

# Fit for Purpose: Developing Business Cases for New Services in Research Libraries

## A CLIR/DLF-Funded Research Project



Fit for Purpose is a collaborative research project that will recommend methods for effective business planning in research libraries. It recognizes first that there are opportunities for research libraries to respond to the turbulence in scholarly communications and a potential role in the management of the data supporting scholarly research. But these opportunities raise the risks of acting with limited knowledge of the longer-term costs of developing and sustaining new services. The goal of the project is to present a structured, disciplined approach for making decisions about creating and maintaining new services in research libraries. The structure described in the project output provides tools with which to determine whether and how to create a new service.

The concept “Fit for Purpose” evolved out of the team’s desire to put the new services into a framework that encourages the challenge of fundamental assumptions. In that spirit, the content of the core article recommendations will encourage professionals to rigorously review the suitability of a proposed service in terms of alignment with institutional mission and sustainability to examine whether a proposed new service is fit for purpose within its context.

During Phase I of the project the team is producing a core article containing a literature review and recommendations. The review of the library, business, and non-profit literatures elicits possible models upon which to build a toolkit that is consistent with research library environments and values. The authors borrow from these to provide recommendations for analyzing organizational readiness, business case development, piloting new services, and monitoring sustainability through the business planning lifecycle. The core article will be released for public comment to provide further input into the model and to request suggestions for case study subjects.

Phase II consists of a series of case studies inspired by the recommendations. Project participants will conduct case studies of services being offered by research libraries or sponsored by libraries in collaboration with affiliated institutions. The case studies will provide the team with an opportunity to explore the planning process and related concepts with practitioners. Based on these case studies, the team will review and revise the initial finding to identify best practices for navigating the inherent uncertainty of developing sustainable services.

### Case Study Under Development

The Center for Digital Research and Scholarship at Columbia University, February, 2012  
(Other case studies forthcoming)

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### **Dedication**

The research team dedicates this work and its published artifacts to Beverly Lynch of the Graduate School of Information Studies (GSIS) at the University of California, Los Angeles. Dr. Lynch is a professor at GSIS, is the founding director of the California Rare Book School and is the Director of the Senior Fellows Program at UCLA.

Most of the research team had the fortune to be a part of the 2010 Senior Fellows program. During that time, Dr. Lynch encouraged all of the Fellows to continue to explore the themes covered by the program and to expand on subthemes or points of interest that resonated with each Fellow. Members of this team had converging interests in how library organizations develop new services and following Dr. Lynch's inspiration agreed to pursue a joint research project.

Dr. Lynch's dynamic approach to the study of libraries and information studies and her natural intellectual curiosity were inspiring to us and have fueled the work throughout the multi-year project. We are grateful to her for including this emphasis on continued study and collaboration as a feature of the Senior Fellows Program and we enthusiastically dedicate the project to her

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## **EXECUTIVE SUMMARY**

### *Background*

Academic research libraries face significant opportunities and risks in considering the role of data management and library publishing as avenues for reshaping scholarly communication. This project is designed to provide a framework for making decisions about new scholarly communication initiatives that is drawn from existing models and complemented with Case Studies. In addition to an environmental scan this article presents a tool set that will support a structured, disciplined process to determine whether and how to create a new service. The goal is to enable libraries to critically evaluate potential options by utilizing a methodology for the development of successful and sustainable services.

### **Environmental Scan**

#### *Data Management & Curation*

Librarians have core skills in collecting, organizing, preserving and making information resources accessible that were acknowledged by the NSF when they established the DataNet program in support of e-research. Proposals to become DataNet Partners require a collaborative multidisciplinary effort to develop the infrastructure and tools that enable the management and curation of huge datasets. Challenges appear in four main areas: developing sufficient skills in informatics within the library, determining demand by researchers for these services, organizing collaborative units in a decentralized environment and demonstrating sustainable funding streams.

#### *Library Publishing*

Libraries are becoming more visible in offering publishing related services which results in rising expectations that they will manage scholars' work locally. In part this evolution can be attributed to the development of an array of digital publishing infrastructure tools. While librarians are eager to support creation of born digital works, promotion and tenure committees value the brand of an established press. University presses are challenged by reduced subsidies which are cut further if they perform well. Since constrained funding and the lack of revenue streams are likely to contain most library publishing programs, collaborative efforts across institutions may be necessary to achieve critical mass.

#### *Literature Review*

There are ninety-nine references cited for this article and a full literature review on libraries, commercial business cases and nonprofit approach to business planning appears in the Appendix. The most useful resources are two books that serve as guides for a mission-oriented approach for non-profits (Brinkerhoff – Social Entrepreneurship) and a

market oriented approach to developing a business case (Maul – Developing a Business Case).

### *Recommendations*

Four recommendations outline a process for developing and evaluating new services. Grounded in the business literature, these guidelines are based on respected methods for effective planning. A planning team is formed to manage the following recommendations.

#### Recommendation 1 – Determine Organizational Readiness

- Examine the library’s mission to determine if it would need to be modified to include a proposed service.
- Evaluate the institution’s culture for its tolerance of entrepreneurial activity and the risk inherent with new business development.
- Define a high level outcome statement in terms of the mission impact and product viability to assess sustainability.
- Conduct an organizational scan to determine if the library and the university have adequate human, financial and physical resources to support the proposed service.

#### Recommendation 2- Develop a Business Case

- Create an outcome statement that describes how the service enables the library or its parent organization to achieve key goals that are measurable.
- Identify all options including ‘do nothing’ and collect ideas from stakeholders and the target audience in order to narrow the list of options.
- Gather data on the costs, benefits, a timeframe and viability for the selected options and explore with other institutions their experience with similar programs.
- Analyze each option in terms of costs, benefits and sustainability.
- Use “what if” scenarios to calculate risk based on a realistic assessment of factors.
- Decide which option to implement and create an implementation plan that identifies action items, staff, a timeline with milestones and defines a statement of value to the users.

#### Recommendation 3 – Conduct a Pilot

Pilot studies are used to identify issues and possibly to justify a full-scale implementation.

- Develop a detailed plan according to project management guidelines.
- Implement the plan and discuss status reports with stakeholders.
- Evaluate the results based on four approaches: economic, strategic, analytical and integrated (i.e. Balanced Scorecard).
- Make a go/no-do decision and present results to the planning team.
- Disseminate the results to all stakeholder groups.

#### Recommendation 4 – Embrace the Business Planning Life Cycle

Each of the preceding recommendations comprises part of an iterative cycle that depicts the flow and sequence of steps. Guidelines in the form of checklists that can be adapted and used when working with this process are provided.

## *Case Study Methodology*

Several case studies will be developed based on site visits to institutions with publishing and data management programs. These examples are intended to provide descriptions of existing programs that will serve to extend and refine the recommendations.

## **INTRODUCTION**

Scholarly communication is in a time of disruptive transition. New models in publishing and new federal mandates on research data management and sharing offer big opportunities and big risks to higher education and research institutions, touching the very core of how research is conducted and reported. Both issues resonate with the core values and skills that are foundational in research libraries: to gather, preserve, and provide access to research and scholarship for its further advancement. As entities that organize, retain, and make information accessible, libraries can bring structure to data management issues and activities. And as large-scale customers of publishing who connect readers to publishing products, libraries have valuable insights on access, institutional and disciplinary repositories, and dissemination.

While there are clear points of intersection between current core services in research libraries and structures needed to manage research data and promote new models of scholarly publishing, libraries must understand the scale and commitment that come with these new service areas. Often libraries, feeling an imperative to meet emerging needs, may act with limited knowledge of the longer-term costs of developing and sustaining potential new services that appear to meet those needs. It is essential that disciplined, structured approaches for service development in the areas of scholarly communication be developed. Both data management and publishing require new skill sets that may not be well represented within current library staff. Both are focused on global dissemination, while libraries traditionally have focused on local needs. Both require long-term commitment and the flexibility and structure to make future transitions as the external landscape changes. Both will require reallocation of funds, of positions, and of organizational focus. And while data management and curation and library publishing are both pieces of the scholarly communication continuum, they pose individual challenges. How libraries respond to these challenges will play a large role in enabling the transformation of scholarly communication in the twenty-first century, as well as defining the future of research libraries themselves.

This article presents a structured, disciplined approach for making decisions about creating and maintaining new scholarly communication programs in research libraries. This approach will provide research libraries with tools with which to determine whether and how to create a new service. Broadly conceived, it enables libraries to determine their and their parent institutions' readiness for new services and service models, to better position the library for success. It provides a model of service or business case development, to support informed decision making and service building. It also provides a

model for the service planning cycle, to promote sustainability over time. The approach is simultaneously abstract and concrete, as it must offer help in a way that is both practical and portable.

The goal of this article is to position libraries to act successfully in the twenty-first-century higher educational environment. In an era of increased institutional accountability, formal assessment, and budgetary constraints, libraries should be prepared to respond to an extensive list of questions before building solutions to the complex problems of scholarly communication. Institutional stakeholders will want to know how a service aligns with their broader priorities and why it should be given institutional support. Even more important, the current moment offers opportunities for real transformation. Libraries must consider carefully their ability to create scalable solutions that can make a transformative impact. Most often, real scalability and its resulting impact will require collaboration across multiple institutions. Clearly, planning in this context is more complex and must be rigorous. The long-term benefits should outweigh the costs.

The structure and recommendations presented in this article draw heavily from models used by the nonprofit and business worlds. While research libraries generally are not interested in (and in some cases are inimical to) questions of profitability, they certainly are concerned about success and sustainability. Nonprofit and business thinking is oriented toward the creation of successful services and products: whether success is defined as more people served or more profit accumulated, services and products that make no impact and cannot be sustained will not meet organizational goals for success. Library leaders are well advised to adapt tools that promote such disciplined decision making. As Jim Collins writes, “A culture of discipline is not a principle of business; it is a principle of greatness” (Collins 2005).

## ENVIRONMENTAL SCAN

### *Data Management and Curation Services*

Over the last several years, a host of reports, articles, and presentations has emerged that demonstrate how core library skill sets, processes, and services may be updated and translated to meet the need for data management and curation, particularly in the area of large scale, data-driven scholarly research, popularly known as e-science or, as the same tools expand into the social sciences and humanities, e-research. Libraries have recognized expertise in the ingestion, organization, preservation, and accessibility of information resources, all of which are necessary components of making sense of data management. As one involved scientist put it succinctly, “Researchers need help with things librarians are good at” (Berman 2008). In addition to these skills, libraries work across academic and organizational boundaries; data management and curation is not scalable in siloed environments (Luce 2008). Also, libraries may be perceived as credible and competent information brokers who act with long-term commitment (Corson-Rikert and McCue 2007).

Libraries bring order and stability to the information environment by developing and sharing standardized tools, taxonomies, architectures, and data transfer and linking protocols, and by creating policies to exploit these effectively. To jumpstart libraries' ability to bring these valuable skills to the data management and curation arena, the National Science Foundation (NSF) established the DataNet program in 2007; the NSF has since mandated data management and sharing plans from potential grantees. This \$100 million funding program was developed to create up to five "exemplar national and global data research infrastructure organizations (dubbed DataNet Partners) that provide unique opportunities to communities of researchers to advance science and/or engineering research and learning. . . . By demonstrating feasibility, identifying best practices, establishing viable models for long term technical and economic sustainability, and incorporating frontier research, these exemplar organizations can serve as the basis for rational investment in digital preservation and access by diverse sectors of society at the local, regional, national, and international levels, paving the way for a robust and resilient national and global digital data framework" (NSF 2007). Since the inception of DataNet, DataNet Partners and other actors have made impressive headway in the areas of education, policy, research, and services (Gold 2010). Despite prevailing global economic issues, a significant number of research libraries are engaged in creating, participating in, or in consulting on data management and curation activities. "The fact that investments in e-science activities are being made even during difficult budget times demonstrates that this is a priority for libraries" (Soehner, Steeves, and Ward 2010).

Building capacity for data management services may also advance related or broader research library goals. One of these is enabling a conceptual shift away from viewing libraries as primarily collections-oriented repositories of information toward viewing them as service providers that actively support the exchange of ideas and knowledge across the disciplines (Gold 2010). Institutional repositories, many of which have been underpopulated to date, may be reconceived as data warehouses (Gold 2010). There is a fear that publishers or information vendors may step in to provide data services and then charge universities high fees to access the data generated (Soehner, Steeves, and Ward 2010). Demonstrating institutional management that mitigates such budgetary constraints parallels and reinforces related open access goals. Finally, movement in this area may create new opportunities to build close working relationships between library staff and researchers (Gold 2010). This would redirect library futures away from some of the more marginalized scenarios that might be imagined from Ithaka's faculty surveys (Schonfeld and Housewright 2010) and OCLC's Research Libraries, Risk and Systemic Change (Michalko, Malpas, and Arcolio 2010).

Reports on developing data management services also reveal the shoals, troughs, and currents to be encountered in navigating the sea of research data. The research enabled by the cyberinfrastructure can be massive in scale, conducted by researchers spread across multiple institutions, and require grid computing capabilities. Creating order and stability across this ecosystem will not be accomplished by individual libraries. It is likely that a small number of research libraries, in concert with government bodies, professional organizations, and industry, will have roles in developing strategies and economic models for supporting large-scale networked research (Gold 2010). These are

likely to be the libraries involved in the DataNet program. The size of the DataNet awards, \$20 million each over a five-year period, recognizes the scope of the investment needed to embed storage and curatorial services and tools into the cyberinfrastructure. NSF expectations are high: “Proposals must cross more than one domain, involve diverse content, and address issues of sustainability. They should integrate library and archival science, computer science, and other scientific domains. Proposals should push the frontiers. Key issues include who are the users now and who might they be in the future. . . . Projects must provide for full life-cycle management, including data deposition and acquisition; data curation; metadata management; privacy and security; data discovery, access and dissemination; data interoperability and integration; data evaluation and visualization; related research; and education and training activities. Community and user input must be collected and assessed” (Spengler 2009). Funded projects must accomplish all of the goals of successful data management and curation in support of big, networked research. Their success will lay the groundwork for wider involvement. Most libraries will build on this work in support of data curation needs. It is equally clear that this will need to be done collaboratively; the scale of the issues is too great in most cases to promote institutional solutions.

The specific elements of data management and curation articulated by Spengler offer their own separate challenges. For example, the 2010 Association of Research Libraries (ARL) study of activities in ARL libraries noted that very little work is currently underway in libraries to support digital lab notebooks, and that most libraries are unaware of whether this is happening anywhere on their campuses or if there are archival services for lab notebooks (Soehner, Steeves, and Ward 2010). The scope of data deposition and acquisition is not clear. Flexible and extensible metadata schemes, such as the DataCite Metadata Kernel, are still in early development (Brase and Farquhar 2011) and are just beginning to build communities of practice. Data publication standards are not as advanced as text publication standards (Hense and Quadt 2011). Questions of ownership, sharing, retention, differing funding body requirements, and interoperability are all pressure points (Gold 2010; Jones 2008). While most of these issues will be worked through over time, they make it difficult to do effective service planning in the present environment.

The greatest challenges in data management and curation may be those of education, acceptance, organization, and sustainability. The technical skills needed to work comfortably in discipline-based informatics, which most closely meet data support needs, are extensive (Henty 2008). These are not broadly represented in libraries currently and will require additional education and training (Soehner, Steeves, and Ward 2010). The divide between researchers’ and library staff’s skill sets may limit acceptance of library involvement in data management and curation. As a respondent to the ARL study said, “No matter the educational background, one important aspect of working with faculty is becoming a trusted member of their team, and this pressure will remain until enough evidence of successful faculty-library projects have been completed” (Soehner, Steeves, and Ward 2010). Even though libraries are responding to a real need, their efforts will have little impact if there is no desire on the part of faculty and researchers to turn to them for these services (Soehner, Steeves, and Ward 2010). Decentralization and lack of unifying direction in research universities, where research groups often work in happy isolation



from one another, militates against the organization needed to make services effective and efficient (Soehner, Steeves, and Ward 2010). Collaboration is critical in supporting e-research, and libraries are working across institutional boundaries to build the needed infrastructures to do so (Gold 2010). If such last-mile connections are necessary, how can the work be accomplished in the absence of first-mile cooperation?

Finally, funding and sustainability are still open questions that must be answered. DataNet goals assume that grantees will create and demonstrate sustainable funding streams, without which robust services cannot be built for the long term. As the grants are still in place, it is not currently possible to know how potential models may be developing. This is a clear concern in research libraries, where funding is fragile and already stretched to capacity (Gold 2010). The Data Conservancy, one large and visible DataNet Partner, plans on depending upon “a portfolio of funding streams,” including leveraging partners’ sustainability or funding (Lynch 2009). But this has yet to be put to the test. The recommendations put forward by the Blue Ribbon Task Force on Sustainable Digital Preservation and Access (2010) which certainly respond to data management topics but will require broad conversation and significant commitment at institutional and national levels, changes that do not take place overnight.

### *Library Publishing*

Library-based publishing activities in their current iteration (recognizing that the publishing role of libraries has long and varied history) are more widespread and perhaps more developed than data management and curation services. Like data services, library publishing is the subject of extensive documentation. Also, publishing is not isolated from data services; there are strong and desirable linkages to be made between data, publishing, and repository services (Hahn 2008). Like e-research, the current generation of library publishing is clearly a product of the Internet. Finally, publishing and data management and curation services may advance the same broader library goals.

Libraries report substantial demand for hosting, consulting, and publishing services (Hahn 2008), demand that has been growing since the beginning of the century. Within libraries, the focus has generally been on reducing the cost of scholarly literature and populating institutional repositories. Librarians are worried about the costs of scholarly publishing, the competition for library acquisitions dollars between nonprofit societal and commercial journal publishers, and the related impact on specialist monographic publishing. There is disagreement among faculty on publishing challenges. Those who see challenges may seek alternative publishing outlets. Concurrently, libraries have been building out their capacity to digitize and disseminate previously published and unpublished materials, raising their profile as potential providers of publishing services. “Consequently, expectations are rising that research libraries will take responsibility for current scholarship as well as legacy scholarship, especially for a wide range of locally produced works of scholarship. Evolving repository services, which house and disseminate institutional records, theses and dissertations, pre-prints, post-prints, learning objects, and research data, can inspire a range of inquiries about potential publishing services. It could

be a short step to managing publication of works like journals and monographs, and faculty are approaching research libraries seeking publishing services” (Hahn 2008).

Strong collaborations between research libraries and campus computing services across the United States and Canada, coupled with a willingness to make their products open source, have resulted in the development and availability of a rich array of digital publishing infrastructure tools. These are easily augmented by low- or no-cost commercial applications that may enhance distribution and the reading experience. Libraries have been building out their digital capacities for decades and have highly competent staff. They also have extensive experience observing what publishers do. Unburdened by legacy print-publishing programs and practices and the revenue streams tied to them, current library publishing programs may rely on an increasingly capable digital infrastructure without the need to maintain large and costly access-control and marketing structures. It is as much a matter of pragmatism as principle to publish open access (Hahn 2008).

Publishing entails far more than hosting, however, and the challenges that libraries perceive and are attempting to address are multiple and complex. Demand for hosting, consulting, and publishing services is coming to libraries due to broader upheaval in scholarly publishing. University presses are under particular strain. Most operate under a cost-recovery model that may stifle the innovation that presses, scholars, and libraries all want (Brown, Griffiths, and Rascoff 2007). Not well understood in libraries is that the transition to real electronic publishing—as opposed to hosting—is costly. Presses may be in positions that run counter to other units in their universities. The Modern Language Association’s recent study on promotion and tenure practices (Modern Language Association 2007) is illustrative: more publications, on more specialized and recondite subjects, are being required for tenure at the same time that publishers are selling far fewer copies of monographs and are calling for more marketable titles. University subventions supporting monographic publications do not begin to make up the cost deficit not covered by sales (Crewe 2004). Yet there is a real expectation from all sides that university presses will meet these contradictory needs and obligations (Brown, Griffiths, and Rascoff 2007). Both success and failure may lead to danger.

Press directors are mostly aware of the problems described by provosts and librarians, but have struggled to formulate a new plan or lack the resources to implement one. They feel they are held to a different standard than all the cost centers on campus, that they are essentially penalized for pursuing a cost recovery model, which then becomes the basis for evaluating their performance. When they perform well (in financial terms), they are “rewarded” by having subsidies cut. When they run too large a deficit they are threatened with closure. Some have responded to these expectations by elevating cost-recovery in their selection criteria, publishing more trade books and shying away from the least marketable fields. This approach may improve their financial situation, while at the same time undermining the case for subsidies. (Brown, Griffiths, and Rascoff 2007)

Libraries are well advised to study the current plight of their institutional presses: if these units, which have skilled staff and access to revenue, are threatened, what is the likelihood that provosts will direct funding and patience to the library for these services?

Economic and cultural issues abound. Digital publishing provides wonderful opportunities for experimental and nontraditional types of publications. Librarians in particular are enthusiastic to support online, hybrid works (Brown, Griffiths, and Rascoff 2007). Tenure and promotion committees, however, may be hostile to these (Candee and Withey 2008), dampening junior scholars' willingness to stretch the boundaries of publishing. Library journal publishing programs generally rely on established peer review mechanisms, employing extant rosters of readers when journals migrate from external publishers to the library (Hahn 2008). But monographic publishing capabilities are less well established. Libraries cannot afford to ignore the importance that scholars place on the imprimatur conferred by established presses (Brown, Griffiths, and Rascoff 2007). The editorial structures that provide such quality certification are the chief drivers of the high costs of book publishing (Crewe 2004), as libraries that partner with presses have discovered.

Library publishing programs are funded in most cases with central library operational funds, even when augmented by other financial streams (Hahn 2008). Librarians know readers and their habits very well, but they don't know what will turn a reader into a customer (Jensen 2008). Attempts to move to external revenue streams have followed a variety of models, with varying degrees of success. Constrained funding and no access to revenue streams will keep most library publishing programs very limited in scope. University presses with access to revenue and strong track records have found it difficult to compete with commercial publishers, resulting in less competition and further concentration of profit and business models. If libraries are searching for transformation in scholarly publishing, small, individual efforts will not meet that goal. Collaborative efforts between institutions and with their presses may actually build a critical mass.

A far broader set of campus conversations will be needed to make publishing services—whether from libraries or presses or the two working together—sustainable. University administrations, which make funding decisions, must take a leadership role. Cooperation and infrastructure-building must be part of the conversation. Most importantly, each institution must articulate clearly *what*, *whom*, and *how* it publishes (Pochoda 2008). Those conversations are not yet sufficiently broad or deep, and not all of the actors are engaged. Until they are, it is difficult to know if library publishing programs, like the university presses with which they may work or against which they may compete, will find ongoing success. Or if, with entrenched opinions still in control, they will be cut loose as expensive and nonessential.

## **LITERATURE REVIEW**

Clearly, planning for forward movement in library-based scholarly communication programs will entail a thorough review of local needs, opportunities, relationships, questions of institutional culture, and more. It will also require rigorous and objective review of operational and financial elements. A blueprint for creating sustainable services and structures must be created.

The framework presented in this article was based on a thorough review of the library, nonprofit, and business literatures. The full review may be found in the appendix; the salient points are summarized here.

A compelling case for broadening the literature search came from one of the valuable reports issued by Ithaka on creating sustainable electronic resources, where the authors remind readers that, while the academic environment may not furnish processes and procedures that support entrepreneurial success, the non-profit and commercial worlds certainly do. These should be adapted: "Accepting and even embracing the mechanisms of the marketplace, if properly placed in a mission-oriented context, can enhance the value that a project generates by sharpening its understanding of where need is greatest and how it can most usefully deploy its resources. The project leaders that are most likely to succeed in this environment are those who can operate successfully under the pressures of competition and accountability, and in the messiness of innovation and continual reinvention." (Guthrie, Griffiths, and Maron 2008).

Good models, then, require drawing from mission- and market-oriented thinking, and two sources form the basis of the service case model presented here: Peter C. Brinckerhoff's *Social Entrepreneurship: The Art of Mission-Based Venture Development* (2000) and June Paradise Maul's *Developing a Business Case* (2011).

According to Brinckerhoff (2000), social entrepreneurs are nonprofit leaders who are constantly looking for new ways to serve their constituencies and add value to existing services, and who are willing to take reasonable risks on behalf of those their organization serves. They understand the difference between needs and wants and that resource allocations are stewardship investments, and they weigh the social and financial return on each investment they make. They consider mission first, but know that without money there is no mission output. Unlike for-profit business planning models, Brinckerhoff's seven-step process for nonprofits, he maintains, is mission based. Brinckerhoff's social entrepreneurial model provides an extensive set of tools for constructing better mission-based policy as well as for realizing improved operational, financial and service planning, and it has been cited frequently in the literature as offering a step-by-step means for nonprofits to achieve their planning goals. As well, because the model is well known and contains many of the basic components included in the other approaches reviewed, this study will rely largely on Brinckerhoff for its definition of business planning.

Coming from the market-oriented literature, Maul (2011) provides guidance on how to make the case for some change within an existing organization or business. The approach contains detailed models, templates, and commentary on how to maximize the chance for success in making a significant business decision. Maul succinctly defines the business case as: "a tool for identifying and comparing multiple alternatives for pursuing an opportunity and then proposing the one course of action that will create the most value." The guide then provides the reader with a step-by-step guide for executing the business case including templates for selecting the best solution and documenting the details of the implementation plan. Combined with Brinckerhoff's mission-oriented approach on preparing organizations to meet their goals, Maul's business case structure

enables the creation of a robust framework for decision making and the developing of healthy, sustainable services.

## RECOMMENDATIONS

### *Part I: Organizational Readiness*

Determining organizational climate and capacity is an important first step in successful planning for new ventures, and, by careful application of aspects of Brinckerhoff's (2000) social entrepreneurship model, research libraries can effectively assess their and their parent institutions' readiness for the creation of a business case.

Step 1: What is the library's mission? It is necessary to review the mission statement and determine how proposed new services will apply to it. Are services under consideration consistent with this mission?

Every library should periodically review its mission and goals as part of a regular strategic planning cycle, and to ensure that staff and stakeholders, including the board or governing bodies, and any applicable external stakeholders, are in alignment regarding organizational purpose and new service outcomes. Brinckerhoff (2000) recommends putting together a planning group able to review the mission and serve as the core participants in venture development. But whether a library creates a planning group or uses an already existing leadership committee, staff from all levels of the library should be represented, along with "skilled outsiders"—possessing financial, business development, marketing and other needed experience—who not only can contribute to planning and implementation but have the status and credibility to promote the library's initiative to the campus community at large. This will usually mean, at minimum, also including representatives from the faculty, students, alumni and administration, together with business or public service leaders who may provide access to alternative funding as well as business expertise. The group's composition will necessarily differ depending on local circumstances, but it can frame its initial discussions around such general questions as, Do preliminary ideas regarding new library service ventures fit into its overall mission? Do proposed new services fit within the overall culture both of the library and university at large? Will they be in line with any consortial or other cooperative agreements already in place? Will new ventures be politically feasible in applicable statewide or regional contexts?

In conducting a mission review, the following components should be considered: The library's mission should be up-to-date and accurately convey the services the library is currently performing. Does the library still serve the same constituencies? Has the service area expanded to include new branches, for example, or has the library cut programs due to budgetary constraints? Given the effects of the current economic climate on higher education, this may be a good opportunity to consider if all priorities are still valid, or if some should be dropped in preparation for taking on new, more viable services or ventures. Does the mission reflect the university's most recent strategic plan? Or has a new leadership changed the university-wide priorities with which the library's mission should

align? If the institution is adding more graduate programs, has the library's mission been updated to reflect these new teaching and research areas? Has the institution's research agenda shifted from a basic to more applied focus in order to capture funding dollars? What are the institution's major grant initiatives, and is the library appropriately involved in providing support?

Brinckerhoff (2000) suggests that **a mission statement should be scrutinized to allow for new, more expansive language in order to incorporate new services or outreach to new constituencies**. On the other hand, a balance should be preserved by creating more inclusive language that at the same time does not sacrifice the library's unique service niche or dilute its brand identity. Additionally, as the discussion of proposed business services evolves, it is critical that, if the library expects to generate profits from such ventures, all key players agree on how the profits will be used to support the library's and institution's overall missions. Will these profits be used to maintain or expand current services, folded back into ventures, or will they benefit some other part of the institution? If the library is considering partnering with another entity to jointly provide new services (such as e-publishing with a history department, campus publications office, or campus information technology services), is its mission inclusive enough to validate such partnerships and alliances, and, if so, how will the profits be divided?

**Update the library mission** as needed, ensuring that a consensus has been reached among all stakeholders on the wording as well as meaning and service implications of the revised mission.

The mission review process may require a considerable investment of time, depending on the institutional context, but provides an excellent public relations opportunity for the library as it solicits buy-in and engagement from its various constituencies. However, libraries involved in regular strategic planning may already be undertaking the bulk of this work, and need only incorporate selected additional components into an already existing process.

Step 2: What is the library's and university's overall risk tolerance for new business ventures?

After conducting a mission review, library leadership should consider how comfortable it is with assuming the risks inherent in new business development, as well as the tolerance for such entrepreneurial activity in the university, or university system, environment. Further considerations include whether the university has set limits on investment in new services, especially if they will entail medium or long-term sunk costs. Do university leaders view such resource allocations as investments rather than expenditures (and thus opportunity costs—involving risks but also rewards—rather than mere operating costs). Fundamentally, does the organizational culture reward risk-taking, or is it difficult to implement and sustain new ideas? Academic libraries often seek investment through grant opportunities, but is there a reasonable expectation that permanent funding will be secured at the end of the grant period or that, once established, a new service will be self-funded and revenue generating? Does the university

administration understand that, in a nonprofit context, outcomes for business ventures should be a “mix of mission return and financial return” (Brinckerhoff 2000)? And how will the library measure and demonstrate a venture’s “soft” mission-oriented rewards additional to its financial return? (Note that we will address risk calculation and risk mitigation in the context of analyzing service options in Step 5 of Part II, below.)

### Step 3: What will be any new venture’s overall mission outcomes?

The library, as a social enterprise distinguished by its “dual value creation properties—economic value and social value” (Alter 2003), should consider the need to develop services having both “high mission impact” and “high viability,” with viability equating with profitability (Allison and Kaye 2005). This will help prepare planners to later identify impact and revenue strategies for sustainability within the case-development phase. In ensuring that mission return and financial return are discussed early in the planning process—before idea generation and creating a case for specific new services—library leaders will encourage an understanding that any subsequently developed project goals should explicitly refer back to mission, a precaution against a common mistake among nonprofits of developing lucrative services that can’t be justified within the context of their correspondingly neglected social mission.

### Step 4: Are the right resources in place to consider new services at this time?

A basic environmental scan should be undertaken to determine if the library and university have sufficient physical, human, and financial resources available to consider embarking on new initiatives at the present time. In particular, the planning group will need to be able to justify the critical question of opportunity: why is the moment opportune for the proposed service?

Brinckerhoff’s (2000) “readiness checklist” divides resources into the categories of systems, skills, space, and finance, forming an outline for an institutional environment scan, with academic library–related questions included as additional considerations:

**Systems** (Does the library, university, university system, etc. have in place adequate applicable policies and procedures, as well as the information, administrative, and accounting systems needed to support, monitor and assess new services?)

- Do new services relate to other initiatives on campus, statewide, regionally, nationally, etc.?
- Does the library have in place appropriate personnel and finance policies for developing a new service?
- Is the information technology infrastructure sufficient to support any needed additional capacity?
- Should the library absorb and repackage as new services initiatives originating in other units (digital publishing, custom databases, etc.)?

**Skills** (Do existing personnel possess the requisite expertise and experience to deliver the new services, or will additional personnel be required?)

- What training/repurposing of personnel will be needed, and at what cost?
- What existing duties will personnel cease to perform in order to assume new responsibilities? What reward system will be in place to compensate staff who transition successfully?

**Space** (Is there appropriate space available [physically or virtually] to support new services?)

- Does the library have adequate storage, equipment and other infrastructure to accommodate new services?
- Will the library gain space, equipment and other infrastructure through reducing or discontinuing existing services of less value?
- Are there appropriate emergency safeguards/security measures in place, if applicable?
- Is there an institutional commitment to sustaining necessary arrangements?

### **Financial readiness**

- Is the university willing to invest in new services at this time?
- If funds aren't plentiful for new start-ups, will the library consider dropping some services in order to develop others?
- What are the financial options the university is willing to entertain (possibly including loans, bonding or credit) to begin a new service?
- Can the library obtain grant or other soft funding? What are the consequences for long-term sustainability if services are funded with soft money? Will funders penalize the library if such a service generates income?
- Can the library undertake partnerships with business, or accept private funding?
- Are there restrictions on the use of consortial funding, if applicable?

These steps in gauging organizational readiness—starting with mission review and ending with a brief assessment of infrastructure—help prepare libraries to evaluate their culture and capacity and serve as an introduction to determining new services in the light of mission, cautioning libraries to look seriously at initiatives stakeholders see as core and therefore more likely candidates for sustainability and growth. Ideally, undergoing such a step-by-step evaluation exercise at the beginning of service planning can build a positive institutional climate of support for new ventures a library determines to pursue through the stages of case development described below. For those libraries that are ready, it's time for the actual business case.

### *Part II: Developing a Business Case*

Building what is referred to as a business case is a set of steps to enable sound decision making for creating a new service. While libraries' goals differ from those of corporations, it is helpful to remember that the basic reason for planning in business is to ensure success, however success might be quantified. The structure for building a business case described here borrows heavily from Maul (2011) and is adapted to reflect the research library environment.



### Step 1: What needs to be accomplished? Creating an outcome statement

The first step in case development is to create a very basic objective. Services and solutions need parameters. The outcome statement begins the process of setting parameters that help define the need and the scope of possible solutions. The creation of an outcome statement also begins the process of tying the development of a service to institutional goals and mission and identifying the desired impact that the library seeks to achieve through the new program.

The basic outcome statement is written to envision how a problem might be solved or a need met:

*The Library will provide data management services to assist the University in meeting its 2020 goal of opening its infectious disease research data to scholars around the world.*

*The Library will provide digital publishing services to enable the College to showcase faculty scholarship.*

As these examples demonstrate, the outcome statement identifies how a service enables the library or its parent institution to reach important goals. Outcome statements should reference key library or institutional metrics, strategic goals, or other signature institutional initiatives.

At this stage the outcome statement is a broad brush that does not specify a particular solution (e.g., “Install Open Journal Systems”). It must be written to reflect the library’s mission and to take into account organizational culture and the priority assigned to stated goals and objectives. What are the plans to meet a specific institutional goal? To what extent is the library considered a key player in helping to achieve institutional goals? Does library leadership have the ear of top administration? How does a new initiative enable the library to further its mission? The outcome statement should be accompanied by clear and measurable objectives that can be assessed over time: a data management service might respond to an internal goal of increasing NSF awards by 15 percent by providing a framework that meets new NSF requirements for data management plans. A college might want to increase its faculty’s publications, and publishing services might assist in expanding these by 10 percent. Establishing basic metrics at this point lays the groundwork for assessing the success of a project after implementation.

### Step 2: How can it be done? Identifying options

Once the desired outcome has been clarified, a list of all possible options for action should be developed. This stage of case building should follow two rules:

- Brainstorm every possible option, not just preferred directions, including maintenance of the status quo: “Do nothing.”

- Collect ideas from stakeholders, especially—but not solely—the target audience.

Talking to stakeholders (faculty, students, research officers, publishers) will produce more ideas than the library might generate internally and will give critical insight into what the library's users or potential partners identify as valuable to their work. This step also connects any new service development to shared goals, matching the library's perception of need to actual user demand—this is where the market research necessary in building any service should begin. What does the library's user community really need? Do they want a prospective service from the library, or do they want it from another source? This highly important step is sometimes missed when libraries implement new services, such as institutional repositories (Choudhury 2008). This step is also the first stage in creating a value proposition, a clear statement by which users are able to see if a service or product has greater value for meeting their needs than its alternatives (Lanning and Michaels 2006).

Once a full list of options has been generated, library leaders should consult with advisors and key stakeholders within the institution who will be affected by service development as well as those from whom the library will need to request resources. In addition to preparing significant individuals for future conversations on a specific project, and to hear their initial thoughts on various options, this is the best moment to reveal their perceptions of any weaknesses in planning or in the library's ideas, well before advanced planning is finished and investment is sought and implementation begins. This is particularly crucial in the development of services, especially in the area of data management, where the proposed financial model may be drawing funds from faculty research grants or other income streams beyond the library's control or area of influence. Such models require institutional policy changes and, in the absence of conversation to build broad buy-in, may be rejected out of hand.

Finally, the options should be narrowed to a short list of possible courses of action. This is best accomplished by:

- Choosing those options that most match stakeholders' expressed needs and institutional objectives and create appropriate impact
- Merging similar options into a single possible solution
- Reviewing how specific options have succeeded—or not—at other institutions
- Eliminating those where the degree of risk is greater than institutional tolerance
- Favoring those that are sustainable over the complex, costly to build, and difficult to scale

At this point in developing the case for service development, options are not written in stone. Further investigation and conversations may cause the library to eliminate what seemed like a positive direction or reveal a new and promising course of action. It is essential that, at this stage of the process, options remain open.

### Step 3: What do the options entail? Gather data and estimate time frames

Once a narrowed list of options has been created, two questions should be answered:

- What information is needed to understand the benefits, viability, and costs of each option?
- How long would it take to implement and attain the benefits of each option?

The objectives developed when the outcome statement was created provide the framework for the data that will be needed. If the university is focused on a particular program as a growth area for research, what kind of data do researchers in that program generate in the course of their work? Are there possible early adopters among the college's faculty who would be eager to use in-house digital publishing services? Does the college's tenure and promotion structure focus on publishing with established, traditional publishers? If one option is to channel data management to a commercial publisher, what have its costs and annual price increases been in comparison with other publishers? If one option is to use a contractor for some or all of a particular service, what has its fee history been with another institution's? If staff need to receive special training, what is its availability and cost, and how long will it take trained staff to become proficient?

As in the option-generation phase of developing a case, data gathering will require casting a broad net and talking with a variety of stakeholders and different offices within the institution as well as with a potential partner's management. It is not possible for the library to have all of the data points in hand. Other prime sources of information are contacts within other institutions: while the conventional library literature provides few examples of rigorous analysis of new scholarly communication services, the profession itself is well known for its willingness to share information. Visiting one or more libraries for in-depth discussions on how a service works, what it costs, what it took to get it up and running, and to observe it in action is far less costly than building an unsustainable service. Contact and discussions with other libraries at this stage of case development is imperative if a strong option is an inter-institutional service.

The second step in the data-gathering process is to project a time frame for implementing each option and attaining its objectives. It is essential that projections be reasonable. Building a service where the best-case scenario is assumed at each step of development greatly increases the risk of not meeting targets or goals. What is a reasonable timetable for training staff, for directing new work to them from researchers or publishers, and for seeing the objectives of a service achieved?

### Step 4: How does this work? Analyzing the options

Gathered data must be analyzed in order to evaluate different service options before a course of action can be selected. As in the data-gathering step of the case process, the analysis should address the metrics and objectives that underlie the outcome statement.

How will a specific option advance the library's goal(s) as described in the outcome statement? What are the real costs of attaining the goal(s) through each option?

Questions to be answered at the analysis stage should include:

- What is the market for this service?
- What are all of the costs?
- What are all of the benefits?
- What are the savings?
- What is the time period between initial steps to full implementation, or to offsetting other costs, where this is a goal?
- Is this service appropriately located for its desired scale? Should it be in the library, or created in collaboration with another campus entity, or in collaboration with other institutions?
- How could this option be sustained financially over time?
- What are the impacts on other institutional goals?
- What are the unquantifiable costs and benefits?
- What is the overall institutional impact?

Market research is critical in the development of any possible service. At this point in the business case, market research includes understanding who is the core audience (market) for a service, their ability and willingness to use it, what their alternatives are, how they want to use a service, and if it is affordable. Without spending time on market research library leaders risk constructing a service that will not be used.

In addition to including figures for actual expenditures, it is important to note any other costs that may be avoided if an option is implemented: contracting with a third-party provider might save dollars that would otherwise be used to add new staff, equipment, and other costs. The cost of providing metadata services in-house for data maintained on institutional servers might be less expensive than licensing access to data if it were transferred to a commercial publisher. The cost of managing an installation of Open Journal Systems to be used by a small society publisher might be less expensive than the cost of finding alternative content should its journal cease publication. In the same vein, does a particular option entail other kinds of less quantifiable costs? If staff are retrained to take on new responsibilities, who will take on their previous work? If the library scales down or ceases to offer other services, what is the impact on students and faculty?

Developing business models—structures for providing ongoing funding streams—must begin at this stage. Any service or program needs ongoing funding streams if it is to be sustained over time. Maron and Loy (2011) reflect on the large number of digital projects that, after initial funding ends, become obsolete or disappear. This may be avoided by early planning and then implementation of appropriate business models. Crow (2009b; 2011) and Guthrie, Griffiths, and Maron (2009) suggest models that sustain publishing programs successfully over time. Esposito (2011) offers very clear descriptions of publishing business models and suggests that a combination or hybrid approach may be more effective than relying wholly on one model. “À la carte” service models, where editors

or societies working with library publishing programs pay varying amounts for different levels of service, could fund a broad array of services over time. A library partnering with a press should turn to the press for an understanding of first-copy costs, which account for many of the fixed costs in publishing.

In the area of data management, business models are currently very limited. DataNet Partners have been tasked with developing these, and their work is ongoing. Nevertheless, it is imperative to put funding streams in place to keep services viable. Libraries will need to work with their institutional leaders and research offices to include appropriate funding in grant proposals or to use overhead income to support programs.

Scalability must be fully analyzed. Is the new service appropriately located locally, in the library alone or in collaboration between the library and another campus entity, such as the research or IT office? While one of the great benefits of the Internet is that virtually anyone may become a publisher, one of the great problems libraries and publishers now face is that most everyone wants to become one. If the library has a stated goal of participating in the transformation of scholarly publishing, is that goal best served by publishing one or two journals or monographs on its own? Or do many small, repetitive efforts thwart the transformation that libraries seek? Real impact will likely require that libraries create collaborative efforts that by their very nature can be better financed and more powerful, which translate into stability and sustainability. One clear example of the benefits of scale is HathiTrust (Christenson 2011; Malpas 2011), where the digital repository is not only larger than a single library could maintain, but can also provide levels of service and security (such as TRAC certification) far beyond the scope of local abilities. The Trust affords a powerful example to libraries interested in creating truly transformative scholarly communication services. Trust-like structures for publishing might enable real competition with commercial publishers. Trust-like structures for data management and curation, perhaps in disciplinary hubs, may be a feasible way forward. Thinking about scalar emphasis (Dempsey 2010) must remain in the forefront of local decision making.

Listing the impact on other institutional goals beyond those that are key to the development of a specific service will provide greater insight into the value that a library's services offer to its parent institution. Enhancing institutional reputation, creating an environment for deeper learning, supporting faculty activities in a time where a university may be trying to grow its faculty, or offering support services that keep top researchers satisfied and less willing to move to other institutions are all important additional benefits that may accrue from new services. Institutional leaders should be made aware of the full impact derived from their investment of trust and resources.

#### Step 5: What would happen if . . . ? Selecting an option and calculating risk

After the analyzed options have been reviewed, varying degrees of scalability, sustainability, costs, and impact among the different options should be clearer. The best possible option—one that provides the best balance of these variables—should be selected.

Risk is inherent in any course of action. No innovation is achieved, no new directions can be explored without it. Risk is best managed and mitigated when clearly identified. It will remain, but can be dealt with. To understand and weigh the risks that come with any specific service implementation, the following sets of questions are helpful.

How will the library implement this service? Does it have the appropriate staff? Can deadlines for development be met with the resources in hand? What will happen if developmental milestones cannot be met or if primary goals are not attained? Is the service really scalable and sustainable? Does it need to be?

What is the impact of the new service on the library and the institution? What would the consequences be for the library if the new service is not successful? Could this service draw needed resources away from supporting the core work of faculty and students? What would happen if the service were more successful than forecasted and grew beyond the stated goals? Would it divert attention and staff from supporting students and faculty? Would it divert attention away from the library's core mission?

Is the proposed business model parallel with others within the institution? If fee-for-service structures are planned, are these contrary to the organizational culture? Can fee-based services be structured to ensure that there is no real or perceived degradation in core services to students and faculty? Could the success or failure of this service adversely affect a particular individual or group within the institution? To what extent are the risk factors within the libraries' control and sphere of influence or beyond its control and influence?

Maul (2011) aptly calls this assessment sensitivity analysis. It identifies unintended and possibly unforeseen consequences of both the best and worst possible outcomes. As a result, steps may be taken or fail safes put in place to reduce risk or possible direct or collateral damage should the service not perform as planned.

Risk mitigation will most likely require enlisting the expertise of others outside the library. A divisional or university finance officer might review the financial plan for a service. The general counsel's office should advise on the development of contracts. A consultant might prove useful for a service in a new area for the library, such as publishing, where the library's industry knowledge is limited to the consumer side. Another key step in risk mitigation is moderating the objectives. If optimal, best-case impacts, time frames, cost projections, staffing factors, and other estimates have been used, they must be recalculated. To assume that the least effort for service development will produce the best results is to create unnecessary risk and to set up a new service for failure. The overriding question that should be asked throughout each step of service case development is, Can this succeed?

If a review of risks reveals that these might be intractable or beyond institutional tolerance, another option should be chosen and assessed. If the risks attached to a preferred option can be successfully mitigated, the outcome statement should be rewritten to address how a particular service, based on that option, will meet goals and user needs:

*The library will create a distributed data management service in conjunction with the other Rocky Mountain Native Species Research Consortium libraries to enable efficient data harvesting, sharing, and curation for researchers within the consortium.*

*The Scholarly Communication Officer, working with leadership at the University Press, will negotiate the provision of online publishing services for print-only journals published by scholarly societies that have been identified as high value, at risk titles by the History Department.*

#### Step 6: This is what we're going to do. Create the implementation plan

Congratulations are in order. A plan has been identified to meet the expressed needs of the library's users and to promote institutional goals. This plan was decided upon after a frank and wide-ranging review of all possible options, after extensive conversations with stakeholders within and beyond the university, and informed by a clear sense of what users think is valuable to their work. Now the outcome statement must be turned into an implementation plan accompanied by a clear value proposition.

An implementation plan includes the action items, dates, and staff needed to bring the service plan to fruition. It must be documented to stay on track and to provide the service markers that future assessment activities will measure, and because there are multiple people and groups who need to have a shared understanding of what is being built, what their roles are, and how it will indeed meet the needs that they have expressed to the library. It need not be elaborate, but it must be clear.

The first step is to sketch out developmental milestones—the time frame for moving from one step of implementation to the next. Milestones also help developers to understand what action items are needed to permit advancing to the next step (e.g., when training needs to be completed). This is a critical component of project management.

Month One: Announce service to Library and University. Contact staff identified by Library and Computing for training and participation. Work with managers to plan how responsibilities will be reassigned. Determine training opportunities.

Month Four: Assess training needs and secure access to training. Gather information on and current prices for software platforms.

Month Seven: Complete training . . .

The action items arise from the milestones: "Have applications for certificate program in by April 1;" "Determine which journal management systems can support subscription access." The action items may not need to be available to institutional leadership, but the library should be prepared to share the milestones.

Developing the milestones and action items exposes what resources will be needed in advance of needing to have them available. How—and by how much—will the library's

budget need to be adjusted to bring the new service online? What individuals—by name and title—will move into new responsibilities? Without financial figures and names, it is likely that central administrators will think that a new initiative will be paid for from internal reallocations.

The implementation plan must also describe the intended benefits or value that the new service will provide. This is the next step in creating the value proposition, and it is included here in order to reaffirm the rationale for moving ahead. A new service draws dollars, staff, time, and attention away from other activities. It also requires that its intended users change their current behaviors or move their work into the new service, demanding effort on their part. Success is based upon the user's assessment that it is worth making the effort because of the value that results in using the new service, value that is greater than received by not changing his or her routines or by choosing from other alternatives. Understanding what the value is in support of their own work will promote user acceptance of a new service. Understanding what users will find sufficiently valuable promotes creation of good services. That is the strength of the value proposition. Indicating it in the list of benefits and value to be provided is a strong motivator in moving a service from plan to reality and a strong motivator for supplying the resources needed to make it possible.

### *Part III: Conducting the Pilot Study*

#### The Value of Piloting

A pilot study, sometimes referred to in the business literature as a feasibility study, is used to gather data and test the technical or commercial feasibility of the project option or options identified in the case-development phase (Turner 2005a). Upon completing the business case, including the implementation plan, the library planning team should determine how and when to test, or pilot, the options before proceeding with a full rollout" (Davenport 2009). While conducting a pilot does not guarantee successful full-scale deployment, it does increase its likelihood by identifying problems that can be corrected or unexpected consequences to be avoided, or, when confronted with a worst-case scenario, by helping to determine that the project should not be undertaken at all (Van Teijlingen and Hundley 2001; Thabane et al. 2010; Pal, Sengupta, and Bose 2008). Politically, a pilot can also help decision makers justify the cost of a full-scale implementation. As Pal, Sengupta, and Bose (2008) note, "while a pilot study may or may not be able to capture all intricate details of the actual project, with careful planning and design it can address many potential issues which would not be possible to consider without a pilot."

According to Turner (2005a; 2000b), in addition to testing the application of the chosen methodology, the data the pilot team collects assists in the selection of an appropriate risk-mitigation strategy. The piloting process should also be designed to engage stakeholders, communicate and promote the project within the library, academic institution, or wider consortial setting, and enable the planning team to begin to build capacity on each of these levels in preparation for full deployment should the pilot prove successful (Siegal and Smith, 2006).



### Step 1: Write the project brief

Project management best practices should be followed in designing and managing the pilot. Turner (2005a) recommends the process begin with the planning team's creation of a project brief, a document of from one to two pages for a relatively modest pilot to over ten pages for a complex study. The project brief should include the following components (Turner 2005a):

- A background or introductory statement, briefly describing the context of the study and what will be done.
- A description of the purpose of the pilot, or why it is being undertaken.
- A statement of objectives or outcomes, along with the desired results or deliverables.
- The scope of the pilot, including how the data are to be gathered and analyzed, and any anticipated challenges or constraints.
- The detailed work plan of how the pilot is to be carried out. This should include a timeline and either milestones to be accomplished or, for less complex projects, a simple task or activities list.
- A responsibility chart defining the roles and responsibilities of everyone involved.
- A list of stakeholders identified as having an interest in or as being affected by the project, and any plans to deal with possible adverse responses.
- A list of quality standards to be met are listed and defined.
- A cost estimate and schedule.
- A list of acceptance criteria or standards that are to be met before the project will be considered for full implementation.
- Identification and description of any known risks, along with mitigation strategies to address them.

If the library feels it necessary, especially when dealing with complex pilots, to hire a consultant or draw on internal specialists possessing needed expertise, these participants should be included in the responsibility chart as members of the project team (Pal, Sengupta, and Bose 2008). However, it is recommended that the pilot team be kept small and tight, with a maximum of eight to twelve members who are invested in the pilot's success and can work to aggressive deadlines (Workplace Competence International Limited 2002). Moreover, in a highly technical project, not all members of the planning team may be directly involved at the pilot stage, although planning team members not included should routinely be kept informed of its progress through pilot team reports.

### Step 2: Execute the pilot

The project team carries out the pilot, or "realization phase," following the specifications outlined in their brief (Boscherini et al. 2010). The associated timetable is critical, and enough time must be scheduled for adequate assessment without dragging the process out until momentum and enthusiasm are lost and the decision on whether to move ahead with a complete implementation is unnecessarily delayed. Turner (2005a) notes that

pilots, by their very nature, are characterized by “short time horizons” and the “need to see quick results.” In business and technology, pilot projects are typically kept to less than a year given the competitive environment and rapid rate of innovation and product development (Workplace Competence International Limited 2002; Pal, Sengupta, and Bose 2008).

It should be emphasized that pilots are managed differently from other projects, as they “have as their primary objective the creation of the ‘first version’ of something . . . and [are] undertaken for the very purpose of acquiring the type of experience needed to set or estimate” conventional project management parameters if the project is continued (Workplace Competence International Limited 2002). Because the testing involves a new product or service, the work plan cannot be structured based on past experience; therefore, teamwork is usually broken down by stages, often into three-month time periods. Each work step should normally conclude with a deliverable, although this might not be in its final form (Workplace Competence International Limited 2002).

The pilot team must be given a “license to innovate” as part of their brief, with the pilot process thought of as a “collective investigation” and “strategic experiment,” rather than merely an initial implementation of a preconceived outcome. As such, pilot teams should be given broad boundaries and scope for creativity (Siegal and Smith 2006). Library management should give them as much room for maneuver as possible in order to facilitate a successful experiment, with “success” defined to include a determination of failure and project termination (Naslund 2010). Team members, and especially their leader, must be able to work collaboratively and be comfortable with ambiguity, having the capacity to “handle the stops, starts, fall backs and leaps forward which will characterize their work” (Workplace Competence International Limited 2002). As they proceed, they must also be able to recognize that while “one thing might not work, something else may” (Naslund 2010).

### Step 3: Communicate with stakeholders

This step overlaps the pilot-execution phase. The pilot team must produce regular status reports to give assurance that the project remains on track and on time, and to make certain that stakeholders remain engaged and interested in the outcomes. Naslund (2010) recommends weekly or biweekly updates to upper management, depending on the length of the pilot. Also needed are appropriate communication venues enabling interested stakeholder groups to review and comment on the pilot’s progress, including public presentations, library or university newsletter updates, and chat forums on the library’s website (Siegal and Smith 2006). Naslund (2010) stresses utilizing every means of capturing feedback, including blogs, wikis, and other social networking opportunities.

### Step 4: Evaluate the results

Based on the list of acceptance criteria set out in the brief, the pilot team needs to measure the results of the project. Pal, Sengupta, and Bose (2008) suggest a number of metrics to measure value generated by technology pilots, such as revenue gains, cost

savings, time to market, on-time delivery, and market share gains, and identify four major approaches, either alone or in combination, to analyze project results:

1. Economic (using financial measures such as ROI, or cost/benefit approaches focusing on tangibles, usually monetary gains or losses).
2. Strategic (determining the degree of alignment with the library's, university's, or consortium's overall purpose, goals, or current initiatives; this may include focusing on intangibles, such as faculty and student satisfaction, institutional prestige, or benefits to the research community).
3. Analytical (risk analysis and scoring).
4. Integrated (utilizing such techniques as the Balanced Scorecard).

Especially for more intangible or qualitative measures, libraries should carefully consider how to capture feedback from stakeholders; how, particularly if using an integrated approach, they will weight the relative importance of these measures in forming their decision or acceptance criteria; and how detailed their evaluation process must be to satisfy the needs of the planning team and senior library management.

Libraries should also consider a separate evaluation team to monitor and evaluate results presented by the pilot group (Workplace Competence International Limited 2002). This team can be formed with planning group members not directly involved with the pilot, who can be augmented, if necessary, with members of senior leadership. A library's investment of time and of operating and human resources in a pilot should be considered a "risk investment" that can lead to nothing. An evaluation team, with the charge of minimizing investment losses via timely review of the pilot, is in a position to stop a nonproductive effort early on (Workplace Competence International Limited 2002).

It is for senior management, deciding on the most effective or acceptable approach for their local situation, to determine whether a library should rely on the planning and pilot teams to evaluate results and render recommendations, or whether a separate evaluation team should be formed.

#### Step 5: Make a go/no-go decision

As indicated in Step 4, should the pilot not show promise during the execution phase, it can be terminated, although it is most likely that the process will continue until its planned completion date. After the results are analyzed, either the pilot or evaluation team will make their recommendation to the planning team, who will ultimately decide whether to proceed with full deployment. One of four decisions generally results:

- End the project and do not transition to a full implementation (project not feasible).
- Determine partial success and incorporate aspects into a revised pilot or full implementation (project feasible with some modifications).
- Determine success, but extend pilot and monitor closely (project feasible but more information or experience is desired).
- Determine success and roll out full implementation (project feasible as is) (Thabane et al. 2010).

Even in cases where the project is deemed unfeasible, the pilot can still be considered valuable to organizational learning. Turner (2005a) outlines several positive side effects that libraries can benefit from as they reflect on the outcomes of their pilot:

- The process may generate better ideas of how to mitigate risk.
- It may result in better ways to reduce uncertainty in project processes.
- It can create an awareness of what will work or not work in new product or service design that can lead to better subsequent pilot development.
- It can test the efficacy of instruments or processes used to collect and evaluate data in order to improve their usefulness in future pilots.

Moreover, conducting new product or service pilots can build the library or university's capacity for strategic change (Turner 2005b), and foster a climate of innovation (Boscherini et al. 2010).

#### Step 6: Present the findings

Once the results are finalized and accepted, the planning group should disseminate them in summary form among all stakeholder groups. These reports should be honest, straightforward, and jargon-free (Naslund 2010). Some broad points for discussion might include:

- If the pilot was deemed a success, in what ways was it successful and which factors contributed to this positive outcome?
- If the pilot was deemed unsuccessful, in what ways and to what extent was it unsuccessful? Were there any aspects that did perform favorably? What should have been done differently to achieve a better result overall? Were the problems or undesirable factors encountered political, structural, procedural, etc.?

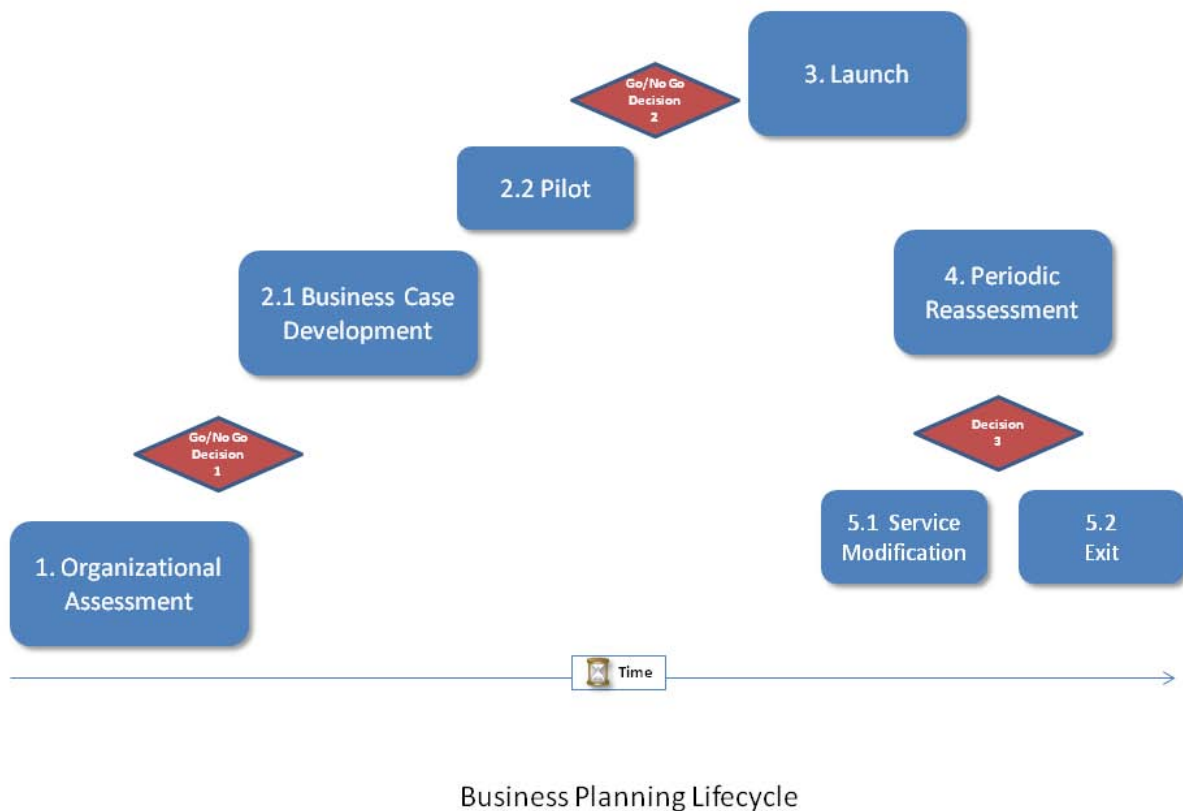
Dissemination of results should not stop with written reports. Other appropriate channels useful in informing stakeholders and in maintaining their support—in addition to presentations in various venues and formats, informal discussion, and the other means mentioned in Step 3 above—depend on the accepted options and room for innovation provided by a particular institution's culture. As always, think flexibly, no less in promoting your progress than in marketing your potential. The next step may well be full implementation, and the understanding, approval, and, no doubt, patience of staff and stakeholders will be needed for it to proceed as smoothly as possible.

#### Step 7: Transition to full implementation if a go decision is reached in Step 5

Finally, the planning team should give careful consideration to the results of the pilot and to any necessary revisions of the original implementation plan. Even if the pilot was a total success, piloting is an active, adaptive process, and it is likely that unanticipated conditions had to be clarified and glitches overcome prior to the achievement of that success. As a result, slight modifications in organization or procedures before moving to a full implementation are not uncommon (Naslund 2010).

### Part IV: The Business Planning Life Cycle

The above recommendations concerning the assessment of organizational readiness and business case development can be seen in the context of a larger business planning life cycle, as visualized in figure 1. (Traditional product management methodology uses variations on product life-cycle management that typically begin with ideation in the innovation context and continue through several stages to product modification or exit.)



Details of the life cycle are described in table 1.

Step	Input	Output	Artifacts
1. Organizational Assessment	Library mission Institutional resources	Decision to develop a business case Decision to not develop a business case	Updated library mission Statement of risk tolerance Statement of new venture outcomes Environmental scan (Modified) Brinkerhoff Readiness Checklist
2.1 Business Case Development	Alternatives identified (Maul) Checklist for creating a business case (Maul)	Business Case Template (Maul)	Business Case
2.2 Pilot	Business case	Service or product	Quarterly or annual reports
3. Launch	Business case	Service or product	Quarterly or annual reports
4. Periodic Reassessment	Business case	Decision to modify business plan Decision to exit	Updated business case or business plan
5.1 Service Modification	Decision to modify business plan	Modified business plan	Modified business plan
5.2 Exit	Decision to exit	Modified business plan	Modified business plan

## Elements of the Business Planning Life Cycle

### *Organizational assessment*

Part I of the Recommendations above provides a four-step process for managing an organizational assessment. At the end of that process, the team proposing the new venture should conduct a go/no-go decision analysis to determine the likelihood of success in moving to the next step of the planning life cycle. The team should analyze the output of all four steps:

- 1. Mission review.** Is the new venture consistent with the library's mission statement? If the mission statement was successfully revised as a result of the review, then there is good reason to proceed to business case development. If the mission statement was not compatible with the new venture or there was not sufficient agreement with stakeholders on the revisions, then there is risk in moving forward to the next step. If the latter is true, but the new venture team has high confidence in the value proposition of the emerging proposal, then the team should consider affiliating with an allied institution or pursuing independent sponsorship and funding of the venture.
- 2. Risk tolerance.** Use the results of this step to gauge the risk tolerance of the parent institution. Decide if the institution will tolerate the risk in a way that will allow the venture to flourish. If not, then consider a no-go decision or alternative affiliation.

3. **Mission outcomes.** How compelling are the newly articulated outcomes? Are they clearly stated and likely to inspire the team and consumers of the service? Answers to these questions will inform a go/no-go decision.
4. **Resources.** Use the modified Brinckerhoff readiness checklist to analyze resource readiness.

The new venture team should also consider a comprehensive review of the overall balance between opportunity, resources, and the strength of the team in assessing the likelihood of success (Timmons and Spinelli 2009). Timmons and Spinelli argue that success in the entrepreneurial process can be predicted by the balance of opportunity, resources, and team. If any of those elements are out of balance, then the likelihood of success is reduced. They describe the entrepreneurial process as follows:

- It is *opportunity* driven
- It is driven by a *lead entrepreneur* and an *entrepreneurial team*
- It is *resource parsimonious and creative*
- It depends on the *fit and balance* among these
- It is *integrated and holistic*
- It is *sustainable*

The Timmons model of the entrepreneurial process encourages a holistic view of three core components:

**Opportunity.** The Timmons model reminds us that “a good idea is not necessarily a good opportunity” (Timmons and Spinelli 2009, 111). The model encourages an analysis of market demand, a thorough understanding of market structure and size, and margin analysis as a way to differentiate an opportunity from an idea.

**Resources.** Librarians will be well acquainted with a principle that is difficult for for-profit entrepreneurs to understand: it is not necessary “to have all the resources in place, especially the money, to succeed with a venture” (Timmons and Spinelli 2009, 112). However, the team should be prepared to spend considerable time in the business case step on the analysis of required financial and tangible resources to make the case for a successful venture. Brinckerhoff provides definitions and worksheets for financial analysis, including forms for start-up cost estimation, a helpful form for calculating working capital needs for the first year, and a model for income and expense statements (Brinckerhoff 2000). In analyzing the need for financial resources, the first worksheets are an excellent resource for determining resource needs for start up and the first year of launch—a comparison of those needs with the available financial resources tells the team whether or not resources are in balance with the other components of the Timmons model.

**Team.** The analysis of the quality of the team is the least quantitative of the components. The authors argue that the successful venture requires “an entrepreneurial leader” and that the quality of the team should be evaluated by reviewing characteristics such as

- Relevant experience and track record
- Motivation to excel
- Commitment, determination and persistence
- Tolerance of risk, ambiguity, and uncertainty
- Creativity (Timmons and Spinelli 2009, 113)

The outcome of the organizational assessment process is to make a go/no-go decision on proceeding to the business case step.

### *Business case development*

The development of the business case is described above in Part II of the Recommendations. After preparing a full description of the expected outcome and options for implementation, analyzing risk, and developing an implementation plan, the team can proceed to selecting the most appropriate option(s) for piloting. Upon the conclusion of the pilot, the business case itself should be updated to reflect lessons learned and new data gathered. At this point, a go/no-go decision on the entire venture is appropriate.

### *Launch*

Product launch is beyond the scope of this study, but there exists a significant literature in the areas of product marketing and the execution of business planning.

### *Periodic reassessment*

The subsection above on organizational assessment provides a model for initial assessment and periodic reassessment. The four steps of assessment described there can be utilized to verify that there has not been a change in overall institutional support for the venture.

## **Overview of the Proposed Case Study Methodology**

Following the publication of our initial recommendations, we plan to produce up to six detailed case studies of services that support publishing initiatives and research data curation and management. These case studies will provide the team with an opportunity to explore the planning process and related concepts with practitioners. Based on these case studies, we will review and revise our initial finding to identify best practices for navigating the inherent uncertainty of developing sustainable scholarly communications services.

The case study methodology will developed to gather data on two major areas:

1. Baseline characteristics, including the nature and mission of the service; products; service models; target market(s); financial income and expenditures; staffing; etc.
2. The planning and management process, including the history and origins of the service; how the mission was developed and how it relates to the parent organization's overall mission; market or demographic research process; pilots and



implementation; definitions of success; assessment methods; changes in services; challenges to sustainability.

We will use the planning processes outlined in our initial report and recommendations as a framework to analyze the data and structure our reporting. During our research, we expect to find a great deal of variation in how service providers planned and executed their work, which we hope will challenge and test our initial recommendations. The case study investigations will not, however, be used to test these recommendations so much as to extend and refine them. Our ultimate goal is that the cases prove useful in themselves to a readership looking for practical guidance and ideas.

Candidates for case studies will be chosen to ensure adequate representation of a variety of contexts, such as:

- Size of library or community it serves
- Single organization or collaboration/consortium-oriented services
- Publishing-related services and data preservation services
- Revenue generating vs. self-supporting/investing
- Started up with grant funds or other temporary money vs. all-internal investment

Members of the team will pair up to conduct twelve case studies during a sixty-eight-month period. In each case the team members will solicit data in advance and schedule a two-day visit to a campus or office location to interview key stakeholders. These may include

- The staff providing the services
- The dean, director, or other executive for the parent library or organization
- Members of advisory boards or committees, if such exist
- Clients of the service

All interviews will be conducted “on the record,” and an informed consent process will be used to ensure this understanding. IRB clearances will be obtained prior to the start of the process. Interviewees will have an opportunity to review drafts of the case study to correct inaccuracies or to redact any information it considers too sensitive to release.

Each final case study report will be 4,000–5,000 words and roughly follow this outline:

- Summary
- Description of Service
  - Mission
  - Service offerings
  - Clients and target audience
  - Examples
  - Income/expenses
  - Staffing and management
- The Planning Process
  - Origins

- Summary of planning process
- Determining organizational “readiness”
- Research into needs/demand
- Implementation and Pilots
  - Defining success and associated metrics
  - Assessment and market/service research
  - Method of data gathering
  - Assessing risk
  - Assessing demand
  - Assessing resource requirements
- Reassessment and Prospects for Future Development
- Analysis and Conclusion
  - Relationship and/or challenges to our recommendations
  - Examples of novel/useful methods
  - Specific metrics or issues that seem especially challenging
  - Implications for others

## **APPENDIX: LITERATURE REVIEW**

### *Part I: The Library Literature*

The conventional library literature has long been noteworthy for reports from the field, generally featuring successes, but not for financial planning or for the background business steps that precede putting new services in place. The large body of literature on data curation and publishing generally follows this model. Service models are just emerging, and, while there has been little time for reflection or hindsight, such reporting would be instructive for the community. Fortunately, professional organizations, independent bodies (such as Ithaka), and governmental agencies are particularly productive in this area: ARL, SPARC (Scholarly Publishing and Academic Resources Coalition), JISC (formerly the Joint Information Systems Committee), and NSF have all produced or commissioned many studies on these topics. Ithaka has been commissioned to study questions of sustainability and business models for services in the digital era. These reports address the development of sustainable models for data curation and library publishing programs on a variety of levels. North American and British agencies have spent considerable effort in raising the discussion around funding and the future of scholarly communication.

It is instructive that North American as well as British reports envision government as the main funder in the area of data curation and management. *The UK Research Data Service Feasibility Study* (2008), submitted to the Higher Education Funding Council for England (HEFCE), expects centralized governmental funding and outlines a first adopters structure similar to NSF’s DataNet Partners program in the United States. Fry et al. (2008), writing from a UK higher educational perspective, provides a business case framework again predicated on centralized funding and large-scale cooperation. Fry et al. draw heavily on Beagrie, Chruszcz, and Lavoie (2008), whose HEFCE- and university-commissioned work

sets the stage for the Research Data Service study by constructing a service model and key cost variables.

North American, primarily U.S.-based, studies articulate service structures to provide support for decision makers. The Blue Ribbon Task Force Report (2010), which treats digital preservation broadly, including data curation, is a primary example of this literature. The report uses standard economic terminology to describe the preservation landscape, enabling a clearer view of problems and responsibilities at the macro level. This is an essential first step. Action agendas that address broad sets of stakeholders require a level of cooperation and funder leadership that has not yet been realized, and, as the authors acknowledge, “there remain significant gaps in knowledge that require further investigation.”

In a similar vein, Friedlander and Adler (2006), in a report to NSF on a two-day workshop held by ARL, are clear that data curation and management pose a discontinuous service development for research libraries. The various discussions during the ARL workshop demonstrate the need for multi-institutional, multiconstituency engagement and solutions. The economic sustainability session developed high-level recommendations that address necessary cultural and economic questions that precede the development of institutional services, but did not provide extensive discussion of building institutional capabilities. The report is explicit that economic models and business models operate on different scales, and both perspectives must be developed and understood. It must be noted that the workshop participants shared the view of data as a public good. This presents particular challenges in the development of business models. One might also argue that this view is not shared by the private sector, where data may be seen as valuable assets for profit generation. What view will predominate will depend on the ability of research institutions and funders to build sustainable models to keep data in public hands. At the institutional level, the ARL E-Science and Data Support Services report (Soehner, Steeves, and Ward 2010) documents service development at six libraries and identifies four models for service provision: institution-wide or centralized, unit-by-unit or decentralized, hybrid, and multi-institutional. This report notes anxiety in regard to funding or resource management needs for these services but does not describe solutions.

Brown, Griffiths, and Rascoff (2007) provide an insightful overview of publishing activities in university presses and research libraries, outlining several strategies that would help both collaborate to provide valuable publishing services to their campuses and beyond. However, this study focuses more heavily on revitalizing university press publishing than on libraries' services. Hahn (2008) identifies a significant number of library publishing projects, but the majority of these are very small or “experimental” and still in the process of identifying what services could be offered. Hahn notes that “all of the respondents who currently utilize library budget funds anticipate continuing to rely on this funding. In addition to base budget and overhead support from the library, other sources of revenue include grants, charge backs to units or organizations, royalties and licensing fees, print on demand revenue, and other forms of sales of some kind.” However, no follow-up studies have been conducted to explore how these projections have played out over time.

Library leaders looking for starting points for sustainable publishing models will find assistance in Crow (2009a). Crow examines the development of university press-library partnerships, reviewing past and current collaborations and setting out guidelines for new partnerships. He is clear that presses and libraries have sometimes had adversarial relationships, but also notes that there are compelling reasons to work together:

*Collaboration, unlike more passive working relationships, can transform a sometimes adversarial relationship into a shared exploration of alternative publishing models that allows libraries, presses, and other stakeholders to ensure that their interests are adequately represented. To advance their mutual interest in addressing problems with the current system, collaboration will require libraries and presses to coordinate their own interests and those of other stakeholders—most notably, their faculty and university administrations—and to act multilaterally, potentially ceding some operating autonomy. Still, libraries and presses share an institutional culture, and a commitment to facilitating the communication of scholarly and scientific research, that should make participation in a collaborative search for solutions appealing.*

Crow's list of value indicators could assist libraries in building their value proposition as well as understanding what to assess. Similarly, Crow (2009b) breaks down particular aspects of business model creation and explains a variety of funding models. While neither report was written to discuss all the steps libraries must take to build sustainable services, or to make suitable service decisions, both would be extremely useful for decision making. Crow's most recent work (2011), a set of case studies and best practices produced for the Institute of Museum and Library Services Library Publishing Services: Strategies for Success grant, offers clear assistance in achieving sustainability. The best practices that Crow describes are applicable to a variety of financial and mission models. A very real advantage of this work is the case studies, which hold real programs (at Purdue, Georgia Tech, and Utah, the IMLS grantees) up against his sustainability model. There is a wealth of assistance for administrators and program designers looking to learn from others and to build services successfully.

Ivins and Luther (2011) report on their study of small, long-tail print journal publishers who are currently under extreme pressure due to constrained library budgets and offer a clear-eyed assessment of areas of disagreement and differences between publishers and library publishing programs that would inhibit collaborative solutions. They conclude that very small presses needing to bring a journal online may not find a suitable partner in a library, having "determined that there is seldom a one-to-one match between a journal needing support to offer an electronic version and the library publishing services offered on a given campus. When this is taken into account in conjunction with the very wide array of potential publishing services a library may consider offering—plus the fact many of these are new activities that are not necessarily a ready fit with traditional library skill sets—it is not surprising that there is rarely a one-to-one match between what is needed and what is available at an institution." Libraries interested in working with small publishers will need to understand the print publishing environment as well as business practices needed to build readership and sustainability. Libraries must also realize that inflexibility on open access will not help start a fruitful conversation about services.

Two reports from Ithaka, sponsored by JISC, explore sustainability and business concepts in some detail. Guthrie, Griffiths, and Maron (2008) emphasize the need for an academic form of transformative, entrepreneurial leadership:

*Acting as the principal investigator of a research grant project is a very different responsibility from operating as the organisational leader of a sustainable enterprise. The issue of “impact” is just one example. In our opinion, delivering impact is the key factor in the potential for achieving long-term sustainability; only high impact and highly useful materials will draw the financial support from beneficiaries needed for long-term success. Yet the importance of impact is often underestimated by leaders of not-for-profit digital resource projects. Much attention is given to making material available and very little attention is given to doing the work to make sure that people will become aware of it, that they can find it, and if they do find it that they will actually use it. . . . They risk developing services that are not what people want or that go beyond what people are willing to support.*

A follow up report (Maron, Smith, and Loy 2009) presents case studies of online academic resources, illuminating a variety of models that projects have taken to support their expenses. The authors identify several key factors for sustainability: dedicated and entrepreneurial leadership, clear value proposition, minimizing direct costs, the development of diverse revenue sources, and clear accountability and metrics for success. While these two reports are very useful, neither of them focuses on the unique context of research libraries and the development of ongoing, core services. Yet Guthrie, Griffiths, and Maron (2008) do offer an acutely accurate reading of what is missing in most academic service planning, particularly in research libraries:

*There is no formulaic answer or single approach to achieving sustainability. No study can lay out a “one-size-fits-all” plan that any organisation can follow to reach a point of financial stability. There are, however, a variety of processes and procedures that can help to improve the likelihood of entrepreneurial success. These include establishing organisational mechanisms to develop accountability in leaders, setting measurable goals and objectives, reviewing progress on those objectives on a regular basis, and assessing the performance of both the project and its leaders... In our experience, we have been surprised by how few not-for-profit initiatives rooted in the academic environment have such procedures in place. Clearly the leaders of these initiatives are competent professionals; why do they not rely on processes that have proven effective in both commercial and not-for-profit contexts? . . . Accepting and even embracing the mechanisms of the marketplace, if properly placed in a mission-oriented context, can enhance the value that a project generates by sharpening its understanding of where need is greatest and how it can most usefully deploy its resources. The project leaders that are most likely to succeed in this environment are those who can operate successfully under the pressures of competition and accountability, and in the messiness of innovation and continual reinvention.*

There could be no better introduction to a review of the business and nonprofit literatures.

### *Part II: Commercial Business Case and Business Plan Writing*

The literature on creating sustainable services in the commercial world follows two tracks. The first track is the business case for new products or services within an existing company. The second track is written for entrepreneurs writing a business plan that proposes a new business.

The business case literature offers few general works on principles and generic structures for the business case, but it offers a massive literature on the business case for specific aspects of business (e.g., diversity, sustainability, records management, etc.). In contrast, the business plan literature offers works on the general principles of the business plan (including canonical works) and business planning on specific topics such as small business, software startups, etc. The business plan literature even contains a substantial subliterature challenging the value of writing business plans altogether.

Finally, there is a literature on reinventing businesses (Johnson, Christensen, and Kagermann 2008). This literature provides guidance to the business decision maker on defining the current business model and exploring alternatives to respond to changes in the current business landscape.

#### The Business Case

Within the first track there is a rich body of work on the business case for almost any aspect of business. This includes topics from human resources diversity, where there is a large literature (Kandola and Fullerton 1998; Richard 2000; Thomas 1992), to sustainability (Hopkins 2010), to records management (Saffady 2011), and everything in between. Much of the literature is itself making the case for some aspect of change—generally trying to prove the benefits of something like a new technology, a new business model or a different demographic component of the workforce. Again, human diversity in an organization is the best example of this, where there is a rich and well-researched literature.

Also within the first track is the “how-to” literature on making a business case: research and commentary that provide guidance on the principles and mechanics of how to make the case for some change in business practices or product offerings. This literature provides detailed models, templates, and commentary on how to maximize the chance for success in making a significant business decision (Maul 2011; Schmidt 2002). These works on presenting a business case to an existing organization provide useful definitions of the business case itself and step-by-step instructions on the execution of a business case. Maul provides a succinct definition of the business case: “A business case is a tool for identifying and comparing multiple alternatives for pursuing an opportunity and then proposing the one course of action that will create the most value.” Her guide then provides the reader with a step-by-step guide for executing the business case including templates for selecting the best solution and documenting the details of the implementation plan. Schmidt too

provides a concise definition: “A business case is a decision support and planning tool that projects the likely financial results and other business consequences of an action or decision.” He also provides a useful summary of the elements of a “good business case”:

A good business case:

- Defines the case subject, purpose and scope, up front, in clear practical terms.
- Shows expected cash flow consequences of an action or decision, organized around a time line
- Presents the rationale and methods for identifying and estimating benefits and costs
- Includes all important benefit and cost impacts, even those that are not easily described in financial terms.
- Discusses critical success factors that must be managed in order to bring predicted results.
- Identifies and measures risks.

### Core Elements of the Business Case

Maul (2011) documents a seven-step process for making a business case:

- Step 1: Define the opportunity
- Step 2: Identify the alternatives
- Step 3: Gather data and estimate time frame
- Step 4: Analyze the alternatives
- Step 5: Make a choice and assess the risk
- Step 6: Create a plan for implementing your idea

As with the business plan literature, there is a keen emphasis on defining the opportunity for decision makers. After defining the opportunity and making a compelling case that the opportunity should be pursued, Maul provides a useful framework that emphasizes the value of analyzing the alternatives to reaching a business objective. Absent this framework, the individual might pursue the business case as a tool for justifying a preselected model for exploiting the opportunity. Rather, this method emphasizes the importance of analyzing a full range of approaches and providing the pros and cons for each approach. Maul provides a structure for this step by detailing the required elements of analysis:

- List the costs
- List the benefits of expected additional revenues
- Point out any cost savings to be gained
- Identify when you expect to see costs and anticipated revenues
- List the impacts on other corporate metrics, such as customer satisfaction, customer retention and operational efficiency
- List any unquantifiable benefits and costs
- Conduct your business impact analysis
- Organize the information into a table for comparison

The principle behind this model is that the business case author will fully explore the alternatives to exploiting a defined opportunity. The decision arrived at in Step 5 can then be defended in the context of the other alternatives and the decision-makers will have confidence that the most appropriate solution has been selected. This approach is in contrast to the intuitive approach which builds an argument for a preselected option. Maul's model includes detailed templates for defining the opportunity, identifying the alternatives, defining the pros and cons of each approach, documenting an implementation plan, and an overall business case document template that includes all aspects of the seven-step model. Maul's model does not include detailed templates for cost estimation or a framework for making a go/no-go decision. Presumably, those components are components of the local business practice.

### The Business Plan

The second track of the business case literature is designed for founders of new businesses—both entrepreneurs and small business people. These guides are part how-to and part motivational input for individuals who are starting a new business outside of an existing organization (Chambers 2008; Stutely 2002). There is a vast literature in this category, in many formats and subtopics. The thrust of the business case literature for entrepreneurs is rhetorical in the formal sense. These works provide the entrepreneur with a framework with which to convince funders that the business idea is sound, that a market exists for the product or service, that the entrepreneur has the organization and organizational skills to be successful, and that there will be a long-term return on investment for the funder. This literature is explicit about its goal of providing the entrepreneur with the tools to get a positive response from a funding organization or individual. As with the how-to literature for existing organization, there is a very accessible toolset and templates for the process of making and documenting the business case.

Within the canonical business plan literature, Rich and Gumpert (1985) argue for a business plan that addresses the viewpoint of three constituencies: the market, the investors, and the producer. They argue that too many business plans are written from the perspective of the producer and that the burden is on the writer of the business plan to prove that there is a market for the new business and that the investors will be rewarded for their financial support of the endeavor. Sahlman (1997) argues for a business plan framework that addresses “the four interdependent factors critical to every new venture”: the people, the opportunity, the context, and the risk and reward. These two approaches can be seen as overlapping in emphasis on the people, the market/opportunity, and rewards to the investor. Sahlman emphasizes the context as demonstrating the entrepreneur's depth of understanding of market conditions or highlighting the appropriateness of the timing of introducing a new venture.

The contrarian literature argues that extensive business plan writing does not predict the success of a new venture (Lange et al. 2007). Lange et al. summarize the literature on the efficacy of business plans by writing, “there is little convincing evidence on whether or not business planning before a business is up and running subsequently produces superior performance.” From their study of 116 ventures that did not require



external investors, they draw the conclusion that “writing a business plan before a business began operating made no difference to the subsequent revenue, net income and number of employees.”

Gumpert (2002) provides a litany of reasons why the traditional business plan fails to provide a lasting impact on the success of business. Among his reasons is the fact that “No one uses them to run their business. In other words, the business plan has been used to raise money, not to plan the business.”

### Core Elements of the Business Plan

As mentioned above, there is a massive literature on writing business plans for all types and sizes of businesses. The canonical literature describes the need to provide the full context of the proposal from various perspectives. (Sahlman 1997; Rich and Gumpert 1985). Chambers (2008) identifies the core elements of the traditional business plan:

- Background
- The Company
- The Market
- Competition
- Personnel
- Sales and Promotion
- The Financials

Stutely (2002) recommends including these financial elements scattered throughout the plan itself and in the appendix:

- A graph showing the “break even” point
- A graph showing cash flow projections
- Financial summaries in the appendix including:
  - Production and sales figures
  - Capital outlays
  - Staff costs
  - Non-staff operating costs
  - Income Profit & Loss statement
  - Cash flow

The contrarian literature argues that it is only the financials and the leadership skills of the people proposing the business that provide the argument for funding to the investor. In the development of a business plan, Gumpert (2003) argues that the business plan “sells your business and its executives to potential backers of your business.” The implication is that success in the actual business lies in the qualities of the executives and the strength of the product and the business model relative to the market conditions. Gumpert’s business plan outline roughly follows the canonical model. He argues for brevity in the preparation and length of the document. Further, he argues that the success of the proposal process will be in the formal presentation to investors and investor confidence in the business skills of the management team.

### “The Classically Balanced Venture”

Finally, Timmons and Spinelli (2009) argue that success in business planning lies in understanding the balance between opportunity, resources, and the team that is founding the venture. This is described as the “Timmons model,” and it argues that “success in creating a new venture is driven by a few central themes.” The themes are:

- It is opportunity driven
- It is driven by a lead entrepreneur and an entrepreneurial team
- It is resource parsimonious and creative
- It depends on the fit and balance among these
- It is integrated and holistic
- It is sustainable

The diagram of the Timmons model illustrates the principle that balance in the share of opportunity, resources, and team is critical to success. It shows those three elements balanced on the fulcrum of the founder or lead entrepreneur and is influenced by inputs such as leadership, communication, exogenous forces, creativity, and the business plan itself. The argument is that on the one hand, if any of the core elements are out of balance, then the entire venture enters into risk of failure; and on the other hand, balance in those factors increases the chance for long-term success.

Using the Timmons model as a point of departure, Zacharakis, Spinelli, and Timmons (2011) suggest that the entrepreneur ask these questions of a new venture: “what pitfalls will I encounter to get to the next boundary of success? Will my current team be large enough, or will be over our heads if the company grows 30 percent over the next two years? Are my resources sufficient (or too abundant)? Vivid examples of the failure to maintain a balance are everywhere, such as when large companies throw too many resources at a weak, poorly defined opportunity.” The authors argue that careful business planning help “tie together the three spheres.” They note that the “planning process helps you shape the opportunity and understand its full potential.”

### *Part III: Nonprofit Approaches to Business Planning*

#### A Business “Mindset”

The nonprofit sector has borrowed heavily from the management theories and methodologies of the business world, and nonprofit business planning does not differ fundamentally from that of for-profits (Massarsky 1987). Most nonprofits now see an “entrepreneurial mindset and investment thinking” as critical to their success as they supplement their revenue streams by embarking on income-generating ventures, establish new fees and contracts to cover costs for traditional services, or secure additional funding from individuals, corporations, or foundations (Rouson 2005; Brinckerhoff 1990). There is even an emerging recognition that the two sectors are “blending,” as nonprofits continue to clarify their identities in order to compete with some rival organizations while pursuing

collaborations and partnerships with others, including for-profit entities (Rouson 2005). However, not all nonprofits have pursued “businesslike” and systematic methods, and those that have been contrasted with others retaining so-called “build it and they will come” and “seat of the pants” approaches (McNamara 2006).

### Planning for Complexity

Their missions and goal orientations are the major differences between nonprofits and for-profit businesses: the main goal in the private sector is to generate profit for shareholders, while nonprofit organizations usually pursue a “plurality of goals” that can complicate their planning processes. Nonprofit business plans often reflect “dual agendas”: combining an overall commitment to benefit society with the need to earn a profit through venture products or services (Massarsky 1987; Moore 2000). Arguably, according to Rouson (2005), for-profit sector business plans typically have only one “real audience”—potential investors—while nonprofits have to appeal to an often broad spectrum of stakeholders, including funders, board members and staff, constituents, partner organizations, and the larger community. For this reason, nonprofit business planning may have to address soft concerns such as motivation, human behavior, and social value as much as financial figures and economic analyses. That said, nonprofit business planning is still looked upon as the primary way to “garner money from investors,” while it may also assist in achieving such desired side benefits as enhancing organizational management, initiating new programs or projects or facilitating mergers (Rouson 2005).

### Sample Plans Adapted from For-Profit Models

Much of the relevant literature consists of efforts to revise existing for-profit planning models to fit the nonprofit environment. One example of this approach is Pinson (2008), who views the planning process as essentially the same for any organization, and suggests only a few minor modifications for those working in a nonprofit environment, the most important relating to formulating the business plan to reflect a nonprofit’s distinct mission and goals. Pinson indicates that while, for example, the for-profit target market is the customer, nonprofits have to address the needs of both program recipients and funding sources. While a nonprofit is more likely to conduct a situational assessment or environmental analysis than a SWOT analysis in the course of the planning cycle, Pinson’s outline for creating a business plan is otherwise applicable to either sector:

- Executive summary
- Organizational plan: business summary including mission, business model, strategy (objectives, activities, current resources), strategic relationships, and SWOT analysis (or situational assessment or environmental business plan)
  - Program services and products (and why they are unique)
  - Administrative plan: location, legal structure (including legal, accounting, intellectual property, insurance, and security concerns), management and personnel, and board of directors
- Marketing plan:

- Market analysis: determining target markets or audience (program recipients and funding sources), and competition, and conducting market research or needs assessment
- Marketing strategy: branding, advertising, sales, public relations (given greater emphasis in a nonprofit), and networking
- Customer service (including expected outcomes of achieving excellence)
- Financials
- Keeping plan up to date with changes within the company, in customer needs, and in technology

Although written from an explicitly nonprofit perspective, Rouson (2005) sees the “division” between for-profit and nonprofit as “very artificial when it comes to strategy and planning requirements.” Rouson considers strategy to be “merely a trip plan” requiring the organization to answer four basic questions: What is the organization’s purpose or mission (the reason for the trip)? What is its destination or vision (where does the organization want to end up)? What are the rules for the trip (the organization’s guiding principles or values)? And what is the route and what are the means (the business model) for reaching the selected destination?

Rouson’s (2005) list of business plan components also follows a basic for-profit outline, although assigning a higher priority to benchmarking and evaluation than Pinson (2008). Importantly, Rouson sees the components of a business plan as the means of operationalizing a nonprofit’s goals in guiding performance and ensuring financial success and sustainability:

- Definition of the venture (identifying programs, products, operational activities, and their impact)
- Market analysis (of customers, constituents or beneficiaries; needs and opportunities; scale; reach or absorption; competitive environment and possible collaborations)
- Staffing and management structure, roles and responsibilities (including relevant skills, experience, and accomplishments)
- Time frames and benchmarks for performing and evaluating work
- Financial requirements (initial capital, cash flow, revenue, record keeping)
- Revenue projections (break-even point, profitability, reinvestment or reserves)
- Marketing plans (branding, pricing, distribution, customer or constituent relations, public affairs and media relations)
- Analysis of current and potential risks, and mitigation strategies.

Others, such as the Enterprise Foundation (1999) and the Center for Nonprofit Excellence (2009) have offered similar outlines and recommendations and have produced guides for preparing and executing nonprofit plans.

### Dual Bottom Line Matrix

CompassPoint's Dual Bottom Line Matrix planning outline, although originating in a for-profit environment (Bell, Masaoka, and Zimmerman 2010), is, with its major assumption that business planning should focus on the tension between mission impact and program or project viability, more specifically geared toward the nonprofit world (Allison and Kaye 2005). CompassPoint holds that nonprofits should develop programs that have both "high mission impact" and "high viability" or profitability, and that their products or services must be of high quality and capable of clearly distinguishing the organization from its competitors. Accordingly, products or services should produce tangible results that directly contribute to the nonprofit's core mission, including the capacity to generate a revenue surplus, while having a financially viable business model and a high potential for future sustainability. A product or service with low mission impact and low viability does not attract funding opportunities and should be discontinued, while one with high mission impact but low viability that may nonetheless result in a good program will also not generate support (Allison and Kaye 2005). Recently, Bell, Masaoka, and Zimmerman (2010) have demonstrated how the use of Dual Bottom-Line mapping and analysis in business planning can lead to nonprofit financial sustainability, allowing an organization to identify impact and revenue strategies for new or existing products and services.

### Critical Decisions Matrix

Similar in approach to the Dual Bottom Line Matrix, but differing in its assumptions and proposing additional criteria for nonprofit business investment decisions, is Snow and Phillips's (2008) Critical Decisions Matrix, which is based on three guiding principles: minimizing risk, maximizing leverage (defined as return on investment), and ensuring sustainability. Snow and Phillips claim that their approach can be used either for exploring and developing new opportunities or for overall organizational planning. Their four stages of decision making (determining feasibility, conducting the pilot, implementation, and the cutback should, at some point, the program be found to be no longer viable) can be applied to a variety of scenarios.

Through each stage, sixteen "due diligence" criteria or elements are applied, weighed, and adapted to developing situations, ideas or solutions (strategic alignment, feasibility, available expertise, reasonable cost, fit, measurable impact, appropriate scope, personnel pool, practicality, measurable productivity, risk factors, possibilities for collaboration, broader benefit, financial health, impact on organizational development, and broad oversight).

Because of its level of detail—and with many of its criteria shared with more conventional business plans—the Critical Decisions Matrix can be considered as both an overall decision-making model and an applied tool for service or project development. Librarians might consider combining aspects of the Critical Decisions Matrix and the Dual Bottom Line Matrix with more conventional business planning efforts when contemplating the profitability and impact of their services.

## Venture Capital Approaches

Larson (2002) places nonprofit business planning within a venture capital framework, and outlines four basic planning steps:

- Identify who will be in charge of the venture (with responsibility for preparing a business plan)
- Identify the audience for the business plan
- Produce the business plan, composed of:
  - Business summary (descriptions of the organization and proposed venture)
  - Market opportunity (what the venture will sell to whom, how it will be profitable, growth projections, and assessment of the competition)
  - People (responsible for development, marketing and operations)
  - Implementation (start-up, operational, marketing, and financial plans)
  - Contingencies (assessment of risks and uncertainties, including plans to minimize undesirable factors)
- Review and approve the plan, accepted as the basis for subsequent evaluation of the venture.

Rather than organizing their model around the elements of a written plan, Bronfman and Solomon's (2010) focus is on idea generation, research, and demonstration, and on the crucial role of partnership development. Bronfman and Solomon see the venture process as a series of discrete steps or "decision points" at which to determine whether to continue or abandon a new program or project:

- Needs assessment (to understand the market and unmet needs)
- Idea generation (identifying operating assumptions, including goals and objectives)
- Research (to test and reassess operating assumptions and prepare for the development of the demonstration phase)
- Demonstration phase (the new initiative's risk capital phase—this is the moment to "try to be bold, welcome noble failure, and measure everything")
- Go or no go decision whether or not to implement the project (seen as "analogous to new business development"), and either:
  - seek funders beyond initial angel investors or
  - sunset project and make "experience and findings available to those who might learn from the experience"
- -Partnership development (become "enthusiastic salespeople" to attract partners to fund the initiative's development and scaling)
- Sustainability (the emerging initiative becomes independent, permanent, and evolving)
- Get out of the way (founders and initial funders do not stand in the way of further program development)

Bronfman and Solomon's perspective can be particularly important for libraries struggling with the high levels of risk often associated with new technology applications, and with the necessity of "selling" partnerships and responding to the demands of funding agencies. Their model also reminds librarians of the issue of scalability, which is not

extensively covered in the nonprofit literature but remains relevant to project design (Tucker et al. 2005).

### Social Enterprise Models

A “social enterprise” is defined as a “part business, part social” hybrid organization that “breaks down the traditional boundaries between the nonprofit and private sectors (Alter 2003). Alter explores how institutions have combined a mix of social values and goals with commercial business practices to design ownership models, income and capitalization strategies, and unique management and service systems that maximize social value. This so-called integrated approach is intended to encourage innovation, increase an organization’s impact and effectiveness, and improve its overall performance. According to Alter, a social enterprise is distinguished by its “dual value creation properties—economic value and social value,” and possesses several unique characteristics.

It uses business tools and approaches to achieve social objectives, blending social and commercial capital and methods and generating income from commercial activities to fund social programs. Being market-driven and mission-led, it measures financial performance in addition to social impact, meeting financial goals in a way that contributes to the social good. A social enterprise can enjoy the financial freedom provided by unrestricted income, while situating the enterprise strategically to accomplish its social mission.

Dees, Emerson, and Economy (2001) argue that a nonprofit should create a social enterprise business plan for a variety of reasons, including to attract investment and identify risks. In measuring the dual outcomes demanded by financial and social “double bottom lines,” it can appeal to supporters from the business sector, as well as provide stakeholders with clarity about how the social enterprise can move rapidly toward its social mission. Showcasing the abilities of the management team, it can facilitate building alliances and the collaboration necessary to leverage resources, and “check” not only feasibility—defined as both market viability and financial stability—but, by following a critical path model, management thinking. A social enterprise business plan can provide detailed knowledge of the marketplace, tying together market feedback and financial projections to identify relevant opportunities, and can facilitate the development of a framework for interpretation. It can enhance communication among all stakeholders and “energize” the entrepreneur.

Forth Sector Development’s Social Enterprise model (2011) frames the business planning process as a “journey” of six stages, placing most emphasis on the first four stages an organization must travel through and consider in detail: motivation, or organizational readiness; preparation, or organizational culture, capacity and risk evaluation; assessment, or idea generation and market analysis; and exploration, the feasibility study and marketing strategy, before embarking on the fifth and six stages of preparing the business plan; and implementing and periodically reviewing the start-up.

Forth Sector Development's emphasis on motivation and organizational readiness cautions libraries to thoroughly evaluate their culture and capacity so as not to undertake services they cannot sustain or that stakeholders may see as peripheral. And, in explicitly operationalizing assessment and periodic review, a social enterprise approach assures that startups and ongoing services are continuously evaluated for viability. Within higher education institutions increasingly required to demonstrate value to taxpayers and funders, and where libraries are usually considered non-revenue-generating cost centers, having an accountable hybrid library organization capable of achieving profit as well as social good may resonate well when considering how to justify new or enhanced services.

### Social Entrepreneurship and Brinckerhoff

According to Brinckerhoff (2000), social entrepreneurs are nonprofit leaders who are constantly looking for new ways to serve their constituencies, and to add value to existing services, and they are willing to take reasonable risks on behalf of those their organization serves. They understand the difference between needs and wants, and that resource allocations are stewardship investments, and they weigh the social and financial return on each investment they make. They consider mission first, but know that without money there is no mission output.

Unlike for-profit business planning models, Brinckerhoff maintains that his seven-step process for nonprofits is mission based:

- Review the organization's mission
- Assess the organization's risk willingness
- Establish the organization's mission outcomes
- Generate ideas for new business
- Conduct feasibility studies
- Preliminary: determine what your product or service is, and whether the target customer will want it; explore the industry, and ascertain whether the organization has the relevant core competencies to undertake the project
- Final: gather information on the business, industry, competition and market (conduct market research on potential markets, and anticipated hurdles and pitfalls), costs, pricing, capital and pro forma financials; make final assessment of feasibility
- Write a business plan (including financials)
- Implement the business plan with accountability.

Brinckerhoff also claims that his social entrepreneurial model provided an extensive set of tools for constructing better mission-based policy as well as for realizing improved operational, financial, and service planning, and it has been cited frequently in the literature as offering a step-by-step means for nonprofits to achieve their planning goals. As well, because the model is well-known and contains many of the basic components included in the other approaches we reviewed in this chapter this study will rely largely on Brinckerhoff for its definition of business planning.



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