The CD-ROM Challenge

*"The man **of** action often has to make do with approximations, **for he** would never accomplish his purpose if he wanted to make every detail perfect."* **Alexis de Tocqueville,** *Democracy in America.*

Libraries are embracing CD-ROM information products. There is a CD-ROM for every application and price range. Steve Sieck observed in the Spring 1989 *CRN Benchmarks:* "The corporate market is so big that if you track only commercially-available CD-ROM titles, you're missing about half the titles." More than 2,000 master CD-ROMS were produced in the U.S. in 1988.[1] This suggests that there is considerable CD-ROM development underway within organizations eager to apply the technology to their proprietary information needs.

Big business is emerging as the **CD-ROM** industry's number one customer. Major corporations own the majority of the 65,000 CD-ROM drives now installed in the United States. These same companies created most of the non-commercial **CD-ROM** titles in 1988. **CD-ROMs** are excellent media for the distribution of massive amounts of

digitally-encoded information. Link Resources Corp., a New York-based research company, estimates that the **CD-ROM** market will be worth more than \$500 million in 1989, reach \$944 million in 1990, and exceed \$2 billion in 1992.

Ten Reasons Why People Buy

1. Cash in on the hot technology.

The publicity surrounding **CD-ROMs** has given the technology, and to a lesser extent, the information available on the discs themselves visibility. Getting a **CD-ROM** is one way to attain stature, create a sense of excitement about using information, or increase the library's budget.

2. Reduce online expenditures.

The cost of online access to many highly-desirable databases is prohibitive, making online access a resource for the rich or privileged. The argument for the **CD-ROM** is that the disc allows unlimited access twenty-four hours a day. One pays for that access with a fee that does not vary. With **CD-ROMs,** information has already been purchased with a fixed-fee subscription. Searching, previously considered a *luxury*, can become a *routine* research activity. Moreover, having a **CD-ROM** allows online searching to be limited to time-sensitive data, thus reducing the cost impact of online databases.

3. Provide more direct user access.

CD-ROMs have allowed people to retrieve information electronically without specialized or lengthy training. In general, the **CD-ROM** user interface makes extensive

use of menus and help screens. An increasing number of **CD-ROM** products provide an expert mode as well. More importantly, **CD-ROMs** quiet the meter which ticks ominously during online information retrieval. The CD-**ROM** can be located in public access areas in a library, in a marketing or corporate finance department, or in a university study lounge. These factors add up to more freedom for those new to electronic information retrieval and serve to increase the end user's information appetite.

4. Offer unique capabilities to clients.

The design of some **CD-ROM** products, including those featured in *V The Product Arena,* invite and encourage the development of new information services. The use of **CD-ROMS** and their ability to allow for downloading, data manipulation, and data recombination make them invaluable and extremely effective in report preparation. Some libraries offer for-fee research services. The **CD-ROM** product can be the foundation for these services.

5. Introduce new products or services.

A library equipped with the right **CD-ROM** products can offer a range of information services that are not currently cost-effective using standard, pay-as-you-go on-line information services.

6. Obtain more computer equipment.

Some libraries need additional computer resources and must justify capital purchases. Many **CD-ROM** vendors provide hardware with their information product or make

it available as part of their full-service approach to meeting library needs. The equipment offered as part of a **CD-ROM** package typically includes the optical drive, a computer which is equipped with a high-speed chip and fixed disk drive, and cables.

7. Expand the library budget.

The library that wants to grow can often expand its capital assets quickly with a **CD-ROM** acquisition. The combination of the subscription fees, the hardware, and the software can cost as little as $1,500 to $2,000 for a single-disk operation or tens of thousands of dollars for multiple subscriptions to high-end, business information products. There are only a handful of other information purchases which can have an impact on a budget.

8. Get smart about the technology.

Many libraries feel they have to know about **CD-ROMs** first-hand in order to keep pace. The self-development factor is often one of the motivators for those libraries which are the early adopters of a technology.

9. Manage time more effectively.

Providing online research services can be time-consuming in many library situations. The **CD-ROM** provides a way to free more staff time. Further refinement of research can be done offline by either end-users or staff who are not expert online searchers. Online can be used to supplement or round-out the offline investigation. Such a division of labor makes more effective use of employees.

10. Follow the pacesetters .

A large number of libraries are acquiring CD-ROMS. Many libraries follow suit because peer libraries have acquired this new technology.

In most CD-ROM acquisitions several of these factors blend together to create the climate for CD-ROM acquisitions. Any one of these factors can be the catalyst for purchase. However, buying a **CD-ROM** is often more costly than the vendor's sales literature indicates at first glance. Therefore, regardless of the number or price of the CD-ROMS that a library wants to acquire, thought should be given to understanding the implications of the technology and its use. A strategic electronic information plan is an essential management tool.

Reasons Buyers Don't Do Their Homework

Caveat emptor. You must do your homework. Without accurate research you are vulnerable to the sales techniques of CD-ROM vendors. You can potentially make poor decisions without proper information. The most common reasons librarians offer for not making a thorough study of the CD-ROM decision involve technology, time pressures, and management style. Do any of these statements sound familiar?

- I don't have time to get involved in technology.

- I'm not a technologist so I cannot participate effectively or comfortably in technology decisions.

- I have people on my staff (or in my organization) who make the technology decisions.

- We have enough technology already.

- I can't be bothered unless the cost is above a certain monetary level.

- I don't know how to manage the **CD-ROM** as a book, service, or online replacement.

Each library must have some type of information technology plan. The **CD-ROM** *must* be a part of that plan. If the library management decides not to acquire optical information products, the reasons for that decision ought to be documented. A well-documented information technology plan will incorporate the reasons which, if a change occurs, can trigger a different decision regarding the purchase of **CD-ROMs.** From time to time, the plan should be revisited and the ideas reevaluated without having to retrace earlier steps.

Signs of Weak Planning

Acquiring and managing **CD-ROM** technology requires careful thought and study. The symptoms of not properly managing the **CD-ROM** include:

Spur-of-the-Moment Decisions

Characteristics of this situation are unused or inappropriate **CD-ROM** acquisitions, cost overruns, lack of integration and consistency in hardware and software or collection of unrelated information tools.

Unrealistic Expectations for the Technology

Do not overestimate what you can accomplish with **CD-ROMs.** Hard-to-reach objectives include wide acceptance by end users within a short period of time or the positive impact of the **CD-ROM** on your online expenditures. False hopes will lead to management criticism of the **CD-ROM** option, budget reductions, or dissatisfied patrons and clients.

Refusal to Embrace New Technology

Characteristics include constant product evaluation but no acquisition.

The Principal Challenges

Let's face **CD-ROM** management issues squarely:

- The technology is changing at a rapid pace and that pace is not likely to slacken in the near future. De facto standards are emerging, particularly as a result of successful products developed by large database producers. These organizations are unlikely to abandon their current product and technology base.

- The risks of not investing in technology have increased. Lack of innovation and conservatism is the result. Without the risk, no growth in service is possible. The key is to assess the risk and come to grips with the impact of the **CD-ROM** acquisition.

- Competition is the norm. Those outside the library may be more equipped to take action. If the library

delays in taking a leadership position in the CD-**ROM** information option, another group will.

A Strategic Approach

Does a **CD-ROM** make sense for you? The foundation of successful **CD-ROM** planning and implementation is determining if the **CD-ROM** will meet specific client or patron needs.

The foundation of any planning endeavor is a needs assessment. (A more complete discussion of information needs assessment appears in *Marketing Library Services: A Nuts-and-Bolts Approach; see X For Further Reading* in this book.) A suggested timetable appears in Appendix A to this chapter.

There are eight basic steps to planning a **CD-ROM** acquisition and its effective implementation. The steps outlined in this chapter are applicable to many library settings.

1. Set Goals and Strategy

Remember that the **CD-ROM** is only one component of electronic information retrieval. Understanding an organization's goals for electronic information products is one of the most important aspects of assessing **CD-ROM** needs. The information products and services libraries develop should support the goals and objectives of their organization or community.

Organization-wide strategies should be clear so that appropriate products and services to support them can be provided. Shifts in focus or emphasis will affect the information required by the organization. Familiarize yourself

with your organization's goals and strategies but be aware that some organizations change strategies mid-stream. Try to ascertain how long the present strategy has been in place and how frequently your organization changes its strategies.

While information products and services should be developed for all groups within an organization, it makes sense to concentrate energies in the areas which will make the most impact on the organization's future. The information services which support applications of importance to the organization--that is, those in which the business payoff is the greatest--will be more highly valued than others and perhaps the departments where important funding can be solicited.

2. Understand Your Environment

When introducing **CD-ROM** products and services, be aware of the corporate culture of your organization. It enables you to identify opportunities and understand how to position your reasoning for acquiring **CD-ROM** technology.

Identify the major functions within your organization and the departments most involved in performing these critical functions. How do these groups fit into the overall structure of the organization?

Understanding corporate hierarchies and how individuals and departments relate to each other will help to plan for **CD-ROM** products and services which serve the organization as opposed to serving individuals. You may want to introduce **CD-ROMs** for a single specific function first and then migrate the technology to other groups.

Offering **CD-ROM** products across departmental lines or in multiple locations will foster the sharing and exchange of information, thereby increasing the efficiency of your organization and leading to an increase in effectiveness or service. Finding a *champion* for your **CD-ROM** efforts in one group is also a good way to spread the message--influence leading.

The type of products you acquire, the user groups or departments you target, where you place them in the organization, and the way in which you promote them will be dependent upon a correct reading of how receptive your customers will be to **CD-ROM** products and services.

The individual styles of key users and senior managers will also play a role in the success or failure of **CD-ROM** products. Don't forget to take them into account when formulating your marketing plan.

3. Segment the Market

Since every community is composed of separate and distinct user groups, you must also determine the functions and activities of each identifiable group. Like the organization as a whole, you must ascertain the mission of each group and determine the role it plays within the organization. Try to figure out what the members of the group perceive as their Critical Success *Factors* and correlate with those of the organization.

Targeting your **CD-ROM** information products to precisely those aspects of a group's activities which determine their success will help the individual group as well as the entire organization achieve its goals.

Each user group is driven by a different, identifiable force. For example, investment decisions are the driving force of the finance department, and technology drives the development department of an electronics firm. If you identify the driving force, you can position the CD-ROM product or service properly. The identical product might be marketed to one department on the basis that it will increase productivity while another user group will be sold on it because it will reduce costs. Successful CD-ROM product selection is of no value unless the efforts to market the product are also successful. An effective marketing effort is directly dependent on an accurate assessment of each group's driving force.

Understand exactly what information is critical to each target group in your organization. All groups require technical, tactical and strategic information. While technical information will increase a department's productivity and tactical information will be useful for problem-solving, strategic information is essential for sound, long-range decision-making.

Know that decisions will have to be made whether or not you have contributed to the process. Once you understand the type of decisions made by each department, you will be able to develop information products and services which will help them make better, more informed decisions.

4. Research, Analyze, and Revise

One of the most useful ways to learn what information is required by your organization is to conduct a survey

of the market, including both current and potential customers.

While questionnaires may work for evaluating information products already in use, they are not as successful in assessing the information needs of an organization. A more thorough method of performing a comprehensive information audit is to begin by conducting interviews with each distinct market segment and following these group meetings with one-on-one interviews with the individual members of the group. Try to keep the group meetings creative to foster the free flow of ideas. Ask members to point to instances where information has been particularly useful, as well as instances where the lack of information has hampered their ability to function effectively. What questions have they tried to answer but could not? What answers were particularly time consuming and frustrating to obtain?

When meeting with individuals, try to gauge where each one fits in the department's organization. What tasks does each individual perform that allow the department to function effectively? During the group interview you will have discussed how information enables the department to achieve its strategic objectives. Now, you must get the individual members of the group to think about how information contributes to their everyday routine. For individuals, the concern is usually the application of information to increase their productivity.

Seeksuggestions as to where improvements might be made in the type of information retrieved and applied. People may be less inhibited in a personal interview than they were in the group situation, when their boss might

have been present. Also, they will have met you at least one time prior to this interview--at the departmental meeting--and may be more at ease and speak more freely.

Once you have assessed the requirements of the department, the library can assume the role as liaison between the **CD-ROM** producer and your clients. Librarians have a great deal of influence on the **CD-ROM** products of tomorrow, including their content, software, and interface. All they have to do is leverage this position.

5. Evaluate the Information Industry

Looking at the world around you means that you concern yourself not only with your individual organization but what is happening in the information industry.

Running a library or information center is a business; and, just like any other business, industry analyses need to be performed as a part of any business planning process. In this way, librarians can tailor, design, develop and promote their services accordingly.

There are more than 1,000 commercial **CD-ROM** products. Which ones are appropriate to your situation? Learn the products' content, strengths, and weaknesses. Understand the vendors with respect to their overall CD-**ROM** product strategy, direction, and pricing schemes. Will they be around to support their product later on?

These factors are essential in making sound purchases. Allow time to understand the products within the industry in which they compete. The information industry is exploding, and it is important to remain aware of new announcements and rapidly changing developments.

CD-ROM is only one medium to obtain information and must be evaluated in parallel with what data are required by key information users. Finally, **CD-ROM** technology must be integrated with the larger scope information provided to the organization.

6. Assess Internal Competition

More and more end users are acquiring **CD-ROM** information products for their own use and the use of others within their department. These products should not be seen as competition. Acquiring **CD-ROMs** offer an opportunity to make use of more cost-efficient research techniques. For example, **CD-ROMS** on an end user's desk can help meet preliminary information needs. The library has more time to provide more value-added research. In fact, the library can be quite involved even if **CD-ROMs** are only on a single user's desk. The library can assume the role of information consultant.

Librarians should to become a partner in all such efforts by aiding in the production or purchase of these **CD-ROM** information services or by making suggestions to improve them. For example, librarians can create front-ends or write macros which make the system easier to use. The suggestion to purchase some information products will originate more times than not from outside the library. The more involved the library is with these information-intensive groups considering purchase of **CD-ROM** information products, the earlier the library can become a participant in the acquisition process. This increased visibility can only be helpful to you and your library. Perhaps next time, they will come to you first for the information products they need.

7. Set Your Tactics

Know what **CD-ROM** information products and services are being offered directly to executives from outside the organization and determine why they were acquired.

Compare these **CD-ROM** products with what is offered by your library in terms of content, technology, cost, and marketing strategy. How do they differ from the products and services you are now providing or are able to provide? Determine whether it is possible to acquire a similar product for less money or a **CD-ROM** product with some added-value factor. Be sensitive to the pricing that external vendors offer to their customers.

The Lotus **CD-ROM** information products are now marketed to those who own copies of the **1-2-3** spreadsheet software. This visibility can be a two-edged sword. The Lotus product may be acquired by a specific department, and the resulting publicity may put pressure on the library to subscribe to this valuable but not inexpensive **CD-ROM** product.

It is realistic to assume that some **CD-ROMS** will be marketed directly to end users.

8. Commit Your Plan to Paper

Planning does not have to be a complicated process. On a sheet of paper state the needs, those products that help address those needs, action steps, budget, and timetable.

The following steps will help you organize, develop, and implement an effective strategic plan for **CD-ROM** information products:

- Conduct a needs assessment.

- Gather research data.

- Learn the technology you need to know to manage **CD-ROM.**

- Identify your target customers.

- Develop a plan for **CD-ROM** acquisition, training, and roll-out, including timetables.

- State budget target and tactics for funding the **CD-ROM.**

- Detail the marketing tactics to be used for supporting the **CD-ROM** product or service.

- Acquire the hardware and build relationships with the vendors.

- Get training in the use of the system and the CD-**ROM** product.

- Assign responsibility for the system.

- Assign technical support responsibilities.

- Develop contingency measures for such situations as acquiring additional units if demand exceeds system capability, moving the unit to a different location if demand fails to materialize or acquiring other **CD-ROM** titles if current **CD-ROMS** do not meet needs.

Note

[1] Elizabeth Gallagher Caginalp, "The **CD** Connection," *CRN Benchmarks: The Computer Research Report,* Spring 1989, pages 47-49.

Appendix A: Sample Timetable

Technology investigation	2 weeks
Product investigation	4 weeks
Needs assessment	4 weeks
Plan development	8 weeks
Cost analysis	2 weeks
Trial installation	12 weeks plus
Contract negotiation	4 weeks
Industry analysis	Ongoing
Total project time	9-10 months