The biomedical industry relies heavily on information. Pharmaceutical, diagnostics and medical device companies thrive when the information they use is accurate, timely and targeted. A skilled information professional can help clients in the biomedical industry better understand their information needs and refine research requests to ensure useful results. Using techniques to evaluate and analyze how employees obtain, use and share information, information professionals can also help organizations avoid costly mistakes. Consider how the information professionals described here add value in unexpected ways to the projects and enterprises with which they work. In this article Liga Greenfield first considers the power that a fresh perspective can bring to a search for information, while Cindy Shamel considers the way in which IIPs can add value when they undertake a specific assignment by identifying larger information issues that may be revealed in the process.

The Power of a Fresh Perspective

With the advent of the Internet, information identification and retrieval changed dramatically, placing vast quantities of information readily at the fingertips of anyone who had the time, energy and skill to ferret it out. Somewhat unrealistically, the perception has therefore developed that anyone can find information they need anytime. The often-unrecognized danger is that the information retrieved in simple web searches is just the tip of the iceberg in terms of what is available. Information professionals daily use an arsenal of authoritative information resources beyond those readily available to the ordinary web searcher.

As an example, most of us are capable of cleaning, disinfecting and bandaging a simple wound, but we would call on a physician for a severe injury and might well find that physician reaching out to even more specialized professionals to provide state-of-the-art treatment when appropriate. So, too, do information professionals provide the next layers of expertise in searching for information upon which their clients base research and business decisions. If Dr. Smith, CEO of a small biotech startup, is traveling to a meeting, there is no reason he should not perform a simple web search to obtain some simple background information about the other participants. But if he is preparing a presentation for a meeting of investors and wants to be certain that he has not overlooked vital information in the published literature that contradicts his research, he should escalate the research job to a professional. If that same Dr. Smith’s company is about to apply for a patent for its discovery, it becomes even more critical to consult someone with expertise in searching technical and patent databases to provide the due diligence research necessary to protect the work.

Few would argue against the idea that someone who performs information research for a living is going to be more efficient and knowledgeable about that process than will someone who only occasionally performs such searches. Often however, we overlook the single most critical unexpected value of the information professional to a client: assistance with articulation of need.
In order to find the correct answer one must first ask a question that phrases the need in a clear and concise way. A person or group needing information often finds it difficult to express that need correctly and clearly. This difficulty is compounded when working with a group, each of whom sees the situation through a different personal filter of experiences, expectation and vision. An improperly voiced question gives rise to an incorrect or irrelevant answer.

An information professional skilled in the art of the reference interview can help the client to see the problem needing a solution more clearly and to articulate it in such a way that the client (individual or group) and the information professional perceive the same need and have a common understanding of the desired deliverable. Through a combination of active listening skills, background knowledge of the field of research and experience with the most directly applicable information resources, the information professional is able to guide the client to a more clearly defined information goal.

A few examples from my own experience with biomedical and pharmaceutical clients can illustrate this point:

**Specificity.**

**Client:** Can you provide us with all the information available on drug X, and can we get copies of all the articles? How much will it all cost?

**Information professional (IP):** Why do you need this information? What will you be doing with it?

**Client:** What difference does that make?

**IP:** It will help us determine the best strategy to retrieve the most useful information in the most cost-effective way possible. For example, do you need only clinical information or do you want pre-clinical publications included as well? Do you want only the brand-specific publications or anything that includes the generic or brand names for product X? Since this product is older, there is apt to be a lot of literature. Do you want to see only review articles or only articles in English, or can you suggest other ways in which we can filter the search results to provide you with a tightly focused and on-target deliverable?

**Concept Relationships.**

**Client:** Can you do a quick search for me? I’ve already prepared a list of the words you should use.

**IP:** Can you tell me more about your project and what you hope or expect to find?

**Client:** Don’t worry about that – just plug in these terms; I just don’t have access to the databases you have or I’d do it myself.

**IP:** I’m concerned that if I don’t understand the appropriate relationships among the terms you have provided and search for those specific relationships, the search results will be unnecessarily lengthy and expensive, as well as disappointing for you.

**Scope of Project.**

**Client:** Can you provide us with information about the companies working in XX therapeutic category for $2000 or less?

**IP:** That will depend on what it is you’re looking for and how you want that information presented. Are you interested in a simple listing of companies involved in research and marketed products in this therapeutic category or a SWOT (Strength, Weaknesses, Opportunities and Threats) analysis? Do you want financials, management information, partnership information, published research, news? Are you trying to build a competitive intelligence dossier on each company? Are you looking for just public companies or also private ones? US or worldwide? Let’s talk about these things and create a checklist of your specific needs in a deliverable, and then I can prepare a meaningful proposal and estimate for you.

Often, clients reaching out for help from information professionals are unaware of the scale of their projects until they hear some of the questions that information professionals ask them. As they respond to the probing, the clients begin to visualize their needs in a different light; they become more aware of various search options, information resources and the costs to perform those services. Potential clients who want the world on a shoestring budget quickly realize the limitations of their financial capabilities, so they structure the research request in a way to provide the most bang for the buck.
Others who have searched the web and found little become aware of how much relevant information is readily available from fee-based secondary resources of which they were not aware. They contract to have that search done, recognizing the cost savings of this approach over having to initiate and complete primary research to determine results that are already available.

A knowledgeable and experienced information professional provides clients not only information but also a clearer insight into what their information needs are, as well as an increased awareness of the resources available to meet those information needs. This value holds true for information across a broad range of specialties, not the least of which are the biomedical and pharmaceutical clients I have mentioned in this article. The advantage a biomedical/pharmaceutical information specialist often enjoys in working with her clients is that the clients are already research oriented, so they are often quick to grasp the value that information professional can bring to their projects.

**Needs Assessments Lead to Unexpected Outcomes**

Analyzing the flow of information into and within a company can lead to valuable recommendations for new services, resources and staffing. Here follows a brief overview of two projects completed by an independent information professional, including a look at the value delivered and the implications for each company. In each case the company had identified an information management problem. They developed a solution and called on an independent information professional (IIP) to help implement the proposal. In each case, after careful research and with the help of the client, the IIP redefined the information need and developed alternative solutions. Although each company was surprised by the findings, they acknowledged the validity of the recommendations and promptly implemented them.

**Information Audit.** Executive managers at Mednostics (not the real name), a diagnostics company with over 750 employees, identified the need to improve competitor intelligence. The corporate business development unit, which was tasked with resolving this situation, determined that the solution lay in organizing existing information, rather than gathering new information. The situation as they saw it involved development of a database for archiving existing available reports and data points. They called in an IIP to develop the system.

The IIP very quickly realized that Mednostics was unusual in the biomedical industry for its lack of an internal library or librarian function. A biomedical company’s most valuable asset is the information that surrounds and supports the use of a substance for a particular purpose. To protect that asset, most biomedical companies – and pharmaceutical companies in particular – employ librarians. In the absence of a centralized information management function Mednostics experienced inefficiencies in information acquisition, barriers to internal information sharing and risks related to copyright compliance.

Phase I of this project involved researching and writing a white paper for the executive team to document the value of a centralized information function and the risks associated with inefficient and ineffective information management practices. The information management needs went well beyond competitor intelligence. Initial findings indicated that the lack of professional library services could be costing Mednostics several million dollars a year.

The executive committee attended to this finding and commissioned an information audit under the guidance of the chief financial officer to determine the company’s overall need for information management and to further define the function of an information professional.

Using an online survey tool to poll all employees and primary research to interview 30 employees in 25 departments, the IIP gathered data on information collecting, developing, sharing and storing practices. Additional research addressed spending and gaps in information availability. Findings from this audit revealed duplication in journal subscriptions and acquisition of market research reports. In an effort to organize their information, several departments had developed multiple homegrown databases for archiving and storing information. Where databases or resources were not available, employees improvised. In the absence of corporate journal subscriptions, employees shared personal subscriptions, putting the company at risk for copyright violations. In one case an employee would occasionally call a friend at a former employer, now a competitor, and ask for research assistance.

Thus, careful research and examination of existing information management practices led to the conclusion that the gaps were larger than a
lack of competitor intelligence, but involved systemic inefficiencies in the acquisition and sharing of information in general. An initial request from the company to create a database of reports and data ultimately led to a series of recommendations for better information management along with the suggestion to create a corporate library function to implement these recommendations. The company responded quickly and hired an experienced biomedical librarian to oversee information management. In the end, among other things, the librarian did create a portal for storing, surfaced and sharing the company’s information assets. Centralized information management put Mednostics in a much better position to systematically share information throughout the enterprise, and better monitoring of the competition is an important outcome of that process.

**Resource Evaluation.** In this case a pharmaceutical company of approximately 500 employees engaged an IIP to discover what sort of information employees on the commercial side needed. The information professional in this company was satisfied that the scientists and researchers had the information and services they needed but suspected there may be gaps in other departments such as human resources, business development and new ventures. The objective was to obtain feedback on the interest in a subscription to a key business magazine and a subscription to a large market research provider.

For this project the IIP conducted 13 interviews with directors and managers to inquire about what kind of information they needed to do their jobs, where they currently got information and what they needed but could not find. The IIP also asked the all-important question: “Is there anything else we need to know?”

The findings were surprising and very clear. These employees were not experiencing a lack of relevant information but rather an overload. They are inundated with data points throughout the day, which provide constant distraction. Along with that problem was the general fear that “maybe I’m missing something.” Findings revealed a strong culture of information sharing, which pleased the executive management very much. In general employees felt they had the resources needed to do their jobs. They obtained information either from the corporate library, through acquisitions using departmental funds or by sharing resources with other departments. Two thirds of those interviewed either received some kind of environmental scan/newsletter or wish they did. Only one department, human resources, expressed the need for access to more information. They asked for a database of scholarly literature that supports their function.

Recommendations from the IIP addressed all of the findings and have since been implemented through the library. The library has implemented a system to share existing news alerts available within the enterprise and to develop new alerts to meet identified needs. Further, they have acquired access to a literature database for human resources and subscribed to the business magazine identified at the outset. The employees interviewed did not think much of the market research company under investigation, so the library saved valuable resources by not subscribing to their publications. Through careful research this corporate library learned that its internal clients needed services more than sources. They avoided the acquisition of unneeded information, created a great deal of credibility and good will for the library function and improved information access for over one-third of the company.

In all of the examples described here the information professional listened, asked questions and applied specific industry knowledge with professional expertise to add unexpected value in resolving information needs. In each case outcomes yielded some combination of improved accuracy, timeliness, relevancy or cost savings.