Title: Professional Competencies for Scientific and Technical Librarians

Chapter 10: How to Understand and Influence the Information Industry

Abstract: One of the key functions of managing information services is mediating between information service providers and the information consumers in the organization. Doing so effectively requires investing time to evaluate the range of service providers and options available as well as continuously assess the changing information needs of the organization. Armed with this dual understanding, librarians can partner effectively with service suppliers and provide feedback to help shape the ongoing product development process. This article provides an overview of the structure and key players of the information industry, plus practical guidance on how to develop an effective voice.

Keywords: Information industry; library-vendor relationships; electronic publishing

Author: Libby Trudell has held a variety of management roles in the information industry, including customer support and training, marketing and product management, and strategic planning. A member of the Dialog executive team for many years, she is currently Senior Vice President of Market Development at Thomson Scientific. She has held many leadership roles in SLA and is currently serving on the SLA Board of Directors. She has been on the editorial board of the Journal of Library Automation and is a frequent speaker at industry events. Her education includes an MLS from Simmons and a BA from Tufts University. Contact information: libby.trudell@thomson.com
I. Introduction

The objective of this chapter is to provide a broad overview of the knowledge and skills required to influence the service providers and publishers in the information industry. Key areas covered are:

- An overview of the structure of the industry and types of service suppliers
- Trends in how suppliers interact with customers and handle new product development
- Specific competencies necessary for exerting influence
- Ideas for how to become engaged as an industry thought leader and influencer

A good starting point is to understand why it is important to influence the industry. More so than in many types of professions, librarians and information professionals work with service suppliers on an almost daily basis -- after all, selection and acquisition of content sources, whether electronic or print, is an ongoing process, and tools or technology for managing and distributing information also must be selected and supported. Success on the job can be very much determined by how effectively this function is performed. Also, the process of working with and "managing" external service suppliers helps to develop skills that are valuable for career growth and moving into management positions.

In the language of economics, librarians are in the middle of a value chain, between information and service providers and the ultimate information consumers.
Service providers ↔ Librarian ↔ Clients

Acting as this key connection point, librarians build relationships in both directions, understanding the needs of the clients and matching those to the available service options. They often “translate” user needs into requirements to be communicated to service providers as well as explain how and when to use a range of service solutions to clients. Because clients typically do not have the time or knowledge to choose and purchase information sources, librarians provide value to clients by selecting the most appropriate content and service options and providing support and consultation to clients. Equally importantly, librarians can increase the quality of those services by communicating back up the information delivery chain to provide feedback to service suppliers -- feedback that can ultimately improve the service offerings available.

In this context, interaction with service suppliers is a partnership in which both entities have the desire to collaborate, provide the best solution possible for that particular user environment and build a long term relationship.

Of course, this partnering process isn’t always a smooth one. Sometimes there is a mismatch between what’s expected and what’s delivered, resulting in the information professional with a product that requires unexpected levels of support or has unanticipated costs. In such cases, if not managed well, the relationship can become adversarial and create an atmosphere of distrust which then colors future interactions. Therefore, it is crucial to be able to exert influence by communicating
in such a way that the problems or concerns are listened to, understood and addressed.

II. Industry Structure

There can sometimes seem to be a bewildering array of service providers, many of whom may fill multiple or overlapping roles. And, new types of providers keep popping up, making it an ongoing challenge to understand the players. Having an understanding of the underlying industry structure can help to keep it straight. Service suppliers for libraries and information centers fall into some general categories

Primary publishers
These organizations publish the primary literature, whether in serial or monograph form. They add value by identifying appropriate authors, providing editorial oversight and control, often through peer review, and by providing marketing and promotion for their publications. A few years ago, the primary publishers produced predominantly print media, but that is changing rapidly with new providers for e-books and e-journals as well as web-enabled social media such as blogs.

Some of the key publishers of scientific journal literature include Elsevier, Blackwell, Wolters Kluwer and Springer-Verlag, plus a wide range of professional association
and academic presses. For a good starter list of scientific publishers, see:

http://www.thymos.com/mind/publ.html

Secondary publishers

These publishers enable better access to primary publications by indexing and abstracting the primary publications. They may rely on cooperation with the primary publishers in order to have access to the source material, or may work directly with other types of source publications such as patents and trademarks. Initially published in print form, such indexes are now available mostly as databases in electronic format. Many secondary publishers offer access to their own database(s) via their website.

Examples of scientific and technical abstract and indexing providers are Thomson Scientific (Biosis, Derwent World Patent Index, ISI Science Citation Index), government agencies such as the National Library of Medicine (Medline) and the Department of Education (ERIC), and professional associations such as the American Chemical Society (Chemical Abstract Services) and IEEE (Inspec). NFAIS (National Federation of Abstracting and Indexing Services) is a good source of information on secondary publishers: http://www.nfais.org/

Online services and solutions

Online services are distribution channels for both secondary and primary publishers. They add value by aggregating many secondary and primary sources into a single
environment, usually with a powerful search engine, and bundling in specialized capabilities for information delivery, formatting, analysis and customization. These services are evolving to more fully integrate the delivery of information with desktop or enterprise-wide software tools.

Examples of online services are Dialog (part of Thomson Scientific, LexisNexis (part of Reed Elsevier), STN (part of ACS) and Ovid (part of Wolters Kluwer). The Software and Information Industry Association (SIIA) is the representative professional association of this segment of the market: http://www.siia.net/

As can be seen, some of the larger companies are operating across the spectrum of information services, encompassing different business units with offerings ranging from primary journals to abstract databases to online solutions. Very often this range of product and service offerings is built up through an acquisition process. While this type of consolidation provides opportunities for synergy and integration, it also results in a mixed landscape where the same organization can be acting as a distribution channel for one database while offering their own competing proprietary databases on other platforms, causing a changing array of brand entities and affiliations.

Software and solutions providers

With all this data flowing into the organization, librarians and information professionals need tools for managing, organizing and providing access to it through
internal systems and to clients’ desktops. A wide range of software providers operate in this space, including enterprise database management tools such as Oracle and SAP, content or document management systems such as Autonomy and Open Text, and intranet portal tools such as BEA’s Plumtree. This is a rapidly changing arena, with a number of open source options available as well as major commercial players.

Library Technical Services

Another category of service suppliers are those who help run the library’s “back room,” providing tools for cataloging, circulation and public access. These library automation services are commonly referred to as integrated library systems (ILS) or Online Public Access Catalogs (OPACs). The largest player in shared cataloging is OCLC, a non-profit membership organization with more than 57,000 participating libraries worldwide. However, there are many options for stand-alone software and solutions providers including EOS, Sirsi-Dynix, ExLibris, and Innovative Interfaces. The open directory project provides a list of services providers at:

http://dmoz.org/Reference/Libraries/Library_and_Information_Science/Software/

Another back office function is book/serials acquisition and document delivery. Examples of major players for materials acquisition management are EBSCO, SWETS, and Harrassowitz for journals and Blackwell Book Services, YBP, and Coutts for books. In the document delivery arena, key players are Infotrieve and the
British Library Document Supply Center. However there are hundreds of regional and specialized suppliers, as indicated by this directory: http://www.docdel.net/

As more and more journals and books become available in electronic form, electronic book and journal delivery services are creating new types of distribution issues and services needs. The major players have entered the electronic arena and new services are emerging. Some of these new e-book services are Knovel, eBooks and Netlibrary. The e-journal services include Public Library of Science (PLOS), Open Content Alliance, Directory of Online Access Journals (DOAJ) and Highwire Press.

Information Brokers and Consultants

A final category of service supplier are those to whom you may turn for help when a special project or internal requirement exceeds the bandwidth of library staff or requires special expertise. Information brokers typically have training and experience as librarians, but have established their own consulting business to provide outsourcing services to information professionals. Some of the big players in this arena are Guideline, which encompasses the FIND SVP and Teltech services and Corsearch, which specializes in Trademark searching. However there are hundreds of other options and many brokers belong to the Association of Independent Information Professionals (AIIP). For more information see the website at http://www.aiip.org/index.html
Consultants or contract services can also be engaged for more permanent outsourcing of library functions, especially back room services. Where such outsourcing occurs, the relationship with the contractor may often be similar to working with a colleague in the same organization.

This brief overview is by no means complete, and indeed it is hard to define all the players as the information industry is so rapidly changing. For a wider view, another useful source is the list of top 100 players compiled by E-Content Magazine:

http://www.econtentmag.com/EContent100/

**INSERT FIGURE 1**

III. Trends

The emergence of these new e-book and e-journal service offerings is one of the key trends causing shifts and realignments within the industry. **Open source services represent a challenge** to the traditional primary publishing sector by offering an alternative way for authors to publish their work. They offer both a challenge and an opportunity to the secondary publishers, who need to determine which sources are of a caliber comparable to that of traditional publishing and therefore should be abstracted or included in indexes. And, where freely accessible via web searching, these sources offer an alternative that offers a different economic model than that of the online search services.
A wider range of options and new economic models is also a challenge for the information professional. The perception that now exists among many clients that “it’s all free on the web” can make it more difficult to justify the budgets required to ensure that the full range of information resources required for access to comprehensive information sources is available.

However, the proliferation of content sources and of free or low cost software options requires service providers to be ever more focused on understanding and meeting the needs of customers. This has led to a trend in product development that is more customer-focused, compared to the technology-driven product development approach of the past. Many service suppliers are seeking to engage customers in feedback activities such as user councils or advisory boards in order to maintain a competitive edge.

Service developers may also use information gathering techniques that endeavor to better understand the user’s day to day activities, and thereby discover opportunities to better integrate information services into the overall workflow. The user in this case might be the librarian, or the librarian’s client. The objective is to provide work flow solutions directed to specific applications and deliver information more directly to the point of need or for when a decision is being made. Another technique that suppliers may use is to participate in professional associations, where they can interact collegially with customers and engage directly in discussions about the issues they face.
Information-using habits and communications tools are evolving rapidly, driven by market factors including the internet, consumer electronics and mobile capabilities. As a result, information service suppliers need to deploy a more rapid development cycle in order to keep up. The pace of development means that immediate feedback on user reaction and needs is ever more highly desired, and creates increased opportunities for information professionals to influence the industry, if they are willing to step up to that role.

Another trend is toward integrated or multi-functional services, such as the combination of OPAC combined with circulation or online searching combined with article delivery. This can potentially enable the librarian to work more closely with a smaller number of suppliers that each provide a set of integrated services, and have more influence as a result. Further, while vendors may adopt open interface standards that enable their systems to work together, they seek to differentiate their services by providing unique user interfaces and approaches to search syntax, making it difficult for users to learn a new service. These factors can make it very difficult to switch service providers if needs are not being met.

Finally, the pervasiveness of the web and availability of very high bandwidth telecommunications is enabling a trend toward hosted applications replacing onsite software and servers. This can significantly reduce the information professional’s reliance on internal IT departments, reduce the impact of
implementing new versions of software and simplify the management of service solutions.

IV. Relevant Professional Competencies

There are many personal and professional competencies that can lead to success in having influence on the industry. We’ll focus here on a few key ones: building relationships, assessing needs, service measurement and “informed consumerism.”

Relationship building
Relationships are something that we spend a lot of time working on in our personal lives. However, they often are not given the attention deserved in the professional environment. A contributing factor is that nurturing relationships takes time and it is all too difficult to invest time in longer term objectives when there are always more urgent or immediate tasks at hand. So, the first key to relationship building is setting aside time to connect with people in a meaningful way.

In the context of suppliers, here are some tactics for building relationships:
- Call your account manager to provide feedback on the user experience (both positive and otherwise) on a monthly or other fairly regular basis. Don’t wait until there’s a crisis to resolve.
- When interacting with your account representative, try sharing some personal information (re vacation, movies, kids, etc) and ask about them in order to connect in a more personal way.

- When planning to attend professional conferences, check to see which of your service suppliers will be there and arrange ahead of time to meet with their staff. Your account manager will usually be happy to take the opportunity to introduce you to key players, such as product managers, who may be at the conference. Exchange business cards and follow-up with an email note or a call. This increases your points of contact with the organization.

By being visible and proactive in such ways, you will make an impact and be remembered, and the chances of being asked to participate in beta tests or other feedback opportunities are greatly increased. For additional tips on relationship building, including a process for self assessment, see the paper “Achieve Results through Relationships: the Power of Influence,” based on a workshop developed by Ulla Destricker

Needs Assessment
According to the consulting firm Outsell, needs assessment is defined as “…the process of gaining an understanding of client’s information use habits, preferences and perceptions based on their direct feedback. It is a wonderful way to get a view of how information is used, through the lens of the user.” Being proactive about needs assessment has multiple benefits, especially in the context that the librarian is
the key connection point between the service provider and the information user. Having a clear understanding of the various environments in which your clients are using information, the ways in which they transform it, and the types of decisions they need to make enables you to define gaps in the current service offering. This then puts you in a position to fill these gaps by working with service providers.

An important aspect of needs assessment is being able to prioritize feedback based on the level of criticality of services requested by the various communities in your organization. There are always conflicting demands for resources, both within your own organization and in the service provider’s organization. It’s better to focus on one or two high priority, high impact needs than to flood the service provider with a long list of less crucial items. Sometimes the best question you can ask your users is: “what’s the one thing that would make this service more valuable to you?” rather than conducting a long and detailed survey.

Service Measurement

It’s very difficult to know whether or not a service is successful without having some valid metrics with which to assess it. This may be an area where you can request help from your service providers, who may be able to provide data for resources being used or assist with return-on-investment analysis. The most vital thing to remember, however, is that it is more important to try to track impact on your organization and link that to information use than to simply report usage statistics.
This linkage requires seeking out ways to identify and report the benefit to the organization which results from the dollars spent on information services.

In her paper “Defining Value for Information Centers,” Laurie Kauffman outlines three key steps:
- Show how the information center solves business problems
- Show why the information center is the best solver of particular business problems
- Show how the value of the information center exceeds the cost, in quantifiable terms, where possible

While this methodology is very effective in terms of creating the value proposition for the library or information center, it is also an approach that you can use in working with service suppliers. Share your business problems with them. Challenge them to show how they can solve them and why they provide the best solution compared to other alternatives. This helps the service supplier to propose solutions closely related to your organization’s needs. It also should lay the groundwork for helping you and the supplier measure the impact of the solution once implemented.

A final competency that underlies all the others is to approach the services suppliers as an informed consumer and take the initiative to fully understand the service offerings. This is challenging, as the existence of multiple distribution channels and product interfaces for the same database or content source can often be confusing. In some cases, the same database is called by a different name on one product or
online host than on another or one product offering may provide only a subset of the complete database, even though called by the same name. These versions may be associated with a pricing structure, a specific interface, a brand identity or a type of contract. This makes it very important to review product descriptions carefully, ask service suppliers to confirm whether a particular content offering is in fact comprehensive and do side-by-side comparisons.

Related to this, there are many different pricing and contract options available, ranging from pay-per-use to monthly flat fees to unlimited use subscriptions. Choosing the best contract options for your needs can require a lot of information gathering and analysis. A good resource for understanding how content licenses work, especially in the context of electronic delivery, is the LibLicensing Project. See the website at http://www.library.yale.edu/~license/index.shtml

Being an informed consumer takes time and focus, but the more you know about the alternatives available to you and your organization, about the true drivers on use of information in various clients groups, and the strategic goals of your organization, the more equipped you will be to select the best possible service partners and to negotiate with them effectively.

V. Taking action to become involved
This overview of industry structure and core competencies sets a framework for building an action plan for influencing the industry.
Be a Technology Maven

This approach isn’t for everyone, but if you have an interest in technology, building recognized expertise in an area or application of interest is one way to increase your ability to evaluate and assess the software-driven aspects of information services. This expertise will serve you well as a resource within your organization as well as raise your professional profile. A few techniques to consider are:

- Devote some time to professional reading by experts in your technology areas of interest. Look outside the library profession to compare how technology is being utilized in business decision-making.

- Explore and contribute to R&D and/or IT initiatives at your organization

- Attend conferences to see demos of new technologies and talk with a variety of vendors

- Join online and face-to-face user groups related to area of interest. Also monitor and participate in blogs and discussion lists based on your area of interest.

Some sites to get you started include:

- [http://stephenslighthouse.sirsidynix.com/impactsfuture](http://stephenslighthouse.sirsidynix.com/impactsfuture) (Stephen Abram)
- [http://litablog.org/](http://litablog.org/) (Library & Information Technology Division, ALA)
- [http://citesandinsights.info/](http://citesandinsights.info/) (Walt Crawford)
- [http://lists.webjunction.org/currentcites/](http://lists.webjunction.org/currentcites/) (Roy Tennant)

B. Create new communication channels with service providers
- Form a relationship with your in-house IT team and bring them together with selected vendors. Both parties will benefit from the opportunity to understand needs and capabilities better.

- Use the strong relationship you build with your sales reps/account managers to funnel key suggestions through them, but also make use of the vendor’s help desks to make suggestions as well. Help desk staff interact with a wide variety of customers and are often in the best position to spot recurring themes and needs.

- Do formal needs assessment within your organization and then follow that up with an ongoing process for collecting feedback. This will give you insights as to what services are having the most impact and give you quantifiable information to share with selected partners. This makes your input more valuable than if it is mainly anecdotal.

- Offer to host local training sessions. This will put you in contact with the product specialists for your service supplier, who often work directly with product management on prioritizing features and development projects.

C. Build a reputation as an opinion leader

- Participate in a committee chair or other leadership role in a professional association such as SLA, ALA, SCIP or ASIST. You’ll get to know colleagues outside your own organization and have opportunities to compare notes on service options and suppliers.
- Speak at conference meetings focusing on topics such as how your organization uses information, ways in which different services work together to create integrated or tailored solutions for your clients and the techniques you’ve used for gathering user feedback.

- Write on similar topics for forward-thinking publications such as Information Today, Online Magazine, or E-Content Magazine.

- The publications are also interested in identifying people who are willing to contribute to the publication in other ways. A great way to get exposed to the ideas of a wide range of people is to join the editorial board of a relevant professional journal.

- Find out if your key vendors have advisory groups or user councils, and if they do, express interesting in participating. These are small groups that can provide opportunities to interact and understand the concerns of colleagues from various environments including academic, private/corporate organizations, government labs and solo librarian settings. They can also provide opportunities to understand the strategic focus of vendor partners.

VI. Summary

It is highly likely that interacting with service providers will be an important aspect of any position you may have as an information professional, especially if you operate a solo operation or progress into management. Being proactive about building positive relationships and maintaining an open flow of communication is a simple yet
effective way to influence your service providers. By investing a little more time, you can be well positioned to influence the industry in a meaningful way, and support the process of improving the types of services available to your and your clients.
Bibliography for Further Reading


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