



Establishing Value and ROI: Investing in STM e-journals and e-books

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Outsell is the only worldwide syndicated research and advisory firm that delivers must-have intelligence and advice to publishers and information providers. We analyze markets, companies, and trends, and provide fact-based recommendations for high-level executives and product development, marketing, and strategy teams. In addition, we work with information managers to benchmark spending and demonstrate best practices. Outsell invests significantly in original research each year to guide clients in optimizing their strategies, plans, and performance.

Executive Summary

Assessing and demonstrating the value of information, especially in challenging economic times, is one of the top issues for libraries and information centers today. Feedback suggests that while libraries are keen to measure ROI and demonstrate the value of information, they struggle to collate appropriate metrics. Usage is often a proxy for value, with purchase and renewal decisions based on user volume, usage activity, and costs per download. Libraries are aware of the need to dig deeper, and have crafted various approaches, albeit ad hoc, to capture more specific value measures such as time saved and cost saved.

While electronic formats have made the compilation of baseline data easier in many respects, the proliferation of e-content options poses new challenges. Increased choices - providers, formats, business models, and access models - make it harder to identify appropriate comparative benchmarks for e-journals and e-books. Outsell's research and survey findings provide some guidance for information managers needing to establish the value proposition for STM content in electronic formats. Across a broad group of R&D and technical end-users surveyed, electronic content was found to be increasingly relied upon with the right source and type of information essential to users now actively searching for required information on a daily basis. Outsell found a large majority of end-users surveyed reporting:

- A heavy reliance upon STM content,
- an average time savings of 2-4 hours per user per occasion,
- associated cost savings in the form of faster information identification and elimination of redundant work, and
- a clear role for e-content in effectively supporting business decisions such as technologies to pursue and projects to select

Information managers should gear up to present even stronger business justifications for library and information investments. As budget pressures push executive and stakeholder scrutiny to new levels, librarians will be challenged to define and establish the contribution of information and information services to business success and the organization as whole. At this level, the outcome of information usage – e.g., quicker time to market, successful patent applications, increased grant money, etc. – shows the alignment of investment with business performance and priorities.

With few standardized approaches to the enterprise level ROI assessment, libraries will benefit from leveraging supporting partners, and striving to create their own consistent procedures to identify, size, and communicate the business impacts of information investment and usage. As options for e-journals and e-books continue to multiply, information managers will want to understand and establish their own business cases for reaping the benefits.

Introduction

Why this topic?

Librarians and information managers that need to make a case for funding of an organizational library face a myriad of choices and challenges. While libraries often turn to activity-based statistics and anecdotal stories of catastrophes avoided or time saved through information access, executive stakeholders are focused on other concerns, i.e., how and where the library or information investments impact business performance and outcomes. Explicating the value of information services is made more complicated by the continued evolution to e-content and the availability of information via open access web providers – if information can be free, then where's the value in buying e-journals or e-books?

From informal to formal means, from activity based measurements to more meaningful business impact assessments, the process of creating and explaining ROI and value is increasingly difficult, and increasingly necessary. To this end, Springer has commissioned research designed to support corporate libraries by identifying the value and ROI of investing in paid STM content - particularly e-books and e-journals - measured by garnering feedback from users and key stakeholders.

Methodology

Springer commissioned Outsell, Inc. to carry out a two-pronged research program involving:

1. A series of qualitative interviews with 3 large corporate libraries of global, multi-national organizations in the US and Europe and 1 US government library. Interviews took place with executive stakeholders, heads of library services and end-users in each organization, and focused on enterprise objectives, how the library supports those objectives, views on the value of information and ROI and concrete examples of ROI (e.g.: time saved, faster path to revenues, money saved, etc). Participating organizations were a network computing infrastructure provider, a global biopharma company, a research and engineering laboratory and a leading Fast Moving Consumer Goods (FMCG) supplier.
2. An online survey with users from the participating corporate libraries designed to understand users' information behaviors and use of STM content and, in particular, use of STM e-books and e-journals, to understand cases and examples that would provide ROI data and to draw out perceptions of value and hard data evidence of ROI. In total 573 users from the organizations listed above participated in the survey.

As an independent advisor, Outsell provided an unbiased view on the data findings and drew on our knowledge and expertise of the information industry and information management organizations to provide contextual information and insights.

How do libraries measure ROI currently?

Assessing and demonstrating the value of paid information is a top issue for libraries and information centers today, with most information managers facing a real struggle to put together all the pieces needed to demonstrate the true worth of information and the return on investment (ROI).

On an elementary level, value and ROI measurements on a product by product, or vendor by vendor basis, help librarians face the myriad of choices present in the acquisition and management of external content – what content sources, in what format, with what access? On a more complex scale, libraries must also justify their decisions upwards, to executive stakeholders who are scrutinizing budgets and decisions more closely in these challenging economic times. At this level, librarians are challenged to define and establish the contribution of information and information services to business success and the organization as whole.

Value Proxies: Baseline Measurements

Most organizations interviewed by Outsell are using quantitative measures of usage and cost to some extent as proxies for value, i.e., the more something is used relative to its cost, the better. As noted by one interviewee, “There are two types of metrics. One is very much costs ... The other one is keeping track of how many people are using our site ... what they are using, where are people coming from.” (Library Head, FMCG supplier) These measurements are basic snapshots into information consumption - usage statistics, cost per download, document delivery costs and site hits – created by the libraries and drawn from statistics provided by publishers.

Particularly for electronic information services, information managers do expect publisher or service provider data to meet their metrics needs. “A lot relies on the publishers to provide audit trails and statistics. To justify expenditure it’s critical to get good statistics.” (Group Leader of Library Services, Global Biopharma).

Even as electronic information services make the compilation of use and cost statistics easier, the very prevalence of both free and for-fee electronic information complicates the value/ROI measurement process for libraries. In particular, the availability of open web tools has helped further the concept that everything is (or should be) free – if not now, then eventually. Increased choices amongst providers, formats, business models, and access models, makes it harder to identify appropriate comparative benchmarks, and creates greater opportunities for other stakeholders to question the worth of choices.

Thus, information managers are increasingly pressured from both sides, i.e., justify the value of particular services by usage and justify the usage of a particular service when a free alternative either is or will be available. “It’s getting increasingly harder to demonstrate the value of information, the value of e-journals when there is open access, and the whole model of the information world is changing. When e-journals have all content older than 6 months available for free, then you have to ask yourself is it worth paying for this? Can’t the users wait six months and

get it for free? Or can they wait for a document delivery? It makes it really hard to decide on what to buy". (Library Head, FMCG supplier)

In this context of complex choices, some interviewees look beyond simple use and cost patterns to more qualitative measurement of value - user perspectives, the utility of a product or service, project results, and efficiencies. "In general we use soft measures; we don't really have hard metrics to evaluate whether or not the investment is bringing the return that it should be. Soft measures would be peoples' opinion, success of a project, survey results, that sort of thing." (Key Stakeholder, Global Biopharma)

As part of the effort for more contextual measurements of value, interviewees also wanted publishers to enhance their reporting capabilities for:

- Regular or repeated usage vs. pure quantity of usage for a system. " If an employee goes into the system and downloads an article, that's great, but if they keep going back to get more, then that's what I call repeat usage, and that shows that someone is finding value, because they keep going back. " (Library Head, Network Computing Infrastructure provider)
- Intrinsic values of the information itself. "How often a document or article has been "re-used" – suppose it had been used 10 times in a proposal and those proposals resulted 8 times in winning some business – we can therefore assume that the document had a lot of value. A whole set of metrics for the document would be relatively helpful. I would like "value-based" metrics, not "relevant-based results." Professional Services / Delivery Readiness Unit, Network Computing Infrastructure provider.

Understanding the nature of usage at this level – frequency, relevance, subsequent utility, and satisfaction - is also important for information managers seeking to define or explain the relative value of competing providers across a broad audience. "I don't think any of the publishers are better than any other, it depends on the portfolio – I can't judge the scientific value. For instance, when you look at the Springer portfolio, it's fairly strong in statistics and mathematics, rather than food sciences. And so for food scientists, they'll get more hits from Elsevier – but that doesn't mean that Elsevier is better, it's just that it is more relevant." (Key Stakeholder, FMCG supplier)

Evidence of relevance and other added benefits – usually in the form of money saved, time saved, or some other efficiency - is hard to determine. Some interviewees do rely on user surveys to develop perspectives on the value of specific content choices, especially in the context of renewal processes. "When we're getting ready to go through a renewal we'll go back and pull data – we try to run surveys ... Stuff like 'because I have access to this, I was able to do x, y and z'. ... We do have a database that sends out a survey that asks questions like 'did it save you time, did it save you money, how valuable is this resource to you'." (Library Head, Network Computing Infrastructure provider)

Unfortunately, regular and ongoing feedback to both information managers and executive stakeholders seems a rarity, with interviewees citing:

- The impromptu and sometimes inconsistent nature of survey programs. “Yes, we’re constantly looking for feedback. We acknowledge that we don’t do it very well... we don’t have a proper process for getting feedback – it’s not organized in any way. It should be more systematic” (Library Head, FMCG supplier)
- The challenges of getting scientists and others to share needed information. “It’s very, very hard for us to get information feedback which is frustrating to us because we want to know where our information is going. We’re further down the food chain so it’s hard to get feedback. We’re always asking people but they are either too busy or it’s not the right time...” (Library Head, FMCG supplier)
- The low visibility of survey results, with only limited sharing up the organizational chain. “We collect all these things as best as we can, but we don’t report it to our stakeholders, we don’t have a formal process like we do it every quarter. We do keep metrics and let our director know, and hopefully he passes that information up into the organization.” (Library Head, Network Computing Infrastructure provider)

In general, where this type of feedback is not currently collected, interviewees were at least aware of its usefulness and expressed intentions to try and collate more of it in the future.

The Value Chain: From End User to Enterprise

In moving away from value proxies (i.e., hard metrics of use and cost), information managers can quickly reach a definitional impasse. Value is inherently subjective, with different assessments from one individual to another, from one user group to another, and across an organization. In considering this spectrum, multiple factors take the stage.

For end-users, value seems a matter of emphasis and personal preference:

- Staying current. “It’s not a question of saving time or money. It’s far more fundamental than that. I need to understand current thinking in my particular field, or about my particular problem.” (Researcher Scientist, Research and Engineering Laboratory)
- Time management. From the end user perspective, content budgets matter less than being able to achieve a task more quickly. “Getting projects done faster. It’s saving me time and helping me get projects done sooner, it’s not really about saving money.” Professional Services/ Delivery Readiness Unit, Network Computing Infrastructure provider.
- Cost management. “If I have to wait for something there’s a business cost and I’m always looking for ways to do things faster. Having immediate access to information helps my

business group in understanding directions for resources, sources of funding so it's extremely valuable" Applied Mathematician, Research and Engineering Laboratory.

As these interviewees illustrate, the value chain is largely the same in each instance: valuable information provides the foundation for staying at the top of one's game and not wasting time or money.

This same calculus drives a broader value perspective, across workgroups, departments, and the enterprise, as a whole. It is fairly easy to translate time saved into a quantitative money measure (e.g., by calculating hourly wage figures and extrapolating to the larger population represented). The more fundamental challenge lies in measuring the true impact of that time saved as it relates to the organization's ultimate performance:

"All of these metrics are fine and dandy, but they don't really answer the question ... libraries have been trying to answer ... for years. And the question is around ROI and it's around impact. *But impact is not cost per use. Impact is not how many journal articles. Impact to me is quantifying the impact on the bottom line.* If Company X made \$10 million last year, how did the library support that? The library is often disconnected from the bottom line. If there was a requirement at a company that every time a product went out the door there was a requirement to answer the question about what the library's impact on this product was, if we could get everyone in the company to do that, across the board it was a requirement, I think we'd begin to approach the answer". (Lab Manager: Technical Library Information Research, Research and Engineering Laboratory).

From this perspective, impacts are first literal (i.e., quicker time-to-market, successful patent applications, increased grant money, etc.), but then also viewed in terms of alignment with – and share in - business success.

Traditionally, a library's planning and purchasing of its information portfolio was not always linked to business goals. With few linkages, there was also no consistent drive to measure the value of information and ROI at a higher level than individual value or time/cost savings. Now, however, a greater emphasis on cost and efficiencies - and the need to "justify [the library's] existence" to senior managers - is driving a stronger imperative to measure the library's value/ROI on an organizational level.

The shift - from proving ROI on a cost basis to validating the importance of the library and information investments to the organization – requires changes in how information managers assess and present their value and ROI calculations. Not only does information expenditure need to be considered across the value chain, i.e, from end-users to enterprise impact, but the ties between those buying decisions and the drivers of business success need to be more visible and understandable. For stakeholders, this visibility supports funding decisions. At the same time, users benefit by knowing to access those sources which have proven most valuable in the past, whether to themselves or to other users in similar circumstances.

As implemented by one interviewee, the new alignment/ROI process affects everything from new purchases to renewals and encompasses a broad new effort:

“In the past, [we have] not been tightly aligned to goals. I’m changing that by doing this analysis on use, the information map (what sources we have, who is using them and to what extent they are being used). [W]e’ve made some investments that are more tightly aligned with business goals ... because it’s important for us now. We’re always thinking about our goals when we’re talking about renewals. Our staff has general impressions on what is valuable, and we’re trying to validate those impressions. ... I’ve set specific goals for our staff to identify that information more proactively ... and [w]e’re working on driving the users to the content as much as possible. We’ve seen a significant improvement in the usage since we’ve started doing that.” (Director of Employee and Partner Learning, Network Computing Infrastructure provider)

Users, Information and Libraries

While understanding how library choices align to business impacts is important, it is equally important for information managers to understand how stakeholders and users view the role of the library and how users, in particular, will interact with information. These perceptions and behaviors influence the value/ROI process both as influencing factors on the choices to make and as an audience to hear and appreciate the ROI message delivered in justification.

The Need to Know

The importance of information and e-content, in particular, was never in dispute with end user respondents to Outsell’s survey, and research findings underline the fact that the right source and type of information are essential to users who increasingly rely on electronic content. Users actively search for required information on a daily basis, describing it as “critical to me” (Researcher Scientist, Research and Engineering Laboratory and “a fundamental part of what I do” (R & D, Network Computing Infrastructure provider)

While stakeholders and librarians often fear that users rely too heavily on “putting a few words into Google” in order to find results, most users are relatively sophisticated information consumers, turning to a variety of different sources of information as their needs require. While an internet search engine such as Google is the most popular place for users to turn to when first seeking information (79% of respondents), library subscriptions to content are a close second. This reliance underscores the valuable role of the library or information services group, as does the third-highest option of seeking the advice of colleagues or experts (including librarians) within the organization.

It should be also be noted that a search via Google on STM topics may also point to library-paid content such as SpringerLink, ScienceDirect, Wiley Interscience, CABI Abstracts and others, as well as specific journal sites and government sites (PubMed, CDC, NIH etc).

How They See You: The Many Faces of the Library/ Information Center

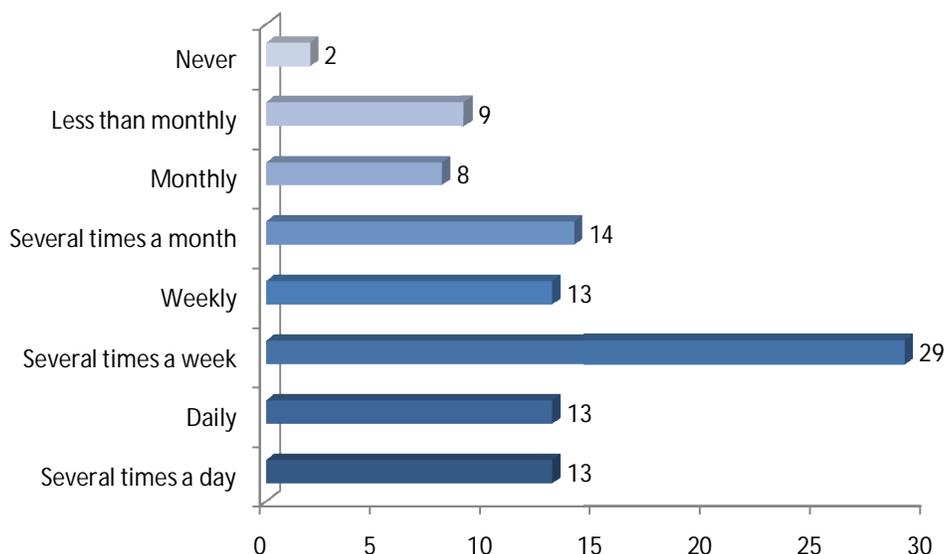
Especially in larger organizations, the library / information center has a broad client base and those interviewed by Outsell typically viewed the whole of their organizations as clients. Within the heavy STM user organizations who comprised the survey group, R & D and technical departments across the company divisions are understandably seen as primary users of their services.

For executives and library stakeholders, the role of the library / information services group is clear and broad:

- The provision of quality information that is easily accessible to those that need it, when they need it – and at the right price. “The first thing is giving people access to good information. The next thing is making it seamless – a seamless flow from searching, to identifying an article, to getting full text, to putting it in to Reference Manager. So, it’s quality information, it’s making it easy to use, and it’s getting good value for money”. (Library Head, FMCG supplier)
- Supporting the organization’s need for authoritative information. “We get emails from people in R & D who say that the starting point for what they’re doing is generally to refer to STM journals to find out what is going on in the industry, to find out what is peer-reviewed and highly valued. I can’t provide that function if I don’t have a library team to do that. The R & D people rely on our library resources.” (Director of Employee and Partner Learning, Network Computing Infrastructure provider)
- Advising, aggregating and agreeing deals with publishers for the provision of that information. “We have an advisory role on the information that people need - that is important. We also have an aggregation role, making access as easy as possible, especially with e-journals. For example, making it as transparent as possible, trying to avoid the scientist having to log into all kinds of systems. The other important task we have is to make deals with publishers, so we’re talking about packages, the whole portfolio.” (Key Stakeholder, FMCG supplier)
- Providing training, professional development and performance support of key functions through the provision of best-of-breed information. “For example, how to train people to sell or to support one of [products]? [Some] implementations ... fall outside of our normal learning ... I need to extend my staff with a library function that will provide best-of-breed information, that will augment that professional development [of the sales and support team] with information resources. ... The info that library provides is directly aligned with making a sale or supporting a sale.” (Director of Employee and Partner Learning, Network Computing Infrastructure provider)

From the user perspective, libraries clearly provide a vital service with 55% of users accessing library information resources several times a week or more (see Figure 1, below).

Figure 1: Frequency of Library Use (% of all respondents)



Source: Q8b, Outsell end user survey on behalf of Springer, 2009. (How frequently do you use the information resources provided by your organization's library or information center?)

Evidence from Outsell's survey shows users' perceptions of their library / information centers to be overwhelmingly positive. A number of users claim that they simply would be unable to do their job without the library – *"if they eliminated the library, they might as well eliminate me!"* (Applied Mathematician, Research and Engineering Laboratory)

Areas where users are particularly appreciative of their library include:

- The quality of the searches undertaken by the library: "I think it's when we can't find what we're looking for, or somebody heard something at a conference we go to the library and they can usually do searches much better than we can." (End User, Global Biopharma)
- The breadth of sources it makes available: "In terms of the options they offer us to search, I don't think it could be much better, it is very complete in all areas." (R&D Project Leader, FMCG supplier)
- Support for their key business objectives: through the provision of targeted searches, a fast response to questions, access to content that supports their research work as well as competitive information and enabling them to keep up to date in terms of their area of interest.

One area where both users and the libraries themselves are looking to play more of a role, however, is in helping users to organize, sort and share the information they use:

“Something we’re driving towards is integrating our information resources with workflow, how users use information in their day-to-day job. Whether they’re doing an R&D project, or selling, we’re trying to embed ourselves into the natural workflow. The notion of a library is heavily embedded in people’s minds as a place you go to and look for stuff, as opposed to a service that’s proactive and comes to you. We want to attach assets to users and usage. A much more proactive approach.” (Director of Employee and Partner Learning, Network Computing Infrastructure provider)

“You Get What You Pay For”

As highlighted above, end-users recognize the comprehensiveness and quality of information provided as one of the fundamental functions of the library / information services group. In keeping with that view, those surveyed also clearly recognize the value of authoritative information sources. The impact of STM content on their work was most popularly described by end-users as “vital, essential and invaluable.”

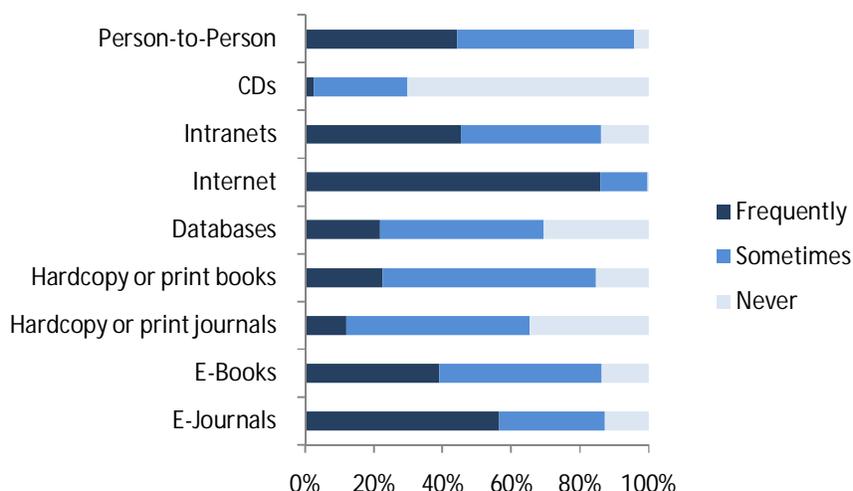
Attributes singled out by end-users as of particular value include:

- **Quality:** “There is no comparison between open web and publisher resources. I’m aware of the movement towards open access journals, but I think the old adage holds true – you get what you pay for. With scientific journals from the major publishers, the quality is so much better.” (Applied Mathematician, Research and Engineering Laboratory)
- **Authoritativeness:** “I’m primarily interested in peer-reference. We don’t provide any information that is “hearsay” or not from an authoritative source.” (Director of Employee and Partner Learning, Network Computing Infrastructure provider)
- **Reliable evidence:** “I don’t often spend time using Google because whilst I may get an interesting result and it can be “good enough”, I can’t rely on it unless I know it’s authoritative and that’s why I go to the library. If it’s authoritative, in many cases it’s fee-based and so going through Google isn’t going to help me.” (Professional Services / Delivery Readiness Unit, Network Computing Infrastructure provider)

Underlining the need for comprehensive and authoritative information, users selected the availability of full text, the perennial ease of access and use and quality and relevance of content as being the three most important characteristics when selecting STM e-journals, e-books and databases. This highlights the importance of investing in good discovery tools given the amount of time users are spending each week with regards to obtaining, reviewing and analyzing information (29% of users reported spending 8-10 hours on this each week, 23% 2-4 hours and 20% 5 – 7 hours).

78% of survey respondents stated that they frequently relied upon STM content. The value of *e-journal* content specifically is most clearly recognized at those organizations with a heavy R&D / scientific focus. While overall survey responses showed slightly more than half of all respondents frequently using e-journals when accessing STM content, this rose to an average of 86% when reviewing the individual responses from the biopharma, research and engineering and FMCG organizations. In these instances, e-journal usage within STM organizations is as high as the overall survey respondents who cited most frequent use of the Internet.

Figure 2: Formats used for STM Content (% of Respondents)



Source: Q7, Outsell end user survey on behalf of Springer, 2009. (When using STM content, how often do you use each of the following formats?)

Always Room for Improvement

Of course, some frustrations still arise. High on the list is the struggle with information overload – not necessarily in terms of the *volume* of information they have access to, but rather, in terms of information organization:

- The need to *filter* and *prioritize* the importance and relevance of information: “When you do a search, you get 50 good results but you don’t have time to look at all 50 thoroughly. How do I decide which 3, or 2 or 1 [to] look at? What if it could be based on a recommendation from somebody, especially if it was an authoritative figure on the topic, as opposed to being recommended by a casual reader? How do we then weigh those recommendations?” (Professional Services / Delivery Readiness Unit, Network Computing Infrastructure provider)
- A lack of tools to help organize information once they have found it: “In terms of management tools, for workflow, what I’d really like and haven’t found yet, is something like Reference Manager but which really works ... What would be nice would be to have

tools that let you store, tag, organize and collaborate with the documents. I'd really like something that is easy to use, something that has the look and feel of these new Web 2.0 interfaces, they just work, they're very intuitive." (Researcher, Global Biopharma)

At the same time a lack of access to required information is also top-of-mind for end-users in relation to the STM content sources they use. For those users Outsell surveyed, this frustration was borne from a number of perspectives including:

- the lack of a subscription to a particular product;
- the inability to access required information from particular locations due to licensing issues;
- the lack of electronic versions of older print texts.

The need for improved ability to link to referenced content (either within the document or beyond it) is also a noteworthy frustration for end-users, particularly within the global biopharma, research and engineering laboratory and FMCG supplier organizations surveyed.

Figure 3: Features Sought from STM Sources

	Total respondents (%)
Easier access or use	63
Ability to link to referenced content, either within the document or beyond it	46
Ability to perform text mining	33
Information tagging capability	29
Information sharing and collaboration tools	24
Ability to access it via a variety of technologies (desktop, smart phone, PDA, e-Book reader etc)	22
Other	4

Source: Q11d, Outsell end user survey on behalf of Springer, 2009. (For those respondents who used Springer e-journals and e-books: what additional features or capabilities do you need from the STM content sources you use?)

E-content Regularly Saves Time, Money, and Supports Business Decisions

Both e-journals and e-books are used across Outsell's survey organizations. In total, 56% of survey respondents stated that they used them on a frequent basis to access STM content. However, they are a far more popular format for users at the biopharma, research and engineering and FMCG organizations – where, in each instance, 82%+ of respondents used e-journals frequently - than at the networking computing infrastructure provider where they were used frequently by 34% of respondents. Similarly, three times as many respondents in the biopharma, research and engineering, and FMCG spaces reported accessing more than 25 STM e-journals a month than did users at the network computing infrastructure provider.

In contrast, users at the network computing infrastructure provider were heavier users and supporters of e-books than those at the other organizations – most likely due to the fact that one is likely to find more technical subject matter in e-books, as opposed to R&D information in e-journals. Whilst the majority of survey respondents have read or browsed only between 1 and 5 e-books in the last month, more than half of respondents (63%) felt that STM e-books were essential for their job and more than three-quarters of respondents (78%) felt that more STM e-books in their professional field would be welcomed.

Respondents were asked to consider the impact of e-journals and e-books on their jobs over the past year in terms of time savings, money savings and support of business decisions. For both formats, the large majority of respondents found an average time savings of 2-4 hours per user per occasion, associated cost savings, and clear nexus to the prioritization of R&D and business initiatives in the form of new technologies to pursue and projects to select.

Time savings

- *E-journals*: Respondents felt that the biggest impact on their jobs with regards to e-journals usage over the past year related to time savings, most (81%) because the information was easily accessible through their library or information center and more than half (59%) because they avoided duplication of research that had already been conducted.
 - Almost half of respondents (45%) agreed that on each occasion they used e-journals, they saved themselves at least 1-5 hours of time. Almost 1 in 5 users (19%) felt that each instance of usage has saved 6 – 10 hours of time, while another 1 in 5 users (19%) felt that they had saved 40+ hours of time each time they had used an STM e-journal.
 - At the lower end of each range of reported hours saved, e-journal usage would save 2.3 hours of time saved per user per occasion. At the higher number of each range of report hours saved, e-journal usage would save 3.8 hours of time saved per user per occasion.

- *E-books*: More than two-thirds of survey respondents (69%) felt that STM e-books had saved them time over the past year, with more than half of respondents (54%) reporting a saved 1-5 hours in each instance of using an STM e-book.
 - At the lower end of each range of reported hours saved, e-book usage would save 2 hours of time saved per user per occasion. At the higher number of each range of report hours saved, e-book usage would save 3.7 hours of time saved per user per occasion.

Money savings:

- *E-journals*: Respondents found it more difficult to associate their usage of particular e-journal content with money savings, presumably because they are much less aware of content budgets than library staff. 43% of respondents felt that their use of e-journals had saved them money but - when questioned regarding the actual amounts of money saved – most (86%) were unable to attribute a specific dollar value.
- *E-books*: Slightly more than half of all respondents (51%) felt that using STM e-books had saved them money, with more than a third of respondents (39%) placing the savings value at \$50-60 per e-book. Another 12% of respondents went as high as \$100 per e-book.

Support of business decisions:

- *E-journals*: Almost three-quarters of respondents (71%) viewed e-journals as having provided information that supported a business decision. Across all four organizations surveyed, respondents felt that the most likely business decisions to have been supported through the use of STM content were the pursuit of new technologies (72% of respondents) and making project or candidate selections (50% of respondents).
- *E-books*: Slightly more than half of respondents (51%) felt usage of e-books had provided information to support a business decision. Favorable sentiments were stronger amongst the biopharma, research and engineering and FMCG organizations, but were offset by perspectives from the network computing infrastructure group which accounts for overall higher portion of e-book usage and has a broader, more diverse e-book portfolio at their disposal. However, respondents across all four organizations agreed that the business decisions most likely to have been supported by the usage of STM e-books in the past year were the pursuit of new technologies (71% of respondents) and making project or candidate selections (42% of respondents).

Figure 4: Impact of STM e-journals

All respondents (%)	Yes	No	Don't know
Using STM e-Journals has saved me time because the information was easily accessible through my library or information center	81	10	9
Using STM e-Journals has saved me time because I avoided duplicating research that has already been conducted	59	24	17
Using STM e-Journals has helped me save money	43	21	36
STM e-journals provided me with information that supported a decision (for example, pursuing a patent or a new technology)	71	14	16

Source: Q9a, Outsell end user survey on behalf of Springer, 2009. (Based on your experience with STM e-journals in the past year, what impact would you say using STM e-journals has had on your job? Would you say that...)

Figure 5: Impact of STM e-books

All respondents (%)	Yes	No	Don't know
Using STM e-Books has saved me time	69	14	17
Using STM e-Books has helped me save money	51	16	33
STM e-Books provided me with information that supported a decision (for example, pursuing a patent or a new technology)	51	22	27

Source: Q10b, Outsell end user survey on behalf of Springer, 2009. (Based on your experience with STM e-books in the past year, what impact would you say using STM e-books has had on your job? Would you say that...)

Springer's E-content Widely Used

When survey respondents and interviewees were questioned specifically by Outsell about Springer and its content, feedback was primarily positive. Of the criticisms made, individual functionality frustrations were raised and, in one instance, a lack of accessibility to content in comparison to other providers.

Springer is clearly a STM publisher on which surveyed end-users rely heavily. Springer e-journals, alongside Elsevier's, are especially relied upon at the biopharma, research and engineering and FMCG organizations. In those same organizations, users also considered Springer's e-books offerings well, along with the aggregated offering of Books 24x7 and Safari. The latter was most heavily relied upon, and by a greater number of respondents, in the network computing infrastructure organization, resulting in significantly higher overall reliance.

Figure 6: Most Relied Upon STM Publishers (% total respondents)

All respondents (%)	E-Journals	E-Books
Springer/Springerlink	46	29
Elsevier/Science Direct	48	18
Ovid	16	8
PubMed	27	10
Safari	25	59
IEEE	41	19
ACM	26	12
EBSCO	12	8
Business Book Reviews	8	11
IHS Standards	8	6
Books 24/7	10	25
Thomson Web of Science	16	7
Wiley-Blackwell / Wiley InterScience	34	19
Other	14	10

Source: Q8, Outsell end user survey on behalf of Springer, 2009. (When using STM content, which of the following e-journals, e-books and databases do you most often rely on?)

When asked to rate specific characteristics of Springer's STM content, feedback from survey respondents was largely positive:

- 64% of respondents rated the relevance of Springer's STM content as either "Excellent" or "very Good";
- 59% rated the authoritativeness of the content as either "Excellent" or "Very Good";
- 51% of respondents rated Springer's STM content as either "Excellent" or "Very Good" in terms of overall quality.

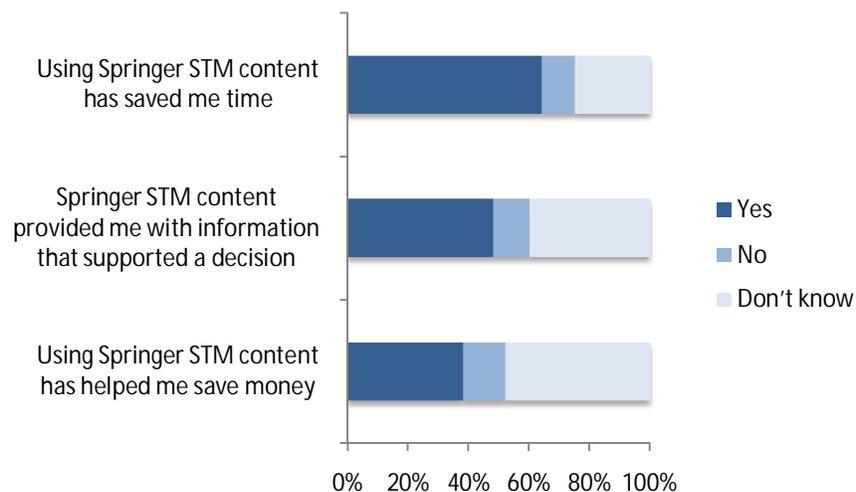
Respondents also acknowledged the role Springer's content played in their research activities, with almost three-quarters indicating some level of difficulty in performing their jobs without access to Springer content:

- 31% of respondents stated that they would "very much" miss Springer content
- 44% stated that they would "somewhat" miss access to Springer STM content

Survey respondents also associated Springer content with individual value and ROI, in particular time savings, with:

- 64% of all respondents reporting Springer STM content had saved them time.
- 48% of respondents finding Springer STM content provided them with the information that supported a business decision.
- 38% of respondents felt that using Springer STM content had saved them money.

Figure 7: Value and ROI Perceptions of Springer Content (% total respondents)



Source: Q11a, Outsell end user survey on behalf of Springer, 2009. (Based on your experiences with Springer's Scientific, Technical & Medical (STM) e-journals and e-books in the past year, what impact would you say using Springer's STM e-journals and e-books has had on your job?)

In Outsell's Opinion: Imperatives for Information Managers

Calculating the value of information and the ROI of investing in STM content is a hot issue for library and information centers, and will remain so particularly as budgets shrink and the need to justify costs and, indeed, the very existence of the library function, increase.

Outsell's research clearly shows that libraries and information centers – along with the STM content and e-content - are hugely valued by their users for the time savings, cost savings, and personal productivity and knowledge they bring. However, the need to identify a higher level value and ROI measurement for these information investments is both desirable and, increasingly, necessary.

- Libraries should measure their impact to the enterprise and business performance especially in communication to management and key stakeholders. A library will still need to gather the metrics of activities and per-use time/cost savings to support the newer value "outcomes" measurements and to manage operational decisions. However, funding decisions will be more influenced by business impact measurements - quicker time to market, successful patent applications, increased grant money coming in the door, educational outcomes, medical outcomes, etc.
- A structured approach to aligning investment decisions to business goals, and confirming value and ROI data, will provide stronger and more sustainable results versus more ad hoc measures. The measurement of ROI is a puzzle that requires a number of different pieces to complete – quantitative data and qualitative feedback together add up to a value proposition of more persuasiveness than would be possible with just one or the other.
- Develop a model for discussion. Once libraries have compiled the ROI and value data they wish to use, it is important that these findings are developed into a cogent story to tell to management – for example, through crafting a model based on KPIs, or the development of a ROI dashboard or scorecard, supplemented with benchmarks and best practice data available from organizations specializing in information and library management. The model used can be updated depending on the validation of assumptions with management.
- Find the right partner(s) with whom to create ROI evaluations. Support can come from a variety of parties ranging from internal champions within the wider organization, to existing partners such as suppliers and vendors, to advisory groups that specialise in such evaluations.
- Information managers must not allow the value of the library to be underestimated. Libraries provide services and support not just in the breadth and quality of the information provided, but also in terms of staff skill-sets. Embedding the library function into the workflow of users as much as possible will further cement their position.

- STM e-content provides the quality, authority, and range to users ultimately need. Usage of Google and other open web sources will continue, but usage does not equate to value or needed business outcomes. Research findings provide a clear message from users that e-journals and e-books are increasingly vital elements of their information consumption – and Outsell's research supports the claim that e-content will support business decisions while saving users time and money.

Related Research from Outsell

Outsell conducts regular surveys of information users in the workplace and in academia – the students, faculty, healthcare providers, and corporate and government professionals commonly referred to as “knowledge workers” – to investigate what they spend for various types of information, what information they use in their jobs or studies, where they go to get that information, how they like to receive it, ways in which they communicate with others, and a host of other attributes that are important to information managers.

Over time, Outsell has published a number of reports that illustrate the changing face of information users – please go to http://www.outsellinc.com/information_managers for further information.

Additionally, the following reports may be of interest – please contact Outsell directly for further information (http://www.outsellinc.com/about_us/contact_us).

Information Management Under Fire: Good Enough Content (published July, 2008)

Information Management Under Fire: Driving New Business Models (published November, 2007)

Information Management Under Fire: Measuring ROI for Enterprise Libraries (published November, 2007).

The information, analysis, and opinions (the "Content") contained herein are based on the qualitative and quantitative research methods of Outsell, Inc. and its staff's extensive professional expertise in the industry. Outsell has used its best efforts and judgment in the compilation and presentation of the Content and to ensure to the best of its ability that the Content is accurate as of the date published. However, the industry information covered by this report is subject to rapid change. Outsell makes no representations or warranties, express or implied, concerning or relating to the accuracy of the Content in this report and Outsell assumes no liability related to claims concerning the Content of this report.



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Outsell is a research and advisory firm focused on the publishing, information, and education industries. Our international team provides independent, fact-based analysis and actionable advice about competitors, markets, operational benchmarks, and best practices, so our clients thrive and grow in today's fast-changing digital and global environment.

His book "Value Investing" is a digestible and intelligent look at how the principles first laid out in 1934 by Benjamin Graham in his book "Security Analysis" are as true now as ever. Montier also, like his current colleague at GMO, Jeremy Grantham, leans heavily on behavioral science and modern advancements in social psychology to make sense of the "madness of the crowds", and of market bubbles and anomalies. The presentation of the book is basically a collection of research papers originally published in the internal journals. All the papers were backed by decades of data crunched concisely and clearly illustrate the point. STM participates in the development of information identification protocols and electronic copyright management systems. STM members are kept fully up to date (via newsletters, the STM website, and e-mail) about the issues which will ultimately affect their business. STM organises seminars, training courses, and conferences. Mark Ware Consulting provides publishing consultancy services to the STM and B2B sectors. Return on Investment (ROI) is a performance measure used to evaluate the efficiency of an investment or compare the efficiency of a number of different investments.
$$ROI = \frac{\text{Current Value of Investment} - \text{Cost of Investment}}{\text{Cost of Investment}}$$
 ROI is a popular metric because of its versatility and simplicity. Essentially, ROI can be used as a rudimentary gauge of an investment's profitability. This could be the ROI on a stock investment, the ROI a company expects on expanding a factory, or the ROI generated in a real estate transaction. The calculation itself is not too complicated, and it is relatively easy to interpret for its wide range of applications.