i>18%</i>	<i>1.2</i>
	Medical/Health	295	28%	54%	13%	0.8
	Government	43	31%	36%	21%	-0.2
	Corporate	89	43%	39%	17%	1.4
	Overall	701	34%	45%	16%	1.0

* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

6.3 Medicine, Nursing and Allied Health subject areas (Academic only)

65% of Academic institutions stated that they teach Medicine, Nursing or Allied Health Studies. These institutions were asked to assess what proportion of their current Materials budget is spent on these subject areas specifically, and then forecast spending on this area for 2020.

In 2019, such institutions spent 23% of their Materials budget on these subject areas.

This figure is broadly comparable between the different regions. North American institutions invest the lowest proportion of their materials budget on these subjects (18%), whilst higher spending levels are reported in Europe (26%) and Asia Pacific (25%).

Lower-Tier Academic institutions have a higher percentage of expenditure on these subject areas (29%), in comparison to Top-Tier (20%) and Mid-Tier (22%) institutions.

Percentage Expenditure on content for Medicine, Nursing and Allied Health Subject Areas			
Region	Organisation	Base* n	% respondents predicting
North America	Academic Top	23	22%
	Academic Middle	22	14%
	Academic Lower	21	19%
	<i>All Academic</i>	66	18%
Europe	Academic Top	17	21%
	Academic Middle	11	23%
	Academic Lower	22	33%
	<i>All Academic</i>	50	26%
Asia Pacific	Academic Top	12	10%
	Academic Middle	18	29%
	Academic Lower	16	35%
	<i>All Academic</i>	46	25%
South America	Academic Top	4	35%
	Academic Middle	4	22%
	Academic Lower	2	40%
	<i>All Academic</i>	10	31%
Middle East and Africa	Academic Top	2	30%
	Academic Middle	3	52%
	Academic Lower	1	30%
	<i>All Academic</i>	6	39%
Emerging Countries	Academic Top	17	18%
	Academic Middle	18	33%
	Academic Lower	12	33%
	<i>All Academic</i>	47	26%
Overall	Academic Top	58	20%
	Academic Middle	58	22%
	Academic Lower	62	29%
	<i>All Academic</i>	178	23%

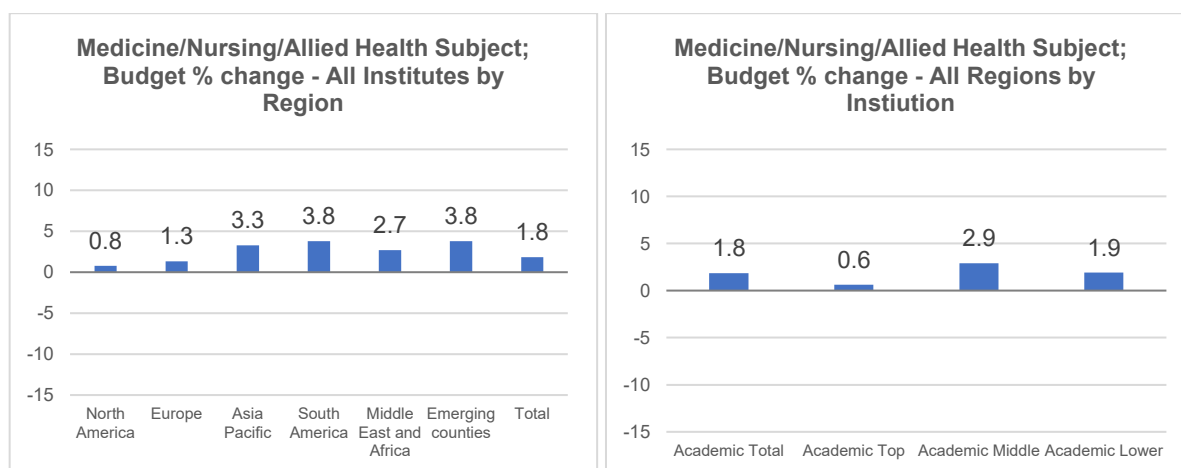
* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

6.4 Medicine, Nursing and Allied Health Budget Predications for 2020 (Academic only)

Materials budget share for Medicine, Nursing and Allied Health subject content is forecast to increase by 1.8% in 2020.

- North America is predicting this budget to increase by 0.8%, which is broadly comparable to Europe (1.3%). Larger increases are forecast in the Middle East & Africa (2.7%), Asia Pacific (3.3%,) and South America (3.8%)*. Collectively, Emerging countries have predicted a budget rise of 3.8% in this area.
- Academic institutions have forecast this budget to increase by 1.8%, which is largely driven by growth from Top-Tier institutions (2.9%).

Qualitative forecasts indicate that this budget will remain static for around half (52%) of all Academic institutions. A further 29% of institutes have predicted this budget to grow in 2020. There are 11% academic intuitions anticipating a reduction in such spending, and this shrinks to 4% amongst those based in Europe.



* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

Medicine/Nursing/Allied Health Subject; Budget change for 2020

		Base	Qualitative Predictions			Quantitative Predictions
			% respondents predicting			
Region	Organisation	n	Increase	Static	Decrease	% Budget Change
North America	Academic Top	23	22%	57%	13%	0.0
	Academic Middle	22	32%	50%	14%	2.1
	Academic Lower	21	19%	57%	19%	0.1
	<i>All Academic</i>	66	24%	54%	15%	0.8
Europe	Academic Top	17	29%	53%	0%	2.6
	Academic Middle	11	18%	73%	9%	0.7
	Academic Lower	22	27%	59%	5%	0.6
	<i>All Academic</i>	50	26%	60%	4%	1.3
Asia Pacific	Academic Top	12	33%	33%	0%	3.8
	Academic Middle	18	44%	33%	17%	1.9
	Academic Lower	16	25%	50%	25%	4.4
	<i>All Academic</i>	46	35%	38%	14%	3.3
South America	Academic Top	4	0%	75%	25%	-13.8
	Academic Middle	4	75%	25%	0%	18.3
	Academic Lower	2	50%	50%	0%	10.0
	<i>All Academic</i>	10	40%	50%	10%	3.8
Middle East and Africa	Academic Top	2	50%	50%	0%	6.0
	Academic Middle	3	33%	67%	0%	0.3
	Academic Lower	1	0%	100%	0%	0.0
	<i>All Academic</i>	6	36%	64%	0%	2.7
Emerging Countries	Academic Top	17	26%	51%	5%	-0.5
	Academic Middle	18	40%	54%	0%	6.3
	Academic Lower	12	20%	73%	0%	7.2
	<i>All Academic</i>	47	30%	57%	2%	3.8
Overall	Academic Top	58	27%	51%	7%	0.6
	Academic Middle	58	36%	49%	12%	2.9
	Academic Lower	62	24%	56%	15%	1.9
	<i>All Academic</i>	178	29%	52%	11%	1.8

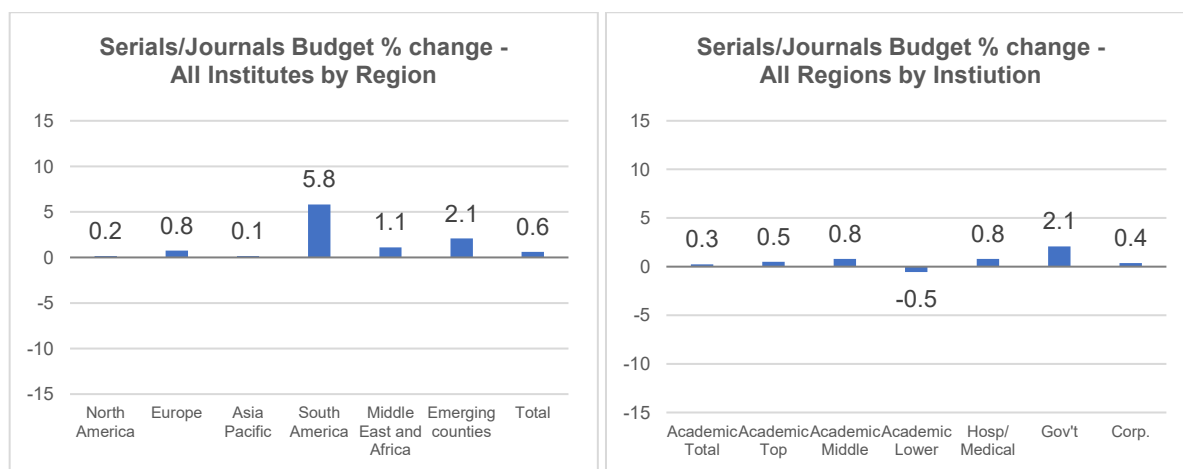
7 Serials and Journals

All librarians and information officers were asked about anticipated 2020 expenditure on serials, journals or ongoing subscriptions covering scientific content. By Serials and Journals, we are referring to repeating publications on a subject or area, typically monthly or quarterly and subscription based. This category also includes journal databases or platforms e.g. Wiley Online or ScienceDirect.

Serials/Journals budgets are projected to increase by an average of 0.6% across all institutions surveyed, with some variations by region and type of institution.

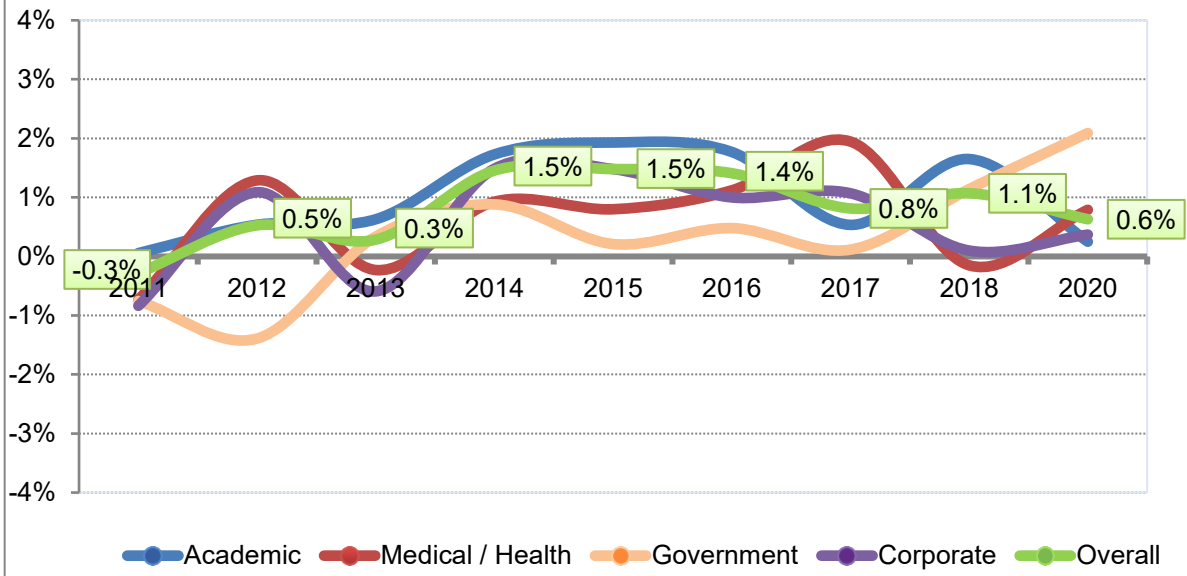
- Budgets are projected to be flat in North America and Asia Pacific, with increases of circa 1% envisaged in Europe and the Middle East & Africa, increasing to 2% in Emerging Countries*.
- There was limited variation by type of institution, with Government institutions projecting the highest increase to their serials budget in 2020 (2.1%).
- There were few marked changes in 2020 serials/journals budgets compared to 2018 (the last data point available) across most sectors. The only exceptions to this was the Government sector, which increased from 1.1% in 2018 to 2.1% in 2020, and academic institutions that declined from 1.7% in 2018 to 0.3% in 2020.

Qualitative forecasts indicate that circa 1 in 2 (48%) of institutes believe that their budgets will remain static, 33% predict that their budgets will increase and 15% expect budgets to decrease. This is similar to the pattern observed for 2018 budgets, when the research was last conducted.



* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

Serials/Journals Budget Forecasts for 2011 to 2020



Serials/Journals Budget Change for 2020						
		Base*	Qualitative Predictions			Quantitative Predictions
			% respondents predicting			
Region	Organisation	n	Increase	Static	Decrease	% Budget Change
North America	Academic Top	25	36%	36%	28%	-1.7
	Academic Middle	25	56%	28%	16%	1.8
	Academic Lower	29	31%	45%	24%	-0.4
	<i>All Academic</i>	79	41%	36%	23%	-0.1
	Medical/Health	88	30%	53%	16%	0.6
	Government	15	40%	40%	20%	0.3
	Corporate	26	38%	46%	8%	-0.9
	Overall	208	36%	45%	18%	0.2
Europe	Academic Top	25	48%	44%	8%	3.0
	Academic Middle	23	22%	52%	17%	0.3
	Academic Lower	36	28%	50%	17%	0.0
	<i>All Academic</i>	84	33%	49%	14%	1.2
	Medical/Health	88	33%	49%	13%	0.3
	Government	9	33%	44%	11%	6.5
	Corporate	23	26%	52%	22%	-1.6
	Overall	204	32%	49%	14%	0.8
Asia Pacific	Academic Top	23	48%	35%	17%	1.8
	Academic Middle	34	24%	56%	18%	0.2
	Academic Lower	34	26%	44%	21%	-2.6
	<i>All Academic</i>	91	33%	45%	19%	-0.1
	Medical/Health	100	29%	51%	14%	-0.3
	Government	16	19%	75%	0%	1.3
	Corporate	32	44%	44%	13%	1.6
	Overall	239	32%	50%	14%	0.1
South America	Academic Top	4	0%	75%	25%	-13.8
	Academic Middle	4	75%	25%	0%	15.0
	Academic Lower	4	50%	50%	0%	5.8
	<i>All Academic</i>	12	42%	50%	8%	2.3
	Medical/Health	14	29%	57%	7%	10.6
	Government	1	0%	0%	100%	-5.0
	Corporate	5	40%	60%	0%	8.0
	Overall	32	32%	50%	14%	5.8
Middle East and Africa	Academic Top	2	50%	50%	0%	5.0
	Academic Middle	3	33%	33%	33%	-20.0
	Academic Lower	3	67%	0%	33%	4.3
	<i>All Academic</i>	8	50%	28%	22%	-3.6
	Medical/Health	5	40%	60%	0%	4.0
	Government	2	50%	50%	0%	5.0
	Corporate	3	67%	0%	0%	5.0
	Overall	18	48%	39%	9%	1.1
Emerging Countries	Academic Top	27	43%	39%	18%	0.4
	Academic Middle	30	24%	60%	16%	-0.3
	Academic Lower	29	43%	39%	15%	2.1
	<i>All Academic</i>	86	37%	46%	17%	0.7
	Medical/Health	65	39%	41%	12%	3.2
	Government	10	23%	54%	23%	0.8
	Corporate	28	54%	39%	4%	4.7
	Overall	189	39%	44%	14%	2.1
Overall	Academic Top	79	42%	40%	18%	0.5
	Academic Middle	89	35%	45%	17%	0.8
	Academic Lower	106	31%	45%	20%	-0.5
	<i>All Academic</i>	274	36%	43%	18%	0.3
	Medical/Health	295	31%	52%	13%	0.8
	Government	43	29%	51%	14%	2.1
	Corporate	89	38%	46%	13%	0.4
	Overall	701	33%	48%	15%	0.6

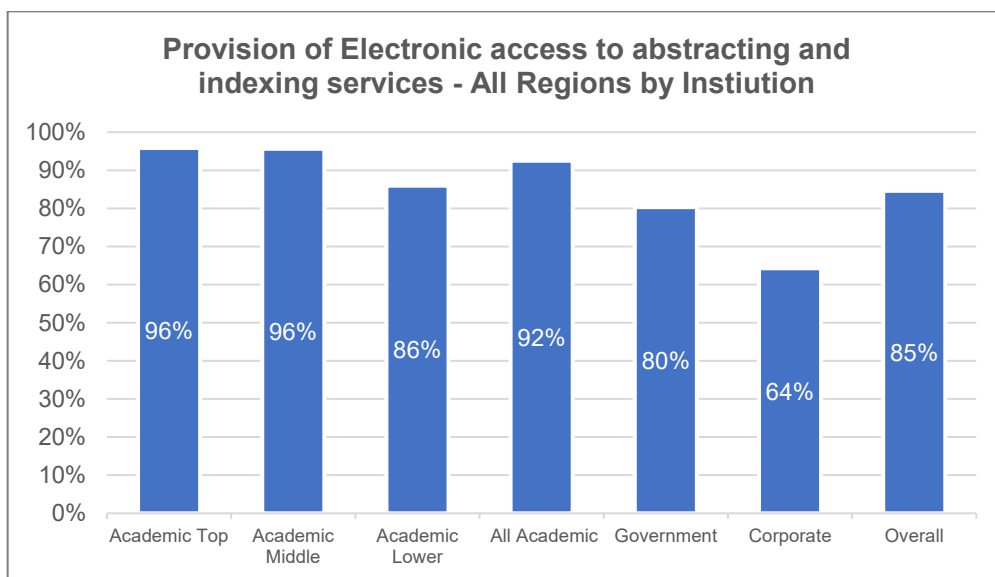
* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

8 Abstracting and Indexing Services

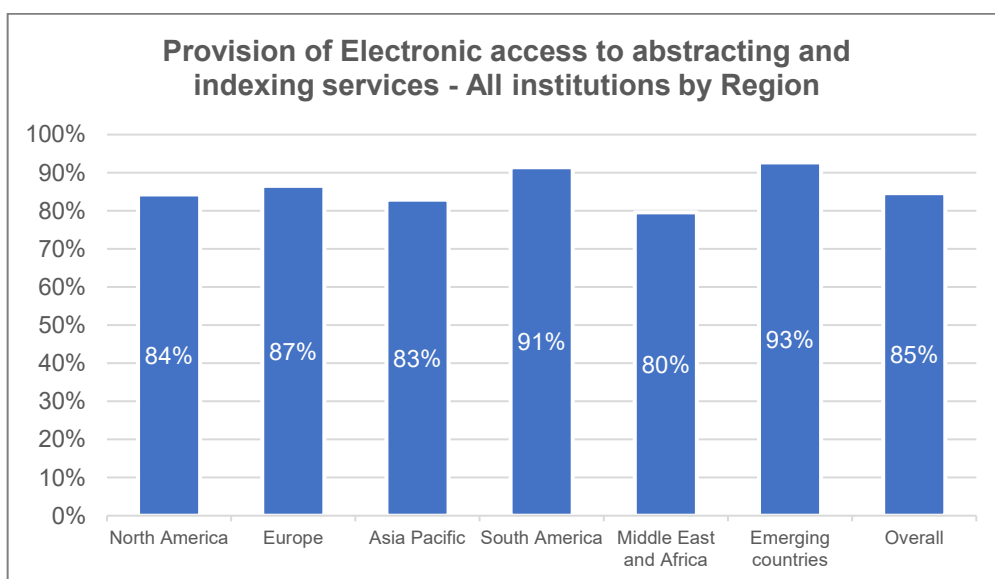
8.1 Provision of Electronic access

All librarians and information officers in Academic, Government and Corporate institutions were asked about their use of bibliographic databases or abstracting and indexing services, and, if applicable, their anticipated expenditure in this area in 2020.

A majority of institutions (85%) currently provide electronic access to such services, similar to the 2017 study and this was more widespread amongst Academic institutions (92%), with Corporate institutions being the least likely to offer this (64%).



The provision of such services was broadly comparable across regions, although was most common in Emerging countries (93%).

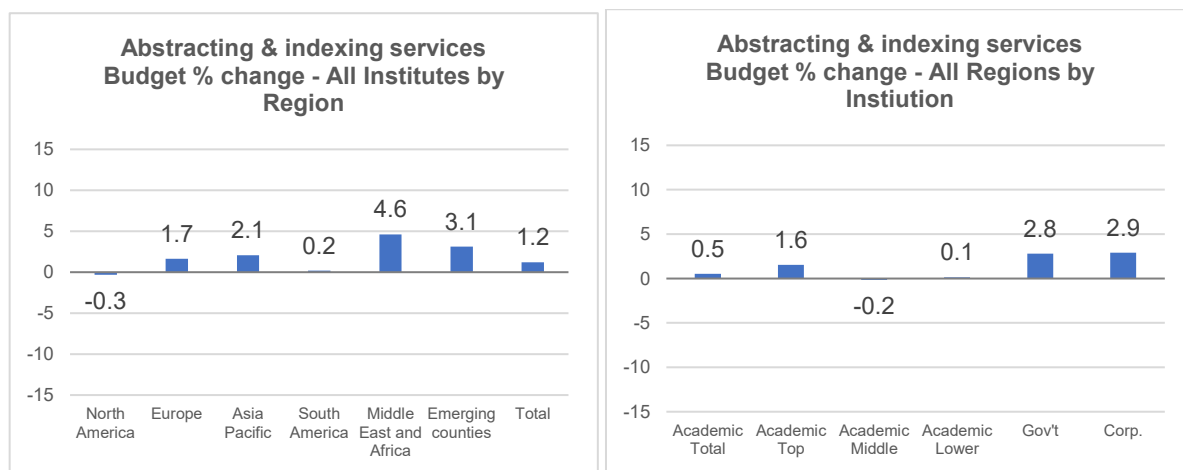


8.2 Abstracting and Indexing Services – 2020 budget predictions

Amongst institutions using such services, spending on abstracting and indexing databases in 2020 is projected to increase by an average of 1.2%.

- In North America projected budgets are flat overall (-0.3%), with modest increases anticipated in Europe (1.7%) and Asia Pacific (2.1%). In Emerging Countries, a projected increase of 3.7% is estimated.
- Top-Tier Academics, along with Government and Corporate institutions were the only sectors anticipating meaningful increases to such budgets in 2020.

Qualitative forecasts indicate that the majority (50%) of institutes believe that their budgets will remain static compared to 73% for 2018, 33% predict that their budgets will increase and 12% expect budgets to decrease.



Abstracting and Indexing Services Budget change for 2020

		Base*	Qualitative Predictions			Quantitative Predictions
			% respondents predicting			
Region	Organisation	n	Increase	Static	Decrease	% Budget Change
North America	Academic Top	25	8%	80%	12%	-0.6
	Academic Middle	23	22%	48%	26%	-2.4
	Academic Lower	24	33%	42%	25%	-0.9
	<i>All Academic</i>	72	20%	58%	21%	-1.3
	Medical/Health	0	0%	0%	0%	0.0
	Government	11	18%	64%	18%	-0.6
	Corporate	18	56%	44%	0%	3.6
	Overall	101	26%	56%	17%	-0.3
Europe	Academic Top	24	46%	46%	4%	2.6
	Academic Middle	23	26%	61%	9%	-0.4
	Academic Lower	31	29%	52%	10%	-1.8
	<i>All Academic</i>	78	34%	53%	7%	0.3
	Medical/Health	0	0%	0%	0%	0.0
	Government	7	57%	29%	0%	9.8
	Corporate	16	31%	44%	6%	2.7
	Overall	101	36%	49%	6%	1.7
Asia Pacific	Academic Top	21	38%	52%	10%	2.6
	Academic Middle	32	31%	38%	22%	1.0
	Academic Lower	29	34%	38%	17%	1.9
	<i>All Academic</i>	82	35%	43%	16%	1.8
	Medical/Health	0	0%	0%	0%	0.0
	Government	14	36%	57%	0%	2.5
	Corporate	19	37%	63%	0%	2.8
	Overall	115	35%	48%	11%	2.1
South America	Academic Top	4	0%	100%	0%	0.0
	Academic Middle	4	25%	50%	25%	3.8
	Academic Lower	4	25%	75%	0%	0.8
	<i>All Academic</i>	12	17%	75%	8%	1.5
	Medical/Health	0	0%	0%	0%	0.0
	Government	1	0%	0%	100%	-5.0
	Corporate	3	67%	0%	33%	-0.7
	Overall	16	21%	53%	26%	0.2
Middle East and Africa	Academic Top	2	50%	50%	0%	5.0
	Academic Middle	3	33%	33%	0%	5.0
	Academic Lower	3	67%	33%	0%	5.0
	<i>All Academic</i>	8	50%	39%	0%	5.0
	Medical/Health	0	0%	0%	0%	0.0
	Government	1	0%	100%	0%	0.0
	Corporate	1	100%	0%	0%	5.0
	Overall	10	51%	40%	0%	4.6
Emerging Countries	Academic Top	27	38%	58%	4%	3.2
	Academic Middle	30	29%	55%	4%	3.7
	Academic Lower	27	35%	44%	11%	3.5
	<i>All Academic</i>	84	34%	53%	6%	3.4
	Medical/Health	0	0%	0%	0%	0.0
	Government	9	38%	38%	24%	1.3
	Corporate	21	42%	48%	4%	2.9
	Overall	114	36%	51%	7%	3.1
Overall	Academic Top	76	30%	61%	8%	1.6
	Academic Middle	85	27%	48%	19%	-0.2
	Academic Lower	91	33%	45%	16%	0.1
	<i>All Academic</i>	252	30%	51%	14%	0.5
	Medical/Health	0	0%	0%	0%	0.0
	Government	34	34%	48%	12%	2.8
	Corporate	57	43%	48%	3%	2.9
	Overall	343	33%	50%	12%	1.2

* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

9 Medical Information Tools

9.1 Current Medical information tools used

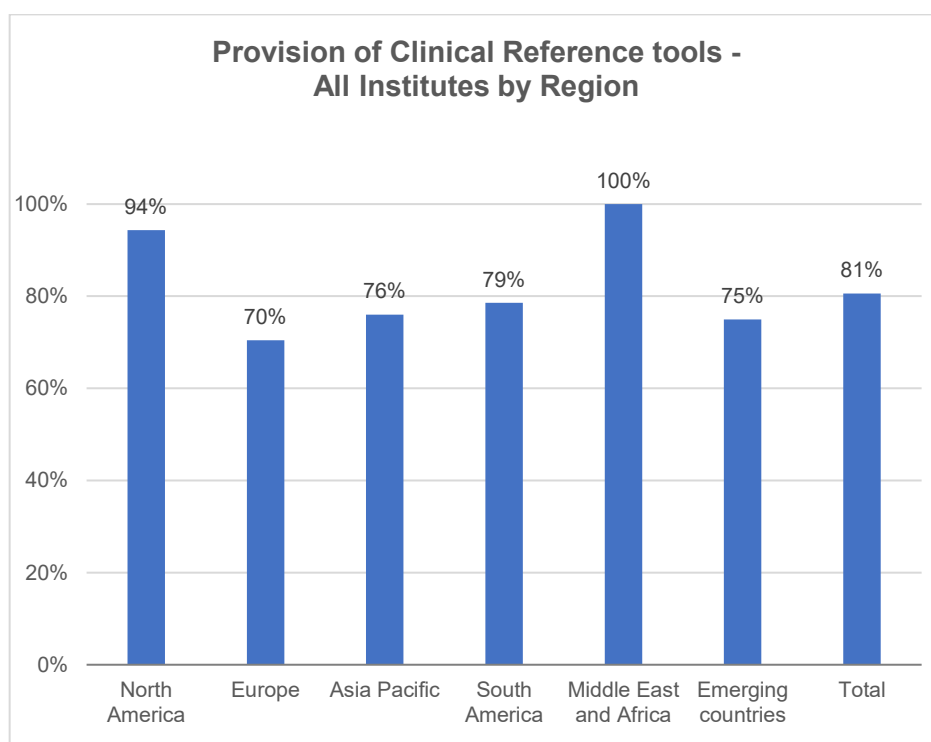
Librarians and information officers in Hospitals or Medical Trusts were asked about different medical information tools. The first of these was Clinical Reference Tools, defined as:

Multi-specialty tools that allow physicians to access clinically-relevant information, across journals, books and guidelines. It also includes drug information databases, order sets (pre-packaged groups of orders that apply to a specified diagnosis) and care plans ('templates' that define the essentials of care – nutrition, mobility etc.).

9.1.1 Clinical Reference Tools

Base: 295 participants

Approximately 4 out of 5 hospitals reported using Clinical Reference Tools. Use of such tools varied by region: North America (94%), Europe (70%) and Asia Pacific (75%).

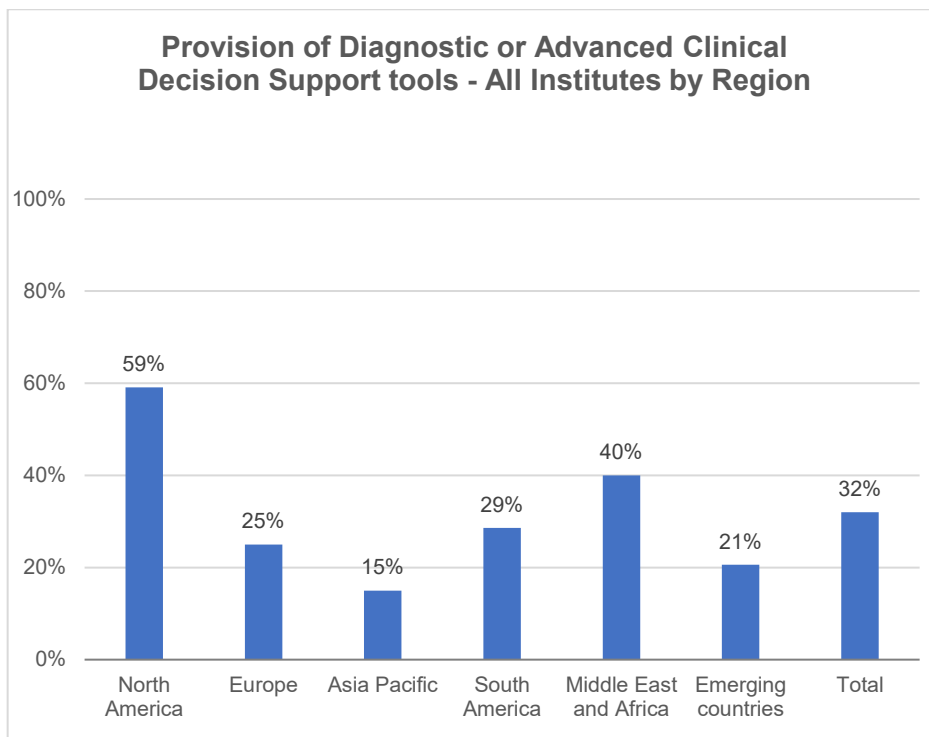


Base: North America 88; Europe 88; Asia Pacific 100; South America 14; ME&A 5; Emerging Countries 65, Total 295

9.1.2 Diagnostic or Advanced Clinical Decision Support tools

Base: 295 participants

Diagnostic or Advanced Clinical Decision Tools (that a clinician can utilise at point-of-care to enable decision making) were less frequently used, with circa 1 in 3 (32%) claiming to use them. Use of such tools varied by region: North America (59%), Europe (25%) and Asia Pacific (15%).

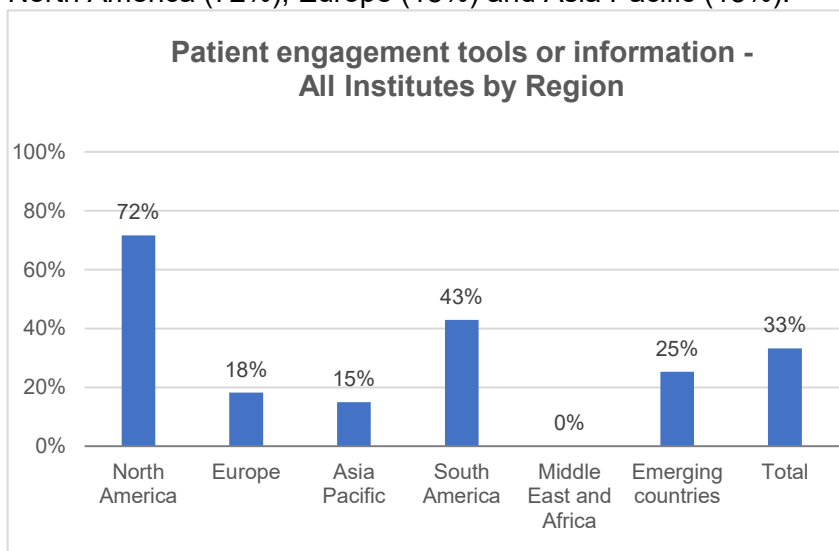


Base: North America 88; Europe 88; Asia Pacific 100; South America 14; ME&A 5; Emerging Countries 65, Total 295

9.1.3 Patient engagement tools or information

Base: 295 participants

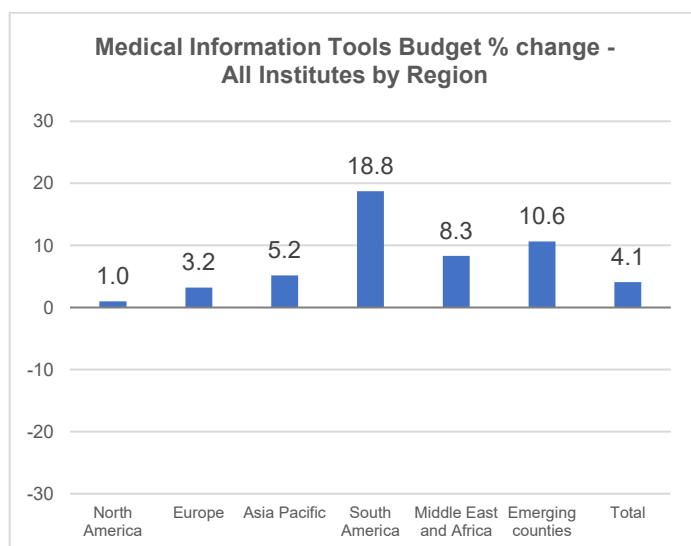
Patient engagement tools or information (enabling patients to be engaged in the healthcare decision-making process and administration of their healthcare) were used by a similar proportion, with circa 1 in 3 (33%) claiming to use them. Use of such tools varied by region: North America (72%), Europe (18%) and Asia Pacific (15%).



Base: North America 88; Europe 88; Asia Pacific 100; South America 14; ME&A 5; Emerging Countries 65, Total 295

Medical Information tools – Budget predictions 2020

Hospitals and Medical Trusts anticipated that expenditure on Medical Information Tools would increase by an average of 4.1% in 2020. Marked variations were noted by geography, with limited increases predicted in this area in North America and Europe.



Base: North America 88; Europe 88; Asia Pacific 100; South America 14; ME&A 5; Emerging Countries 65, Total 295

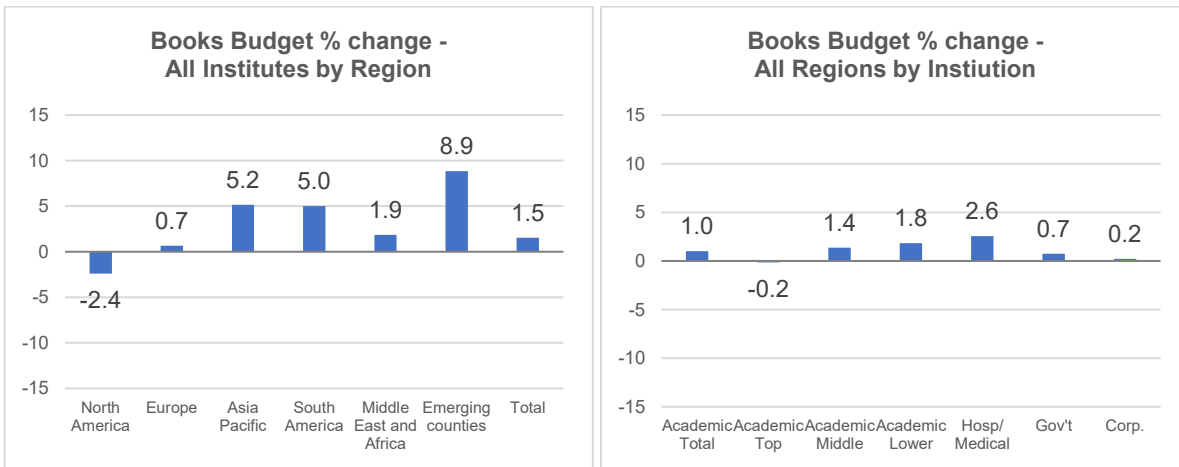
Qualitative forecasts indicate that the majority (57%) of institutes believe that their budgets will remain static in this area, 26% predict that their budgets will increase and 3% expect budgets to decrease.

Medical Information tools; Budget change for 2020						
		Base*	Qualitative Predictions			Quantitative Predictions
			% respondents predicting			
Region	Organisation	n	Increase	Static	Decrease	% Budget Change
Region	North America	88	27%	60%	8%	1.0
	Europe	88	16%	59%	1%	3.2
	Asia Pacific	100	29%	60%	1%	5.2
	South America	14	50%	29%	7%	18.8
	Middle East & Africa	5	40%	20%	0%	8.3
	Emerging countries	65	37%	48%	3%	10.6
<i>Total</i>		295	26%	57%	3%	4.1

* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

10 Books

All librarians and information officers were asked about anticipated 2020 expenditure on books (including printed books, e-books, monographs and book series).



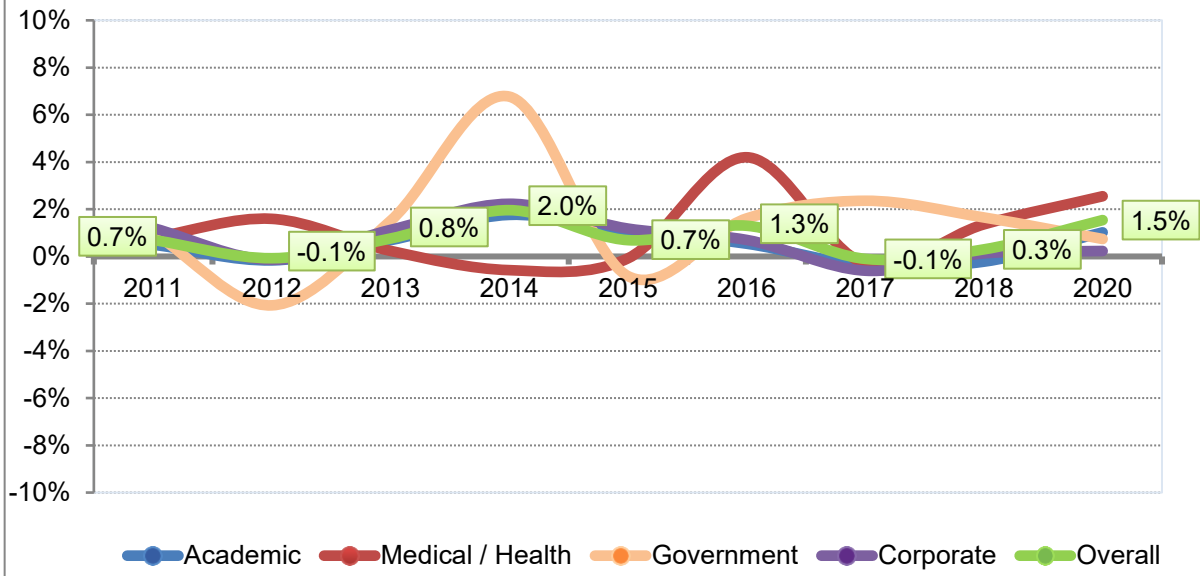
Book budgets are projected to increase by an average of 1.5% across all institutions surveyed. However, there were some variations by region and type of institution.

- Institutions in North America are projecting a decline of 2.4% in their books budget, whereas in Asia Pacific and South America an increase of c. 5% is estimated (before inflation), increasing to 9% in Emerging Countries. In Europe, book budgets are flat at 0.7%*.
- There was limited variation by type of institution, with hospitals projecting the largest increase to their books budget in 2020. Across the academic sectors, Mid and Low-Tier institutions reported modest increases, with a slight decline for Top-Tier institutions.
- There were no marked changes in 2020 book budgets compared to 2018 (the last data point available), with modest increases across all sectors since the last study. The only exception to this was the Government sector which fell from 1.7% in 2018 to 0.7% in 2020.

Qualitative forecasts indicate that the majority (59%) of institutes believe that their budgets will remain static, 21% predict that their budgets will increase and 17% expect budgets to decrease. This is similar to the pattern observed for 2018 budgets, when the research was last conducted.

* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

Books Budget Forecasts for 2011 to 2020



Books Budget Change for 2020						
Region	Organisation	Base*	Qualitative Predictions			Quantitative Predictions % Budget Change
		n	% respondents predicting			
			Increase	Static	Decrease	
North America	Academic Top	25	8%	60%	32%	0.6
	Academic Middle	25	32%	44%	24%	-2.1
	Academic Lower	29	7%	59%	34%	-2.2
	<i>All Academic</i>	79	16%	54%	30%	-1.2
	Medical/Health	88	10%	64%	25%	-3.7
	Government	15	13%	67%	20%	-2.4
	Corporate	26	19%	42%	38%	-1.7
	Overall	208	14%	58%	28%	-2.4
Europe	Academic Top	25	24%	52%	24%	-0.2
	Academic Middle	23	17%	65%	17%	-0.4
	Academic Lower	36	28%	64%	8%	2.1
	<i>All Academic</i>	84	23%	60%	17%	0.5
	Medical/Health	88	16%	66%	10%	0.5
	Government	9	33%	44%	11%	5.6
	Corporate	23	22%	57%	22%	-0.9
	Overall	204	21%	61%	14%	0.7
Asia Pacific	Academic Top	23	39%	35%	13%	1.4
	Academic Middle	34	24%	56%	18%	2.8
	Academic Lower	34	21%	47%	24%	5.0
	<i>All Academic</i>	91	28%	46%	18%	3.1
	Medical/Health	100	23%	70%	3%	8.9
	Government	16	19%	69%	6%	0.5
	Corporate	32	25%	53%	22%	1.3
	Overall	239	25%	59%	11%	5.2
South America	Academic Top	4	0%	75%	25%	-13.8
	Academic Middle	4	75%	25%	0%	30.0
	Academic Lower	4	50%	25%	25%	2.5
	<i>All Academic</i>	12	42%	42%	17%	6.3
	Medical/Health	14	21%	71%	7%	4.4
	Government	1	0%	0%	100%	-5.0
	Corporate	5	80%	20%	0%	10.0
	Overall	32	34%	48%	17%	5.0
Middle East and Africa	Academic Top	2	0%	100%	0%	0.0
	Academic Middle	3	0%	67%	33%	-10.0
	Academic Lower	3	67%	33%	0%	4.0
	<i>All Academic</i>	8	22%	67%	11%	-2.0
	Medical/Health	5	40%	60%	0%	5.0
	Government	2	50%	50%	0%	5.0
	Corporate	3	33%	67%	0%	1.7
	Overall	18	33%	63%	4%	1.9
Emerging Countries	Academic Top	27	37%	44%	7%	1.4
	Academic Middle	30	34%	60%	6%	6.9
	Academic Lower	29	39%	42%	8%	11.5
	<i>All Academic</i>	86	37%	49%	7%	6.2
	Medical/Health	65	38%	54%	3%	15.3
	Government	10	45%	32%	23%	1.8
	Corporate	28	45%	40%	15%	4.4
	Overall	189	39%	48%	8%	8.9
Overall	Academic Top	79	23%	51%	22%	-0.2
	Academic Middle	89	26%	54%	19%	1.4
	Academic Lower	106	22%	54%	22%	1.8
	<i>All Academic</i>	274	23%	53%	21%	1.0
	Medical/Health	295	18%	67%	12%	2.6
	Government	43	21%	57%	17%	0.7
	Corporate	89	25%	50%	25%	0.2
	Overall	701	21%	59%	17%	1.5

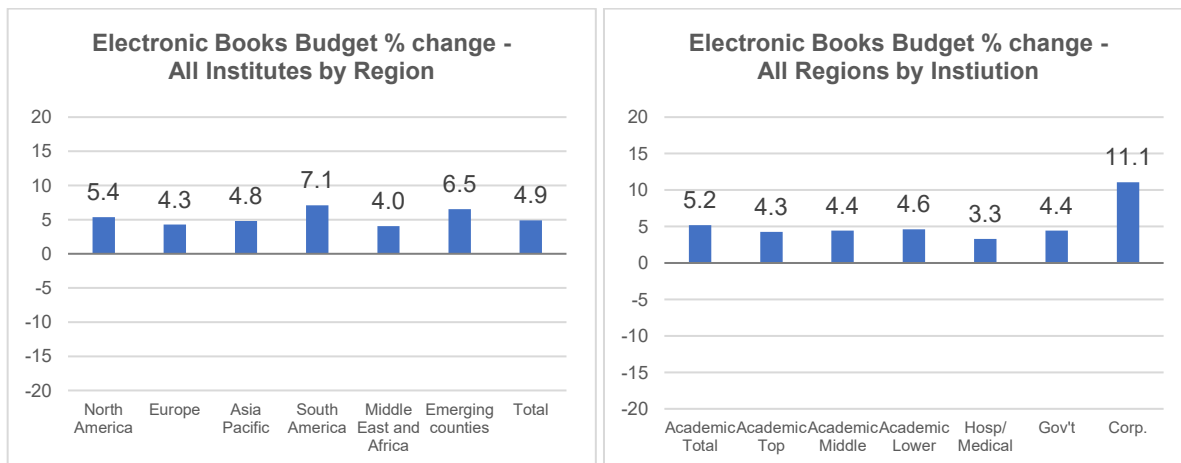
* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

10.1 Electronic books

All librarians and information officers were asked about the proportion of their current books spend which is allocated to electronic books. Across all institutions, circa 25% of the current spend is on electronic resources and this is little changed from the previous wave of research (27.5% in 2017).

Library Book Budget – current % spent on electronic books												
Region	Organisation	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2019
Overall	Academic Top	4.7	8.3	14.1	22.4	18.3	19.9	27.8	30.9	27.9	30.7	30.6
	Academic Middle	5.6	8.5	9.0	14.8	17.7	16.8	22.1	25.7	26.7	27.0	26.0
	Academic Lower	5.1	8.0	7.1	15.7	15.4	19.9	25.3	24.7	23.1	29.7	24.6
	<i>All Academic</i>	3.2	8.3	10.0	17.6	17.1	18.9	25.0	27.0	25.9	29.1	27.1
	Medical/Health	3.7	6.5	4.8	15.0	17.5	21.0	33.9	36.4	32.0	29.5	24.0
	Government	5.9	2.4	9.4	10.9	7.7	11.8	24.2	28.7	24.5	18.3	22.3
	Corporate	3.5	2.7	11.5	16.8	11.5	20.9	26.6	34.1	26.1	25.6	21.7
	Overall	4.9	6.6	9.4	16.3	15.5	18.8	26.7	29.7	26.7	27.5	24.7

All librarians and information officers were asked about anticipated 2020 expenditure on electronic books.



Electronic book budgets are projected to increase by an average of 4.9% across all institutions surveyed.

- This was broadly consistent across all regions*.
- There was limited variation by type of institution, with Corporate institutions projecting the largest increase to their electronic books budget in 2020.
- There were an increase in 2020 electronic book budgets compared 2018 (2.3% increase in 2018 which the last data point available)

Qualitative forecasts indicate that the majority (57%) of institutes believe that their electronic books budgets will remain static, 34% predict that their budgets will increase and 4% expect budgets to decrease.

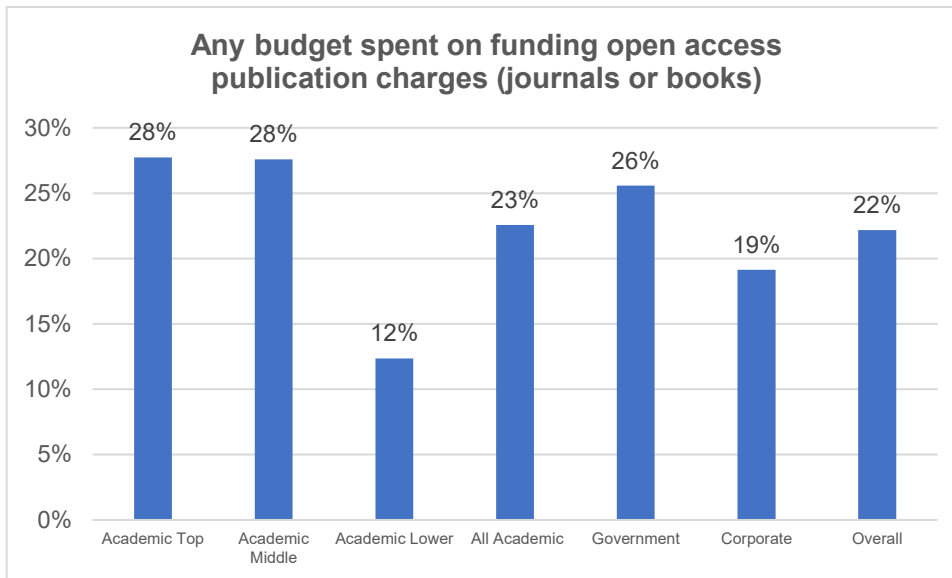
* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

Electronic Books Budget Change for 2020						
		Base*	Qualitative Predictions			Quantitative Predictions
			% respondents predicting			
Region	Organisation	n	Increase	Static	Decrease	% Budget Change
North America	Academic Top	25	32%	64%	4%	3.7
	Academic Middle	25	64%	36%	0%	3.4
	Academic Lower	29	41%	48%	10%	5.9
	<i>All Academic</i>	79	46%	49%	5%	4.3
	Medical/Health	88	17%	75%	7%	0.5
	Government	15	20%	73%	7%	-1.6
	Corporate	26	35%	58%	8%	28.5
	Overall	208	30%	63%	6%	5.4
Europe	Academic Top	25	60%	28%	8%	2.7
	Academic Middle	23	39%	61%	0%	2.5
	Academic Lower	36	39%	58%	0%	2.7
	<i>All Academic</i>	84	46%	49%	3%	2.6
	Medical/Health	88	23%	63%	5%	3.8
	Government	9	44%	33%	0%	17.9
	Corporate	23	43%	52%	4%	4.4
	Overall	204	36%	54%	3%	4.3
Asia Pacific	Academic Top	23	43%	43%	0%	8.2
	Academic Middle	34	44%	41%	6%	4.2
	Academic Lower	34	41%	50%	3%	4.3
	<i>All Academic</i>	91	43%	45%	3%	5.5
	Medical/Health	100	32%	59%	1%	5.2
	Government	16	13%	75%	0%	1.4
	Corporate	32	22%	72%	6%	3.3
	Overall	239	33%	57%	2%	4.8
South America	Academic Top	4	25%	50%	25%	11.3
	Academic Middle	4	75%	25%	0%	20.0
	Academic Lower	4	50%	50%	0%	6.3
	<i>All Academic</i>	12	50%	42%	8%	12.5
	Medical/Health	14	29%	57%	7%	4.2
	Government	1	0%	100%	0%	0.0
	Corporate	5	60%	40%	0%	5.0
	Overall	32	38%	53%	6%	7.1
Middle East and Africa	Academic Top	2	50%	50%	0%	2.5
	Academic Middle	3	67%	33%	0%	4.0
	Academic Lower	3	67%	33%	0%	4.7
	<i>All Academic</i>	8	61%	39%	0%	3.7
	Medical/Health	5	40%	60%	0%	4.0
	Government	2	50%	50%	0%	5.0
	Corporate	3	33%	33%	0%	5.0
	Overall	18	48%	48%	0%	4.0
Emerging Countries	Academic Top	27	47%	38%	3%	9.3
	Academic Middle	30	50%	43%	0%	6.7
	Academic Lower	29	33%	63%	0%	4.5
	<i>All Academic</i>	86	44%	47%	1%	7.0
	Medical/Health	65	37%	50%	2%	7.1
	Government	10	27%	73%	0%	2.7
	Corporate	28	43%	46%	7%	5.7
	Overall	189	40%	50%	2%	6.5
Overall	Academic Top	79	44%	46%	5%	5.2
	Academic Middle	89	51%	44%	2%	4.3
	Academic Lower	106	42%	51%	4%	4.4
	<i>All Academic</i>	274	46%	47%	4%	4.6
	Medical/Health	295	25%	65%	4%	3.3
	Government	43	24%	64%	2%	4.4
	Corporate	89	34%	60%	6%	11.1
	Overall	701	34%	57%	4%	4.9

* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

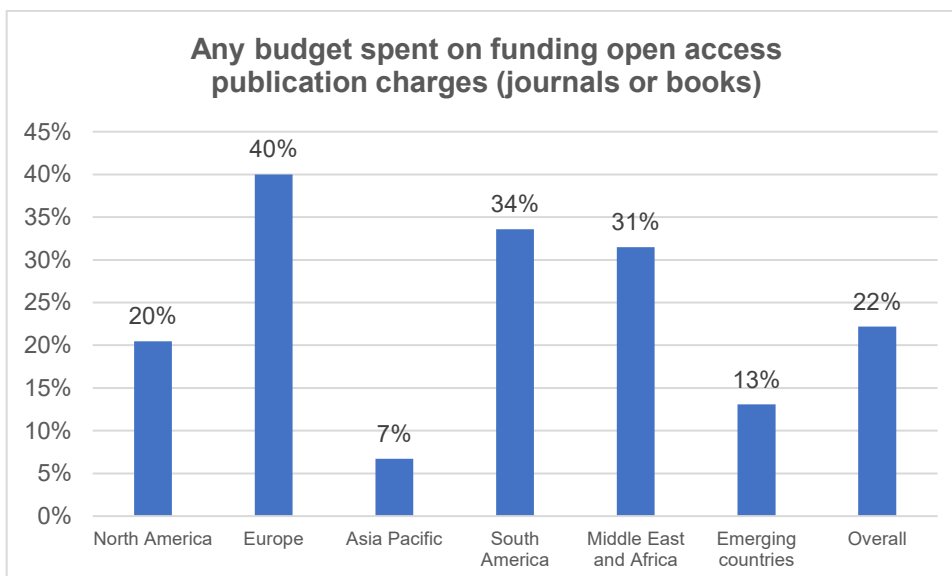
11 Open Access

All librarians and information officers in Academic, Government and Corporate institutions were asked about **Open Access** (i.e. typically when research or books are made free to access, with costs covered by a fee charged to the author which may be reimbursed by some funding bodies or institutions).



Circa 1 in 5 institutions (22%) reported that a part of their library and information services budget was spent on funding such open access publication charges, in either journals or books. However, no attempt was made to quantify the proportion of budget that was allocated to this activity.

This practice was more common amongst Top and Mid-Tier Academic institutions, along with Government institutions. It was least likely to happen in Lower-Tier Academic institutions.



Such activity was twice as likely to be reported by European institutions, compared to those based in North America (40% and 20% respectively). It was least likely to take place in the Asia Pacific region.

Actions as a result of more content being made available through Open Access					
	Base	Saved money which has been allocated back to your institution	Used any savings to cover Open Access Article Process Charges managed by the author	Other impact	No impact
Academic Top	24	14%	8%	53%	25%
Academic Middle	24	20%	26%	25%	28%
Academic Lower	14	29%	10%	27%	34%
<i>All Academic</i>	62	19%	16%	37%	28%
Government	9	22%	21%	12%	46%
Corporate	17	35%	24%	12%	29%
Overall	88	23%	18%	29%	31%

Librarians and information officers in institutions that cover some open access publication charges were asked about the potential impact of this. Nearly 1 in 4 (23%) said this had saved money which had been allocated back to their institution, with circa 1 in 5 (18%) saying that their institution had used savings achieved to cover author charges.

Actions as a result of more content being made available through Open Access					
	Base*	Saved money which has been allocated back to your institution	Used any savings to cover Open Access Article Process Charges managed by the author	Other impact	No impact
North America	24	16%	34%	8%	42%
Europe	45	17%	13%	46%	24%
Asia Pacific	10	19%	12%	29%	40%
<i>South America</i>	5	84%	16%	0%	0%
Middle East & Africa	4	35%	0%	0%	65%
Emerging countries	15	61%	6%	17%	17%
Overall	88	23%	18%	29%	31%

Emerging countries were more likely to allocate savings back to their institution (61%), whereas those in North America were more likely to use savings to cover author charges (34%).

* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

12 Research Data Management

12.1 Research data Management: current provision and future plans

All librarians and information officers were asked about **Research Data Management (RDM)** tools or services (i.e. software solutions that allow researchers to store, share, publish and find research data), to establish if their institution currently provides this or plans to do so in the future.

Provision of RDM: by institution type			
Organisation	Provision		
	Currently provide	Plan to provide	No plans to provide
Academic Top	31%	23%	46%
Academic Middle	23%	19%	58%
Academic Lower	22%	13%	65%
<i>All Academic</i>	<i>25%</i>	<i>18%</i>	<i>56%</i>
Medical/Health	18%	10%	73%
Government	15%	14%	71%
Corporate	24%	9%	67%
Overall	21%	13%	66%

Provision of RDM: by institution Region			
Region	Provision		
	Currently provide	Plan to provide	No plans to provide
North America	26%	10%	65%
Europe	30%	18%	51%
Asia Pacific	12%	8%	80%
South America	6%	33%	61%
Middle East & Africa	25%	23%	52%
Emerging Countries	16%	18%	66%
Overall	21%	13%	66%

21% of institutions currently provide RDM tools or services which is a large increase from the last study for 2017 (9%), with a further 13% planning to do so in the future, again a higher proportion than the previous study which showed 6%. Higher levels of current and planned adoption were noted amongst Academic institutions, with Government institutions being the least likely to provide this.

RDM systems were more commonplace outside Asia Pacific and South America, although the latter were most likely to have plans to introduce this*.

* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

12.2 Institutional Repositories: current provision and future plans

All librarians and information officers were asked about **Institutional Repository** tools or services (i.e. archive for collecting, preserving, and disseminating digital copies of the intellectual output of an institution or organisation, particularly a university or research institution), to establish if their institution currently provides this or plans to do so in the future.

Provision of Institutional Repositories by institution type			
Organisation	Provision		
	Currently provide	Plan to provide	No plans to provide
Academic Top	73%	11%	16%
Academic Middle	68%	12%	20%
Academic Lower	61%	10%	29%
<i>All Academic</i>	<i>67%</i>	<i>11%</i>	<i>21%</i>
Medical/Health	27%	13%	61%
Government	52%	10%	38%
Corporate	46%	6%	47%
Overall	46%	11%	43%

Provision of Institutional Repositories by Region			
Region	Provision		
	Currently provide	Plan to provide	No plans to provide
North America	45%	8%	48%
Europe	49%	12%	40%
Asia Pacific	43%	12%	45%
South America	53%	24%	23%
Middle East & Africa	60%	13%	28%
Emerging Countries	51%	20%	29%
Overall	46%	11%	43%

Institutional Repositories were one of the most widely used tools or services, with 46% of institutions currently providing, and a further 11% planning to do so in the future. Higher levels of current and planned usage were noted amongst Academic institutions (67%), with Medical/Health institutions being the least likely to provide this (27%).

There was limited variation in current usage by region, although institutions in South America and Emerging Countries were more likely to have plans to introduce such tools or services.

12.3 Current Research Information Systems (CRIS): current provision and future plans

All librarians and information officers were asked about **Current Research Information Systems (CRIS)** (i.e. information system to store, manage and exchange contextual metadata for research activities undertaken within an institution or organisation), to establish if their institution currently provides such systems or plans to do so in the future.

Provision of Current Research Information Systems: by institution type			
Organisation	Provision		
	Currently provide	Plan to provide	No plans to provide
Academic Top	24%	12%	64%
Academic Middle	20%	19%	61%
Academic Lower	24%	5%	70%
<i>All Academic</i>	<i>23%</i>	<i>12%</i>	<i>65%</i>
Medical/Health	17%	9%	74%
Government	15%	10%	75%
Corporate	30%	4%	66%
Overall	21%	9%	70%

Provision of Current Research Information Systems: by region			
Region	Provision		
	Currently provide	Plan to provide	No plans to provide
North America	20%	10%	70%
Europe	28%	14%	58%
Asia Pacific	14%	4%	82%
South America	15%	15%	70%
Middle East & Africa	40%	15%	45%
Emerging Countries	25%	10%	65%
Overall	21%	9%	70%

CRIS are currently provided by 1 in 5 institutions (21%) which was a large increase from the last

study (8%), with 1 in 10 (9%) having plans to provide this in the future. With the exception of Corporate institutions, no marked differences were noted in current or future adoption, by type of institution. Institutions in Asia Pacific and South America were the least likely to have this system in place*.

12.4 Research Performance Analytics: current provision and future plans

All librarians and information officers were asked about **Research Performance Analytics** tools or services (i.e. dedicated tools used to undertake sophisticated research performance analyses based on publication, citation and collaboration data; typically to track research productivity and return on research value).

Provision of Research Performance Analytics: by institution type			
Organisation	Provision		
	Currently provide	Plan to provide	No plans to provide
Academic Top	42%	16%	42%
Academic Middle	35%	11%	55%
Academic Lower	24%	4%	72%
<i>All Academic</i>	<i>33%</i>	<i>10%</i>	<i>56%</i>
Medical/Health	17%	7%	77%
Government	27%	4%	68%
Corporate	26%	7%	67%
Overall	25%	8%	67%

Provision of Research Performance Analytics: by region			
Region	Provision		
	Currently provide	Plan to provide	No plans to provide
North America	24%	6%	70%
Europe	27%	11%	62%
Asia Pacific	26%	6%	68%
South America	12%	15%	72%
Middle East & Africa	27%	4%	69%
Emerging Countries	37%	10%	53%
Overall	25%	8%	67%

1 in 4 institutions currently provide such tools or services, significantly higher than the last study of 9%, with a further 8% planning to do so in the future. Higher levels of current and planned adoption were noted amongst Academic institutions, although this did vary by size. Medical/Health institutions were the least likely to use such systems, as with the previous study findings.

Research Performance Analytics tools or services were more widely used outside South America, although institutions in this region were the most likely to have plans to provide this in the future[†].

* Sample sizes for South America and Middle East & Africa are small and should to be interpreted with caution.

13 Appendix

13.1 Definition Index: Material and Information Spend

Journals/Serials: are repeating publications that deals with a particular subject or professional activity. Typically issues are published on regular intervals, monthly or quarterly. Journals are typically scholarly and publish research articles that record scientific developments. Journals or serials are often subscription based, the library pay an annual fee to subscribe to all the issues published in a year.

Databases and tools: These are typically bibliographic databases (sometimes called Abstracting and Indexing databases) allow users to search across quality assured publications (journals) to find scholarly content. The databases will search abstracts and the references (citations to other articles) of research articles to locate specific content. They will also search conference publications, academic books, chapters from academic books and sometimes quality assured web sites.

Tools could be databases that focus on areas such as engineering or chemistry, in addition they also support searches for drug interactions or by chemical formulae.

Tools also can include a 'Discovery service' which is an online library searching tool that provides an all-in-one interface for finding both local library items and online subscription and open access resources.

Books normally are written for scholars/researchers/professionals are intended to share research findings or provide foundational knowledge in particular field. Books can be sometimes be part of a series.

13.2 Definition Index: Medical Information Tools

Clinical Reference tools: These are often multi-specialty tools that allow physicians to access clinically-relevant information, across journals, books and guidelines,

Diagnostic or Advanced Clinical Decision Support tools: Tools that a clinician can utilize often at the point-of-care to enable decision making. They are often easy to use and contain filtered information

Patient engagement tools or information: Resources that enable patients to be engaged in their healthcare decision-making process. Tools that use a variety of channels (smartphone app, social media etc) to enable providers to e-connect with patients sending appointment reminders, educating, enabling medication adherence via reminders and collecting data.

13.3 Definition Index: Research Data Management

Research Data Management: Software solutions that allow researchers to store, share, publish and find research data

Institutional repository: is an archive for collecting, preserving, and disseminating digital copies of the intellectual output of an institution, particularly a university or research institution.

CRIS (Current Research Information System): is an information system to store, manage and exchange contextual metadata for the research activity funded by a research funder or conducted at a research-performing organisation such as a university.

Research performance analytics: Dedicated tools used to undertake sophisticated research performance analyses based on publication, citation and collaboration data. They are typically used to tracking research productivity and demonstrate a return on research value.

14 References

¹ ARL Statistics 2017-18