The background of the cover is white with a pattern of thick, colorful arrows in shades of purple, orange, blue, yellow, and green. The arrows point in various directions, some straight, some curved, and some overlapping. A large purple rectangular box is positioned in the lower right quadrant, containing the title and author information.

Library Collaboration as a Strategic Choice: Evaluating Options for Acquiring Capacity

Brian Lavoie

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Brian Lavoie

Senior Research Scientist



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ORCID iDs

Brian Lavoie, OCLC Research  <http://orcid.org/0000-0002-7173-8753>

Please direct correspondence to:

OCLC Research
oclcresearch@oclc.org

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PREFACE

As academic libraries look to the future and an operational context reshaped by the COVID-19 pandemic, as well as pre-pandemic trends, they will need to make choices about the capacities—expertise, services, infrastructure—they need to acquire to carry out their mission effectively. Equally important as the question of what capacities to acquire, however, is the question of how to acquire them.

Collaboration is an important option for acquiring capacity. Whether pursued through established consortia, or new groupings organized for specific purposes, libraries have a long, rich history of acting collectively to achieve mutual needs, exemplified, I am pleased to note, by the founding of OCLC. In a library landscape transformed by the lingering consequences of the COVID-19 pandemic, changing research and learning practices, squeezed budgets, and new technologies, collaboration is likely to only grow in importance as an attractive solution for acquiring capacity.

In a series of recent articles and blog posts, Lorcan Dempsey, former Vice President of Membership and Research and Chief Strategist at OCLC, has offered some foundational thinking about library collaboration. There is much to reflect on in this work, but perhaps the most important message is that *library collaboration should be a strategic choice*—one that is carefully evaluated on the basis of the trade-offs presented by choosing the collaboration option, the context in which collaboration is to be implemented, and the suitability of other sourcing options that may be available.

This report explores the idea of collaboration as a strategic choice, and also extends it to practical tools, frameworks, and concepts to help inform decision-making about acquiring capacity. While much of the focus is on collaboration, it is important to note that the discussion begins by emphasizing that collaboration is one option among several. This, of course, is the origin of the strategic choice that Lorcan Dempsey underscores in his writings.

This is the first of two thematically linked reports. The second report will apply the findings from this report to three case studies of research data management (RDM) capacity acquisition through collaboration. RDM serves as a strong connective thread between the two reports: first, because it is an area of growing strategic interest for many academic libraries—and an area where collaborative solutions are not uncommon; and second, because OCLC Research has developed a strong familiarity with RDM through a substantial body of previous work in this area. Indeed, the reader will note that many of the examples chosen to illustrate the concepts in this report are drawn from the RDM landscape.

Brian Lavoie
OCLC Research

EXECUTIVE SUMMARY

Library collaboration, in the form of multi-institutional effort to acquire needed capacity, is a choice. The decision to collaborate can yield distinct benefits, but not without an often-significant investment of effort, attention, and resources. It is a choice that entails trade-offs and opportunity costs, and it should emerge from careful consideration of institutional interests and priorities, as well as broader environmental conditions impacting the decision. Library collaboration needs to be weighed against the pros and cons of alternative ways of acquiring capacity. In short, collaboration is a decision that needs to be approached strategically.

This report provides insight and tools to support academic libraries in making intentional decisions about cross-institutional collaboration opportunities to acquire capacity, including:

- A menu of common sourcing strategies available to libraries
- Considerations of key characteristics and trade-offs associated with these strategies
- A summary of foundational concepts from economic topics that help deepen understanding of the collaboration option

These resources will help academic libraries in thinking about whether to choose the collaboration option, and, in cases where collaboration is the desired approach, in selecting the most effective forms of collaboration to meet strategic aims. Additionally, the frameworks and tools offered in this report can help with communicating sourcing decisions—especially those involving collaboration—to staff and other stakeholders. This in turn can improve transparency around sourcing decisions and, ultimately, strengthen buy-in from those impacted by the outcomes.

Sourcing options and managing trade-offs

All organizations must choose the appropriate mix of sourcing strategies to acquire the capacities needed to carry out their operations. The report introduces a model describing four potential sourcing strategies for academic libraries acquiring capacity:

- Build—developing and deploying capacity through internal efforts
- Collaborate—working collectively with a group of organizations to create and sustain capacity
- Outsource—contracting with an external provider to supply capacity
- Refer—directing users to an external provider, with whom there is no contractual relationship

The model visualizes a set of options academic libraries face when making sourcing decisions, and it contextualizes library collaboration as one sourcing strategy among a broad range of options. Choosing the appropriate option involves assessing the strengths and weaknesses of each and weighing them against the circumstances surrounding the sourcing choice.

The report contextualizes four common sourcing strategies for acquiring capacity.

No single sourcing strategy is intrinsically better than any other. Rather, each represents a set of trade-offs that must be balanced against the prevailing circumstances of the sourcing choice, as

well as the strategic priorities of the institution. The report outlines a number of considerations that highlight potential differences between the four sourcing strategies described in the model. The list of considerations can be applied to any potential sourcing strategy being evaluated.

Addressing these considerations helps form a general description of the strategy's salient features and potential trade-offs, which the library can then compare with institutional priorities to help determine whether the strategy is a good fit for the circumstances. This exercise surfaces key sourcing strategy considerations to inform the decision-making process, and can also aid in communicating key decision points to relevant stakeholders.

Included are a list of sourcing considerations that can be used to surface, compare, and communicate the features, advantages, and disadvantages of different sourcing options.

Strategic frames for collaboration

The report presents a set of high-level concepts—referred to as strategic frames—inspired by four topics in economics that, taken together, provide some guideposts for making a strategic decision to invest in collaborative sourcing:

- The collective action problem—the possibility that coordinated activity to achieve a common goal can fail, even if all parties would be better off cooperating.
- Transaction costs—the costs of organizing and conducting an economic exchange.
- Path dependency—“history matters,” in that existing arrangements tend to persist even when better, more efficient alternatives become available..
- The principal-agent problem—issues that arise when a person or organization (the principal) delegates responsibility to another person or organization (the agent) whose interests or incentives may not completely align with their own.

Each topic yields broad insights that can help guide strategic thinking about collaboration as a sourcing strategy. Incorporating these insights into a broader understanding of collaboration can help library decision makers propose a more informed case for selecting this sourcing strategy from among the alternatives or steer away from collaborative opportunities that are poor fits for prevailing circumstances.

A summary of important ideas for each economic concept, key questions that can help evaluate a collaboration opportunity, and some suggested “prompts to action” to better inform decision-making are provided.

Libraries, collections and services, scholarly practices, and the university research enterprise itself are all undergoing transformation, both as a result of the COVID-19 pandemic and through patterns of change that emerged long before COVID came onto the scene. The question of how to acquire capacity—and in particular, whether to acquire it through collaboration—deserves as much attention as the question of what capacity to acquire. The frameworks and tools for evaluating sourcing options introduced in this report serve both to highlight the importance of the first question, and to help libraries answer it.

INTRODUCTION—LIBRARY COLLABORATION IS A STRATEGIC CHOICE

Library collaboration, in the form of multi-institutional effort to acquire needed capacity, is a choice. The decision to collaborate can yield distinct benefits, but not without an often-significant investment of effort, attention, and resources. It is a choice that entails trade-offs and opportunity costs, and it should emerge from careful consideration of institutional interests and priorities, as well as broader environmental conditions impacting the decision. Library collaboration needs to be weighed against the pros and cons of alternative ways of acquiring capacity. In short, collaboration is a decision that needs to be approached strategically.

This report provides insight and tools to support academic libraries in making intentional decisions about cross-institutional collaboration opportunities to acquire capacity, including:

- A menu that describes common sourcing strategies available to libraries
- Considerations of key characteristics and trade-offs associated with these strategies
- A summary of foundational concepts from economic topics that help deepen understanding of collaboration as a sourcing strategy

These resources help to situate collaboration as one of several sourcing options for academic libraries to consider, with tools that can help libraries evaluate institutional needs, goals, and priorities to inform their decision-making. Additionally, the frameworks and tools offered in this report can help with communicating sourcing decisions—especially those involving collaboration—to staff and other stakeholders. This in turn can improve transparency around sourcing decision-making and, ultimately, strengthen buy-in from those impacted by the outcomes.

For the purposes of this report, acquiring capacity can be understood as obtaining something that extends a library's ability to deliver value to its users, such as expertise, services, and infrastructure. Examples of desired capacities might be:

- Data repository services
- Specialized curation skills
- Metadata aggregation and enrichment workflows
- Environmentally controlled print storage facilities
- Publishing services

The collaboration option has a long-standing history in the academic library community as a means of acquiring capacities and creating value. Think of OCLC's WorldCat, a shared global registry of more than 500 million records and more than 3 billion library holdings, or expansive resource sharing networks such as those operated by Minitex or OhioLINK that extend the

boundaries of local collections to include the holdings of interlibrary loan partners. The abundance of library consortia also speaks to the deep-seated inclination for academic libraries to form groups and act collectively.

Reflecting on library collaboration, Lorcan Dempsey strikes a cautionary note:

As libraries work to meet new institutional needs, the collaborative imperative is strong. It makes increasing sense to do things together in a network environment, where scale benefits both efficiency and impact. And yet current approaches will not suffice to meet this need. **Collaboration is hard . . . effective collaboration is harder.** It is not simply a given, but is a choice which has to be designed and strategized, and followed up with real commitment.¹ (Emphasis added)

While collaboration offers real benefits to academic libraries as a way to address mutual needs, it also entails real costs to release its expected value. In this sense, collaboration is more than a sourcing strategy: it is an investment in the complex apparatus—relationships, governance, organizational skills—needed to make collaboration effective. The United Nations' System of National Accounts defines investment as the process by which an economic decision maker “acquires a fixed asset or spends resources (money, effort, raw materials) to improve it.” Collaboration is therefore a form of double investment in two fixed assets: first, the capacity (e.g., service, infrastructure) that the collaboration is intended to deliver, and second, the collaborative arrangements through which the first asset is produced and sustained.

Collaboration is more than a sourcing strategy:
it is an investment in the complex apparatus—
relationships, governance, organizational skills
—needed to make collaboration effective.

Today, academic libraries are responding to a relentlessly dynamic environment: new technologies, changing user expectations, evolving research practices, economic pressures, and significant collective moments of upheaval, such as the COVID-19 pandemic. This environment creates challenges, but also opportunities for academic libraries to support research and learning at their institutions through the development of new services or innovative ways of delivering existing ones. Academic libraries often need to acquire new capacities to pursue these opportunities, and these capacities in turn can require significant investments in staff, expertise, systems, and infrastructure. In those circumstances, collective action to meet mutual needs can be seen as an attractive sourcing option, especially when the necessary investments are beyond the means of a single institution.

In addition to the economic advantages of pooling efforts to meet shared challenges, the collaboration option has also been embraced as a way to redress what is seen by many as an undue encroachment on scholarly infrastructure and communication by commercial enterprises. This, along with calls for greater attention to open science, including content and systems, have sharpened the incentives for choosing the collaboration option. David Lewis has called for academic libraries to reserve 2.5 percent of their budgets for the development of shared

infrastructure to support an “open scholarly commons.” Kathleen Fitzpatrick has urged higher education institutions to work more collaboratively in a spirit of “generous thinking” to overcome mutual challenges.²

So, collaboration is often seen as an inviting, or even preferred option for sourcing capacity. This brings us to a second observation from Lorcan Dempsey: “It is not simply more collaboration that is needed—it is a strategic view of collaboration. . . . There should be active, informed decision-making about what needs to be done locally and what would benefit from stronger coordination or consolidation within collaborative organizations.”³

“It is not simply more collaboration that is needed—it is a strategic view of collaboration.”

Lorcan Dempsey

“What Collaboration Means to Me”

This observation is the starting point for this report, which outlines what “active, informed decision-making” means in the context of evaluating the collaboration option as a sourcing strategy—and a strategic investment—for acquiring library capacities. The goal is to help academic libraries make intentional, strategic choices about cross-institutional collaboration opportunities across the many contexts in which collaborative effort is germane. To this end, this report offers some foundational tools to aid in thinking about whether or not to choose the collaboration option, and, in cases where collaboration is the desired approach, in choosing the most effective forms of collaboration to meet strategic aims.

The discussion begins with a framework that describes four potential sourcing strategies for academic libraries acquiring capacity. The purpose is to highlight that the collaboration option represents one choice among a menu of sourcing options, each with advantages and disadvantages that need to be evaluated to determine the right choice for a particular set of circumstances. This framework is supplemented with a list of dimensions along which sourcing strategies can differ, and in turn, impact their relative fit for a given set of circumstances. These tools aim to help libraries evaluate the benefits and trade-offs of various sourcing approaches, prioritize for their needs, and make considered, strategic decisions, and communicate those decisions to stakeholders.

The focus then turns to the collaboration option itself. What factors contribute to the success—or, conversely, might hinder the progress—of building needed capacity through collaborative arrangements? A third observation from Lorcan Dempsey suggests a way to approach this question:

The organizational context of collaborative or consortial activity is surprisingly little explored in the library literature, in terms of incentives, organizational patterns, successful models, etc. There is certainly a descriptive body of work about classic library consortia . . . but the more general perspective is missing. . . . I would note in particular that there is a large literature on organizations across several disciplines which would provide a valuable context for the examination of collaborative library work.⁴

Motivated by this observation, this report explores some economic topics—the collective action problem, transaction costs, path dependency, and the principal-agent problem—that can help inform the decision to source capacity through collaborative arrangements. Each of these economic concepts offer insights on key elements to consider when evaluating the pros and cons of the collaboration option and, in doing so, help guide strategic decision-making.

It is important to acknowledge that there is an existing (and growing) literature originating from the library domain that is focused on library collaboration—indeed the journal *Collaborative Librarianship* (in which the first two quotes from Dempsey appear), is devoted to the topic. This report contributes to this field of inquiry by drawing concepts and insights from the economics literature and applying them to the library domain. Collaboration, collective effort, and related topics have been explored extensively within an economics frame, yielding insights that translate quite easily to the library context and provide a complementary perspective to the library-focused literature.

The stakes of choosing library collaboration to acquire capacity—whether to support research data management (RDM), digital curation and preservation, print management, or any other area of library interest—have been heightened by recent shifts in the environment in which this decision is made. Advances in digital and network technologies have amplified the benefits and lowered the costs of collaborations that lift capacity above the scale of a single institution. Economic pressures have called into question the feasibility of duplicating capacity across institutions at suboptimal scales. The COVID-19 pandemic introduced new uncertainties, and collaboration may be seen as an opportunity to blunt the impact of risk and economic burdens by spreading them across multiple institutions.

The stakes of choosing library collaboration to acquire capacity—whether to support research data management (RDM), digital curation and preservation, print management, or any other area of library interest—have been heightened by recent shifts in the environment in which this decision is made.

Additionally, libraries have increasingly prioritized diversity, equity, and inclusion (DEI) outcomes in strategic planning; collaboration among libraries of different sizes, reach, and communities served may offer opportunities to expand services and extend impact. As interest in the collaboration option grows, it becomes even more important for academic libraries to be purposeful and strategic in their collaboration choices.

Four Sourcing Options and their Trade-Offs

Any organization, be it a commercial enterprise, government agency, or a library, must choose the appropriate mix of sourcing strategies to acquire the capacities needed to carry out its operations. This choice is sometimes presented reductively as a binary “insource or outsource” or “build or buy” decision, but the reality is more complex. This section introduces a model describing four potential sourcing strategies for academic libraries acquiring capacity:

- **Build**—developing and deploying capacity through internal efforts
- **Collaborate**—working collectively with a group of organizations to create and sustain capacity
- **Outsource**—contracting with an external provider to supply capacity
- **Refer**—directing users to an external provider, with whom there is no contractual relationship

The model visualizes a set of sourcing options academic libraries face when making sourcing decisions, and in doing so, highlights that the collaboration option represents one choice among a menu of sourcing options, each embodying strengths and weaknesses that must be weighed against the circumstances surrounding the sourcing choice.

A model of common sourcing strategies: moving beyond “build or buy”

The model of common library sourcing strategies (see fig. 1) highlights four broadly defined strategies arranged on a continuum representing the degree of local engagement involved in creating, sustaining, and evolving the capacity in question.

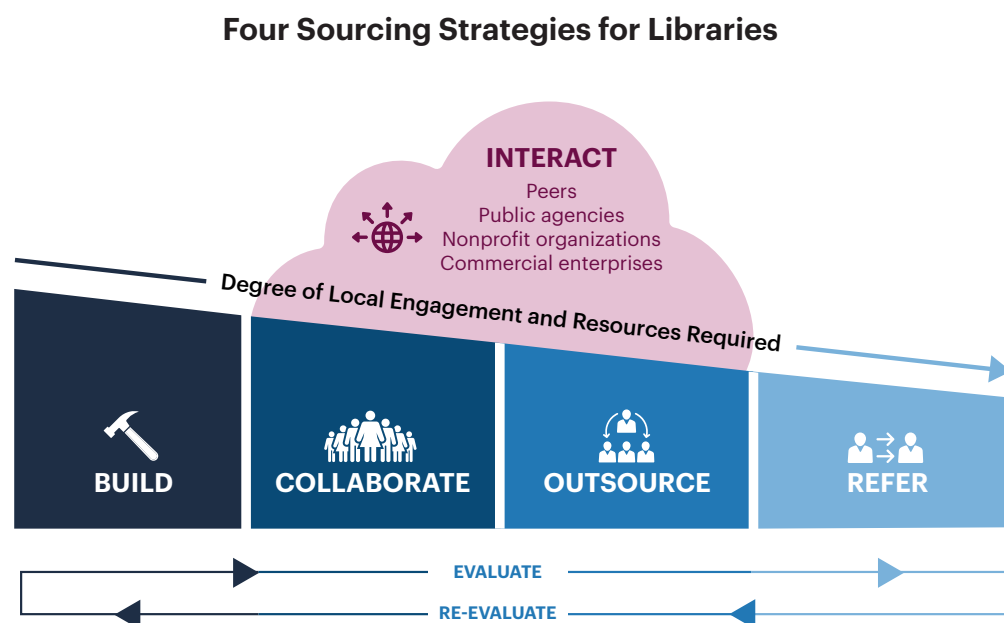


FIGURE 1. Four sourcing strategies for libraries: build, collaborate, outsource, refer.

SOURCING OPTION: BUILD

At one end point is the **Build strategy**, in which capacity is acquired by developing and deploying it through internal efforts, without outside assistance. Put another way, the Build strategy involves the capacity arising from *within* the boundaries of the institution. For example, the Illinois Data Bank, a public access repository for research data for University of Illinois affiliated researchers, was developed using local resources and is operated by the University Library's Research Data Service.⁵ In practice, the idea of developing a capacity internally can be nuanced: for example, developing a customized, local solution based on an externally available open-source system. Generally speaking, local engagement on the part of library staff in the operational provision of the capacity is at its highest with the Build strategy.

SOURCING OPTION: COLLABORATE

Next on the continuum is the **Collaborate strategy**, which involves a group of organizations working together to create and sustain a capacity through collective action. Collaborative partners may include academic libraries or nonlibrary organizations, such as public agencies, commercial enterprises, or nonprofits.⁶ It should be noted that academic libraries also partner with other units on campus. This form of intra-institutional collaboration is outside the scope of this report; however, the sourcing strategies illustrated in the model could also be adapted to this scenario as well.

The collaboration option is a form of double investment, in that it entails a commitment to the capacity that the collaboration produces and also to the collaborative infrastructure needed to sustain it. An example of the Collaborate strategy is 4TU.ResearchData, a shared data archive operated by the 4TU Federation, a group of Dutch technical universities.⁷

SOURCING OPTION: OUTSOURCE

The **Outsource strategy** involves an institution formally contracting—for example, through a purchase or licensing agreement—with an external provider to supply a capacity. An example of this sourcing strategy is Carnegie Mellon University's KiltHub, a comprehensive institutional repository in which affiliated researchers can deposit their research outputs, including data sets.⁸ KiltHub is hosted on the Figshare platform, a subsidiary of the technology company Digital Science. Use of the Figshare platform as an institutional repository includes a set of value-added services and local branding.

The model in figure 1 illustrates that the Collaborate strategy is positioned further to the left than the Outsource strategy, suggesting that collaboration involves more local engagement than outsourcing. Broadly speaking, sourcing capacity through collaboration often involves a local investment of time, effort, and resources into the collaborative infrastructure that supports it, such as through membership and/or governance responsibilities or in-kind contributions like staff secondments or technical resources. But Outsource strategies can also involve significant local effort in the form of managing licensing agreements, procurement processes, or deploying customized or “branded” services operating on top of externally provided platforms. In practice, therefore, the degree of local engagement associated with the Collaborate and Outsource strategies will vary according to circumstances.

SOURCING OPTION: REFER

At the other endpoint of the continuum lies the **Refer strategy**. Here, the academic library contributes nothing to the provision of the capacity and instead relies on an outside provider to supply it. But there is no contractual relationship between the library and the provider: the former simply refers or directs its users to the latter. For example, an academic library may supply an RDM-focused LibGuide that provides information about and links to various disciplinary or generalist

data repositories (e.g., Synapse, ICPSR, Dryad), and encourages local researchers to utilize these repositories for their data management needs. Another example is DMPTool, an online resource that walks researchers through the creation of a data management plan (DMP); librarians can refer researchers to DMPTool for guidance on creating their own DMP.⁹ Local engagement in the direct provision of the capacity is at its lowest for the Refer strategy—for all intents and purposes, zero—although local effort must be invested in identifying, disclosing, and updating lists of relevant capacities via LibGuides or other channels.

The Refer strategy may sometimes be overlooked as a means for acquiring capacity, in that the library does not actually create capacity or establish some form of contractual access to it, but as a practical matter, it is as legitimate a sourcing strategy as any other. And for some resource-strapped institutions, it might be the only option within reach. In this case, capacity is acquired by creating an implicit link or channel to a resource that the library does not control or influence through any formal relationship.¹⁰

The Build strategy keeps the capacity fully *within* the institution, while the Refer strategy keeps the capacity fully *outside* the institution.

It is worth noting that the two strategies of Build and Refer are diametrically opposed, in the sense that the Build strategy keeps the capacity fully *within* the institution, while the Refer strategy keeps the capacity fully *outside* the institution.

The sourcing model in figure 1 highlights a dynamic element in the sourcing decision. In acquiring capacity, an academic library will evaluate the different sourcing strategies and select the one most suitable for the circumstances. However, the initial sourcing strategy may not remain the optimal choice indefinitely. Circumstances change, and as they do, sourcing strategies may need to evolve as well. The decision to Build, Collaborate, Outsource, or Refer can be reevaluated, and in some cases, new directions may be chosen. For example, the *Realities of RDM* study described how the University of Illinois decided to adopt a Build strategy for the Illinois Data Bank. However, Illinois staff interviewed mentioned that Build was chosen as a short-term necessity given prevailing conditions and priorities when the capacity was acquired. Looking ahead, they were open to investing in cooperatively sourced services deployed at group scale as opportunities emerge in the RDM space.¹¹

SOME OBSERVATIONS ON THE SOURCING MODEL

Several other points are worth noting about the sourcing model in figure 1:

Sourcing strategies are not mutually exclusive

There are no hard and fast boundaries between these strategies, nor are they necessarily mutually exclusive. While they are presented as distinct strategies for expositional purposes, in practice, their differences can be more nuanced. For example, the 4TU.ResearchData repository mentioned earlier as a collaboration example is, in its strictest interpretation, a hybrid strategy: collaboratively sourced, shared repository services built on a platform obtained through an external provider (Figshare). But broadly speaking, the four strategies depicted in figure 1 are the fundamental building blocks from which more complex strategies are fashioned in practice.

Sourcing choices can be used in combination

Sourcing is often not a single choice applied to a monolithic capacity. A capacity can be divided into multiple levels of granularity, with different sourcing choices applied to different components. For example, while the University of Edinburgh used the Build strategy to source its Edinburgh DataShare repository (based on an open source solution), it utilized an instance of Elsevier's Pure research information management (RIM) system to provide a registry capacity for documenting data sets—an Outsource strategy, according to the definitions above.¹²

In practice, multifaceted sourcing choices can be used across capacities, or even different components within a particular capacity. A disciplined approach to collaborative capacity building would account for this: identifying which components are most suitable for collaborative effort, and the feasibility of separating them from other components in terms of sourcing approaches.

The full life cycle of a sourcing strategy should be considered

It is important to note that sourcing strategies not only have a beginning and a “life span” during which they are actively pursued, but they also potentially have an endpoint, at which time the capacity is either shut down or continued via a different sourcing strategy. The dynamics of the sourcing choice were mentioned earlier, in terms of being re-evaluated and possibly changed. Here, the emphasis is on the ending of a sourcing strategy, or the transition from one strategy to another. For example, the University of California system transitioned from a UC-focused data repository to a partnership with Dryad.¹³

In summary, the model in figure 1 provides a simple visualization of four basic sourcing strategies academic libraries can choose from in acquiring capacity. The model sets library collaboration in the broader context of a sourcing choice, in which collaboration is but one option among several.

Managing trade-offs in sourcing choices

The model of four sourcing strategies suggests the all-important question: How does one choose the “best” option? No single sourcing strategy illustrated in figure 1 is intrinsically better than any other. Rather, each represents a set of trade-offs that must be balanced against the prevailing circumstances of the sourcing choice, as well as the strategic priorities of the institution. This connects back to Lorcan Dempsey's observations:

- Collaboration, while embodying certain benefits, also comes with costs in the form of a parallel investment in, or commitment to, the collaboration effort itself.
- Academic libraries must evaluate the collaboration option—and its trade-offs—strategically.¹⁴

In other words, managing trade-offs is what is meant by making strategic sourcing decisions.

Managing trade-offs is what is meant
by making strategic sourcing decisions.

The sourcing choices illustrated in figure 1 are primarily differentiated on the basis of *who* provides the capacity: the library, the library together with a group of partners, an external provider through a formal relationship or agreement with the library, or an external provider with whom the library has no formal relationship at all. But each strategy can also be linked to a set of additional considerations, or trade-offs, that must be evaluated when choosing the right approach for a given set of circumstances.

Some of the trade-offs involved in deep collaboration are enumerated in a recent OCLC Research report *Operationalizing the BIG Collective Collection*, which explores collective action around shared print in the Big Ten Academic Alliance (BTAA) consortium.¹⁵ The report considers what is essentially a sourcing decision for collection development and management that must be located on a continuum between two poles: autonomy and consolidation, or, in other words, the Build and Collaborate strategies in the figure 1 model. In examining this choice, the authors of the report identify several trade-offs that must be evaluated:

Efficiency vs control: “Local control is perceived as important for political or service reasons, but the efficiency of the overall system can be improved if individual libraries give up some local control to central coordination. . . . Local control of multiple independent components will inevitably slow performance.”

Institutional vs systemwide optimization: “Optimizing at these two different levels may result in different paths. BTAA has favored institutional over systemwide planning. For example, collections are optimized locally rather than at the BTAA level.”

Ideal vs pragmatic: “Progress is often incremental, piecemeal, negotiated, and retrofitted on existing solutions. The option to build anew or to re-engineer is not always available or desirable.”¹⁶

Operationalizing the BIG Collective Collection is a good illustration of the idea that choosing one sourcing strategy over another involves evaluation across several dimensions and, often, making difficult choices. For example, recall the decision to source the Illinois Data Bank using a Build strategy: this was not necessarily, in the view of the decision makers involved, an ideal approach; rather, it was a pragmatic course of action taken in light of then-current conditions in the RDM service space.

Efficiency is not universally superior to retaining local control and pursuing the strategy that would be chosen in a “perfect world” is not necessarily prudent when conditions are decidedly imperfect.

This highlights an important corollary to the trade-offs described above: there is not an intrinsically “right” choice in evaluating these options. Efficiency is not universally superior to retaining local control, and pursuing the strategy that would be chosen in a “perfect world” is not necessarily prudent when conditions are decidedly imperfect.

CONSIDERATIONS FOR EVALUATING TRADE-OFFS

The four sourcing strategies illustrated in figure 1 can be evaluated in terms of a number of considerations that highlight the differences involved in choosing one strategy over another. The tables below offer a list of considerations organized into five thematic clusters—process, values, goals, investment, and hazards—that include many of the most important factors for academic libraries to consider when facing a sourcing decision to acquire capacity. The answers to these prompts can aid in comparing sourcing strategies with institutional priorities, determining if a strategy is a good fit, and communicating these considerations with stakeholders.

TABLE 1.1. Process: A list of key sourcing considerations.

Process	
Agility	Consider the flexibility and nimbleness a strategy allows as conditions evolve or change.
Speed	Evaluate if the sourcing strategy permits quick deployment and immediately addresses user needs.
Autonomy	Discuss how much decision-making authority a local institution would have to cede to an external entity. What are the potential benefits and drawbacks of this?

TABLE 1.2. Values: A list of key sourcing considerations.

Values	
Community	Review the values, practices, and attention to DEI issues that the strategy incorporates. Do they reflect those of the library community? Does the strategy include the participation of other libraries?
Trust	Evaluate to what extent the providers, partners, or other stakeholders involved are trusted to meet commitments and accomplish stated goals.
Reputation	Reflect on how the sourcing strategy impacts the institution's reputation among stakeholders or peers.
Fear of missing out	Consider if the sourcing strategy is favored by peer institutions. Could there be consequences to institutional prestige if a different strategy is chosen?

TABLE 1.3. Goals: A list of key sourcing considerations.

Goals	
Efficiency	Analyze the per-unit cost of the capacity.
Innovation	Identify opportunities to innovate around existing systems, practices, and/or technologies. How does the sourcing strategy enable the library to take advantage of these opportunities? How might it hinder this?
Quality	Determine if the sourcing strategy offers “best in class” performance. Does it comply with prevailing standards?

TABLE 1.4. Investment: A list of key sourcing considerations.

Investment	
Total cost	Determine the cost projection (i.e., “total cost of ownership”) over the lifetime of the sourcing strategy.
Sunk costs	Define the upfront investments that cannot be recouped if the strategy founders or ends. How significant are these costs?
Local resources	Assess whether the sourcing strategy fits with, or makes best use of, the capacities and skills of the systems and staff that will be needed to implement it. Consider what capacity and/or skill gaps would need to be filled.

TABLE 1.5. Hazards: A list of key sourcing considerations.

Hazards	
Risk	Identify the potential risk and uncertainty involved in acquiring the capacity in question. To what extent does the sourcing strategy mitigate or increase this risk?
Lock-in	Consider the extent to which the sourcing strategy reduces or constrains choice. How might the strategy lock the library into a technological monoculture or proprietary ecosystem?
Endgame	Review the plan or terms for exiting the arrangement. Is there a clear plan?

While intuition might ascribe some of these considerations to one strategy or another, in practice they are context dependent. For example, sourcing with a vendor (Outsource strategy) is sometimes associated with a lack of agility and little innovation, but there is nothing that intrinsically connects those characteristics with that strategy; some vendors may indeed choose to evolve their offerings slowly, but others may be quite agile and innovative in product management. Similarly, collaboration among peers (Collaborate strategy) may seem like the best approach for the community dimension, but other strategies can also involve solutions that emphasize this characteristic, such as robust user group communities associated with vendor products.

The key point is that the sourcing strategies in figure 1 do not inherently fit clear-cut molds or templates in all situations to all libraries. While the strategies are consistent across contexts in terms of the identity of the capacity provider (i.e., internal, group, external organization), the considerations listed above—and many others—will be calibrated according to the circumstances of a given sourcing decision.

When reviewing a particular sourcing strategy within a particular set of circumstances with the list above, it is perhaps better to imagine a set of sliders that are adjusted incrementally, rather than a set of binary on/off switches.

Another point worth emphasizing about these sourcing considerations is that the issue is often not “either-or,” but rather, “How much?” For example, a sourcing strategy that prioritizes speed over risk mitigation does not necessarily mean that all risk mitigation is sacrificed. Trade-offs on sourcing considerations are often made on the margin; for example, gaining a little more speed might mean taking on a little more risk. When reviewing a particular sourcing strategy within a particular set of circumstances with the list above, it is perhaps better to imagine a set of sliders that are adjusted incrementally, rather than a set of binary on/off switches.

TRYING TO BE EVERYTHING AT ONCE MEANS BEING SECOND BEST AT EVERYTHING

It is clear that, at least on the surface, some aspects of a sourcing strategy may be incompatible with others. For example, solutions featuring agility and innovation are in many cases at odds with those associated with risk mitigation—to achieve the former, one must give up at least some of the latter. This calls to mind an important precept from the operations strategy literature¹⁷: organizations must establish priorities across a set of operational factors, such as those in the above list of considerations. Organizations that try to be the best at everything often end up being second best in everything.¹⁸ “The effectiveness of an operations strategy,” notes Mandar Dabhilkar, “is determined by the degree of consistency among competitive priorities and corresponding decisions regarding operational structure and infrastructure.”¹⁹

The key takeaway is that, as a practical matter, sourcing strategy considerations cannot be optimized simultaneously within a single sourcing choice. Organizations need to make choices, and in doing so, they also make trade-offs. Finding the right balance of trade-offs, given the circumstances of the decision, is the core of selecting a sourcing strategy.

A good illustration of this concept is provided in an article by John Hagel and Marc Singer,²⁰ in which they observe that a modern corporation often bundles together three kinds of businesses:

- Infrastructure Management: building and maintaining the “back-office” facilities and capacities that support day-to-day operations
- Customer Relationship Management: attracting and building long-term relationships with new customers
- Product Innovation: developing and bringing to market new products and services

Hagel and Singer argue that integrating these businesses within the boundaries of a single organization often creates internal contradictions in perspectives, goals, and strategies.²¹ For infrastructure management, Hagel and Singer note, economies of scale—efficiencies gained through size or volume—are of paramount importance: efficient operation of systems and facilities to support routinized, repetitive, back-office workflows hinges on cost minimization, typically achieved by spreading high-volume usage over high fixed costs.

Customer relationship management, on the other hand, emphasizes economies of scope—efficiencies gained by offering many products—as a key factor for success: to recoup their substantial investments in building long-term customer relationships, firms must try to sell the customer as wide an array of products as possible. And product innovation prioritizes speed and flexibility: the sooner new products and services can be developed, adapted to current market conditions, and commercialized, the faster research and development (R&D) investment costs can be recouped, market share established, and return on investment realized.

Because each business focuses on a different economic imperative, contradictions tend to arise in managing all three within a single organization. At some point, the factors that promote success in each business become competing rather than complementary. As Hagel and Singer put it, “[s]cope, speed, and scale cannot be optimized simultaneously. Trade-offs have to be made.”²²

Because each business focuses on a different economic imperative, contradictions tend to arise in managing all three within a single organization.

For example, if the imperatives of the infrastructure business—economies of scale and standardization—are emphasized within the company, the customer relationship business, which requires economies of scope and customization, may suffer. If the customer relationship business gains ascendancy, the virtues of patience and deliberateness that characterize successful cultivation of long-term customer relationships might hinder product innovation, where speed and flexibility are key.

In the same way, libraries that attempt to bundle incompatible dimensions within the same sourcing strategy will likely lead to suboptimal results. Choosing a set of mutually compatible sourcing considerations, selected from the tables above, that align with the circumstances surrounding the sourcing choice—including institutional priorities—and then adopting the sourcing strategy that best approximates these factors is a better approach for acquiring capacity.

Factors shaping the local decision-making environment

The decision-making environment is an important element to consider when prioritizing characteristics of a sourcing strategy. Consider, for example, an institution that needs to acquire capacity in the form of a research data repository. Several contextual factors are relevant here:

- The degree to which the needed capacity must be customized to meet local requirements or preferences
- Budgetary status
- Existing systems, capacities, and skills
- Local workflows and practices
- Fiduciary responsibilities
- Security and privacy requirements
- Institutional and/or community values or priorities
- Issues of ownership and portability
- Inter-unit relationships on campus (e.g., does the central IT unit disapprove of “homegrown” systems?)

Many more factors could be added to this list. The key point is that sourcing choices are not made in a vacuum, but in a complex environment, shaped by dynamic factors that influence which sourcing considerations a library prioritizes. In this sense, the local decision-making environment serves as an important mechanism for ranking the relative importance of the sourcing considerations as they pertain to a particular institutional context. It also means that there is no universal “right” weighting of the sourcing dimensions; none is intrinsically more important than another. As with so many economic decisions, the response to the question, “Which is best?” is, “it depends.”

The key point is that sourcing choices are not made in a vacuum, but in a complex environment, shaped by dynamic factors that influence which sourcing considerations a library prioritizes.

Strategic Frames for Collaboration

Collaboration, or collective effort to achieve a mutual goal, is pervasive across many types of activities. Individual activists join movements to work together toward social justice causes, companies form trade groups to advance industry interests, nations work together in alliances such as the G7 or NATO to promote economic growth and mutual security, and, of course, libraries band together in consortia and other groupings to achieve shared goals. As Valeria Horton observes: “No library stands alone. Library cooperation goes back to the 1880s and is a long-standing tenet of the profession. Collaboration is strongly rooted in most of our current activities.”²³

Because of its pervasiveness, collaboration has been much studied in economics literature, as well as in political science and other disciplines. The result is that there is a rich resource of scholarly insight on collaboration and related topics that can be readily applied in many contexts. In this sense, academic libraries can learn a great deal about collaboration as a sourcing strategy by reflecting on the insights of these nonlibrary literatures.

Although the “best” sourcing strategy for a library will always depend on its context, academic libraries have historically had a special interest in collaboration. Gathering insights from relevant scholarly literatures can help decision makers determine if collaboration is the right strategy for a library’s situation. If the collaboration strategy is selected, these insights can also help identify what factors maximize the likelihood that it will be successful, or conversely, what potential obstacles might diminish its prospects for achieving sustainability, and ultimately, its goals. This returns us to Dempsey’s observation that “collaboration is hard; effective collaboration is harder.”²⁴ Collaborative activities are more effective when managed by some basic principles that speak to the strengths and weaknesses of this sourcing option. Economics scholarship on collaboration helps us draw out these principles.

This section presents a set of high-level concepts—referred to as *strategic frames*—inspired by four topics in economics that, taken together, provide some guideposts for making a strategic decision to invest in collaborative sourcing:

- The collective action problem
- Transaction costs
- Path dependency
- The principal-agent problem

The goal is to identify broad insights from each economic topic that can help guide strategic thinking about collaboration as a sourcing strategy. Each topic is described using a foundational work in the field as a means of highlighting some basic ideas and concepts that can be applied to an evaluation of the collaboration option. Examination of these topics is kept at a high level, and by no means constitutes a deep dive into the nuances or theoretical debates that mark their evolution over time. No doubt other economic topics would yield additional perspective. But the insights from the four topics discussed here will provide a foundation for library decision makers that contributes toward the “active, informed decision-making” that Dempsey calls for.

Figure 2 provides a visualization of the economic concepts, or strategic frames, we examine in this report. Each strategic frame provides a different perspective, or “window,” through which to view the collaboration option. Although the views through these windows are not necessarily

mutually exclusive, they each have a distinct focus. The remainder of this section briefly introduces each strategic frame and their insights that can help decision makers evaluate a collaboration opportunity. The discussion of each strategic frame ends with a summary of important ideas, key questions that can help evaluate a collaboration opportunity, and some suggested “prompts to action” to better inform decision-making.

Four Economic Concepts, Four Perspectives: Strategic Frames for Collaboration

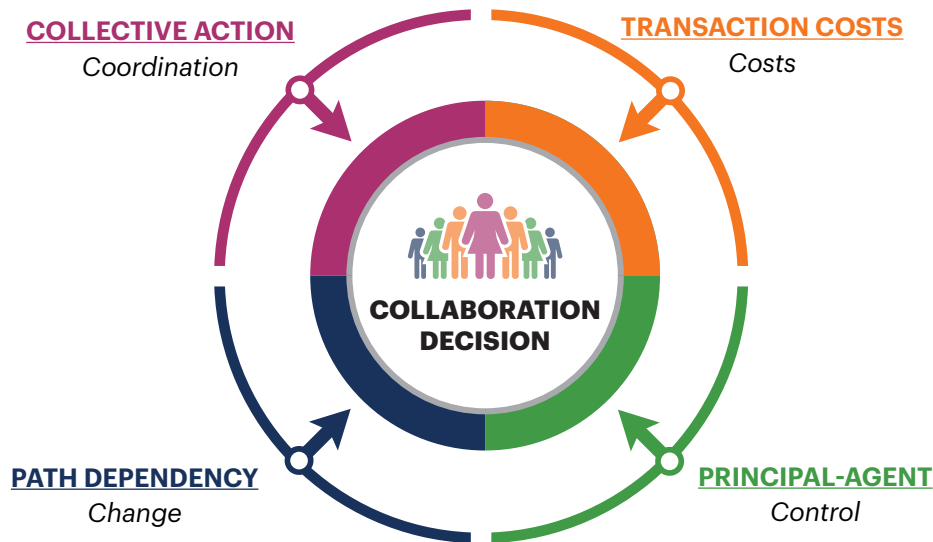


FIGURE 2. Strategic frames for the collaboration option.

COLLECTIVE ACTION—Coordination

The collective action problem refers to the possibility that coordinated activity to achieve a common goal can fail, even if all parties would be better off cooperating. Think about a group of people who share a greenspace that has fallen into disrepair. All would benefit if everyone worked together to tidy up the space: mow the grass, weed the flower beds, and prune the trees. Despite this, some members of the group might withhold their labor, assuming that other members will perform the task anyway. This in turn might reduce the incentive for anyone to contribute, for fear of being burdened with an unfair share of the work. In this way, an activity that is of mutual benefit to all group members remains undone.

Mancur Olson identified and described the collective action problem in *The Logic of Collective Action* (1965).²⁵ Olson begins by exploding the seemingly logical idea that if a group of individuals would benefit by working together toward a common interest, they will. “It does *not* follow,” Olson wrote, “because all of the individuals in a group would gain if they achieved their group objective, that they would act to achieve that objective, even if they were all rational and self-interested.”²⁶ The reason is that achieving the shared goal involves contributions on the part of each group member. A “rational” group member, informed by their own self-interest, will seek to avoid these costs if they can, and “free ride” on the contributions of others. The result is that cooperation breaks down: by acting in their self-interest, no group member has sufficient incentive to contribute, and the collaborative opportunity goes unfulfilled.

Collective action problems can impact collaborative arrangements in the library realm. Think about an interlibrary loan agreement. Libraries must coordinate their behavior, decide on procedures for lending materials to each other, and design a system to support lending activity. Some libraries may prefer to be net borrowers rather than net lenders, as it reduces their need to invest in their own collections. Libraries that are net lenders, on the other hand, might feel that they are contributing more than their fair share in this arrangement and that other libraries are taking advantage of their collection investment. Or consider library collaborations around open-source software development, where there might be tension between participants who are contributing resources and coding effort, and those whose involvement is limited to scoping requirements. Difficulties such as these must be overcome if effective cooperative arrangements are to be established.

Olson's discussion touches on the size and characteristics of the group as a predictor of the likelihood or intensity of the collective action problem. He notes that groups with fewer members can overcome some of the collective action problem because it is more difficult to conceal noncontribution to, and resist full participation in, the collective effort. This sets up a trade-off between collaborating with a large number of partners (to scale capacity most efficiently) and a smaller number (to minimize the collective action problem).

Olson suggests that small groups with close interaction can exert implicit or explicit social pressures or incentives to ensure participation through "fellowship of their friends and associates . . . social status, personal prestige, and self-esteem."²⁷ Consensus on common interests or priorities across group members helps as well, as do established relationship networks within the group. For example, a library professional working in the RDM service space in the relatively small Dutch higher education landscape observed that in this environment, "personal networks across institutions are extensive—'everybody knows everybody'—and this facilitates understanding of the overall national context and collective RDM capacity. In such an environment, the option to engage in collaboration with trusted partners, and to develop 'above the institution' solutions, is particularly efficacious."²⁸

"Personal networks across institutions are extensive—
'everybody knows everybody'—and this facilitates
understanding of the overall national context and
collective RDM capacity."

Rebecca Bryant, Brian Lavoie, Constance Malpas
Scoping the University RDM Service Bundle

One solution Olson identifies for large groups where it is difficult or impossible to exclude noncontributing members from the benefits of those that do is *compulsion*, where contribution is mandatory for participation. A common example is a labor union: if one union member withholds their dues, this will not perceptibly impact the union's ability to achieve its aims, and the nonpaying member will still reap the benefits of the union's collective bargaining activities. The rational, self-interested decision for all members, acting as individuals, is therefore not to pay. The compulsion solution in this example is to make payment of labor union dues a required condition of membership.

Another solution is *selective incentives* offered to group members to call forth contributions to the collective effort. These incentives can be positive or negative—i.e., reward or punishment—with the goal of mobilizing collective action that may otherwise remain “latent” without these inducements. As Olson notes, “[t]he incentive must be ‘selective’ so that those who do not . . . contribute to the attainment of the group’s interest, can be treated differently from those who do.”²⁹ An example of a selective incentive that librarians will recognize is the opportunity to participate in the governance of OCLC if a library satisfies the guidelines for active membership in the OCLC cooperative.

An important part of the collective action problem is the trade-off between optimizing local benefits versus group benefits. A group of libraries may agree that collectively managing down print is a good strategy, yet individual libraries will not want to alienate local faculty by reducing the on-site print collection. A shared data repository may be more efficient and cost effective, but a locally administered, branded capacity may be more attractive to various campus interests. Even the general concept of collaboration may be questioned when potential partners are also seen as current competitors. Managing the relative prioritization of local and group interests is a fundamental aspect of acting collectively.

TABLE 2. COLLECTIVE ACTION—Coordination

Key concepts	Prompts to action and considerations
<p>Group characteristics</p> <ul style="list-style-type: none"> • Group size • Similarity in characteristics • Diversity in perspectives 	<p>Determine</p> <ul style="list-style-type: none"> • Member group characteristics; how similar are their missions, priorities, financial resources, etc.? • How this impacts consensus-building and ability to act • If diverse perspectives are represented and considered equitably in decision-making • Optimal group size: too few members hampers substantive progress; too many impedes efficient decision-making and consensus
<p>Embedded networks and trust</p> <ul style="list-style-type: none"> • History of interactions and cooperation • Existing association or new grouping 	<p>Assess</p> <ul style="list-style-type: none"> • History of interactions with prospective partners: Were goals successfully achieved? • If preexisting structures—executive body, committees, working groups, etc.—can support the collaboration • How the collaborative structure secures and maintains group member trust
<p>Selective incentives</p> <ul style="list-style-type: none"> • Defining a “member in good standing” • Policies to ensure sustained commitment 	<p>Evaluate</p> <ul style="list-style-type: none"> • Clarity of collaborative commitments and responsibilities of its members • If policies, understandings, and sufficient trust exist to ensure members fulfill their commitments

TRANSACTION COSTS—Costs

Transaction costs are the costs of an *economic exchange*—specifically, the costs of organizing and conducting the exchange, rather than the costs of the good or service being exchanged. Consider someone who wants to hire a contractor to remodel their kitchen. Time and effort must be expended to find suitable contractors, evaluate reviews of their previous work, negotiate a price for the work to be completed, and, once the project commences, monitor the progress and quality of the work. All of these costs are incurred in relation to conducting the economic exchange itself and are separate from the costs of the actual service provided (in this case, kitchen remodeling).

Transaction costs are generally categorized as:

- Searching costs: finding appropriate parties for an exchange
- Bargaining costs: agreeing on the terms of the exchange
- Enforcement costs: ensuring that the terms of the exchange are fulfilled

Transaction costs help determine which activities an organization internalizes (i.e., acquires through a Build strategy), and which it might externalize (i.e., via Collaborate, Outsource, or Refer strategies). In the 1937 article “The Nature of the Firm,”³⁰ economist Ronald Coase set out to answer two questions: Why do firms (i.e., companies or corporations) exist, and what determines their boundaries? The answers to both questions, according to Coase, can be understood through the concept of transaction costs. Production of a good or service can be disaggregated into a collection of distinct activities: acquisition of raw materials, processing, marketing, human resource management, accounting services, and so on. Firms come into existence because it is often cheaper and more efficient to bundle various component activities of production under a single organizational structure (i.e., a firm), rather than to transact for each activity individually in the market. The reason for this is the existence of transaction costs.

Coase noted that the boundaries of a firm—that is, the line between activities that are internalized within the firm, and those that are conducted via an external party transaction—occur at the margin where the cost of internalizing an activity is equal to the cost of transacting for it in the marketplace. This establishes a natural boundary for the firm, in that there is an economic limit placed on the size and scope of the firm’s activities. For example, a shipping line might acquire an oil company to reduce the transaction costs of obtaining fuel for its ships. Rather than negotiating a series of contracts over time with external fuel suppliers, the shipping firm can organize the supply of fuel internally and dispense with the cost of negotiating with outside suppliers, as well as reduce the risk of costly supply interruptions. The reasoning is simple, yet it provides a powerful insight into how firms organize their activities.

Transaction costs literature underscores that economic exchanges are more attractive when transaction costs are lowered. Transaction costs drive a wedge between the cost of conducting an activity internally and the cost of conducting the same activity through an external transaction. The higher the transaction costs, the more likely an activity will be internalized within the firm. But if the pattern of transaction costs changes—that is, if the transaction costs associated with certain activities rise or fall—then it is likely that the boundaries of the firm will also change. For example, historically, a company may have managed its own payroll operations. But the emergence of online payroll services like Paychex or Square have reduced the transaction costs of acquiring such services externally. More generally, think about how online services such as Angi (which collects reviews of local contractors) or Google Reviews have lowered the searching costs of finding reputable service providers.

Libraries encounter transaction costs when building, sustaining, and participating in collaborative arrangements. This includes resource investments in identifying partners and organizing collaborative arrangements. It also includes the costs of participating in governance mechanisms to manage the collective effort, set strategic priorities, adjudicate disagreements, and ensure goals are met. Academic libraries, for example, will be familiar with collaborative efforts that require local staff to serve on governance boards, working groups, policy committees, and so forth—all tangible costs to participate beyond any direct fees for utilizing the capacity that the collaboration provides. These costs of collaborating may be more difficult to plan and budget for, as they may be less formalized than contractual obligations. And these costs are easy to underestimate.

Moreover, the impact of transaction costs is amplified for many academic libraries that are embedded in a “web of collaboration”—i.e., multiple collaborative efforts conducted simultaneously across different partnerships, groupings, or consortia. Advancing all of these collaborative efforts at the same time can spread limited resources over too many activities, which leads to diminishing returns as new collaborative efforts are added to the fold.

TABLE 3. TRANSACTION COSTS—Costs

Key concepts	Prompts to action and considerations
<p>Searching costs</p> <ul style="list-style-type: none"> Determining the costs and effort to find appropriate collaboration partners 	<p>Determine</p> <ul style="list-style-type: none"> If membership of collaboration is established or undecided Criteria describing prospective members and the difficulty of identifying suitable candidates Costs or other obstacles preventing smaller or less-resourced institutions from participating and potential impact on group’s diversity Number of members needed to reach minimum efficient scale. What degree of effort is needed to bring them into the collaboration?
<p>Bargaining costs</p> <ul style="list-style-type: none"> Achieving agreement on goals, operational strategy, allocation of responsibilities 	<p>Determine</p> <ul style="list-style-type: none"> If collaboration has clear goals and priorities If not, assess process and investments necessary to establish clear goals and priorities If consensus is achievable within reasonable investments of time, effort, and other resources
<p>Enforcement costs</p> <ul style="list-style-type: none"> Sustaining ongoing governance 	<ul style="list-style-type: none"> Assess the structures and procedures in place—or proposed—to support the governance and operation of the collaborative activity. Estimate the costs of participating in governance activities, including staff time, travel, in-kind contributions, etc.

PATH DEPENDENCY—Change

Path dependency is another way of saying “history matters.” Due to their complexity, institutions tend to be slow to change. A useful heuristic is that if you want to know how something will be done a year from now, the best indicator is to look at how it is done now. Path dependency arises in many forms: think about the difficulty in changing providers of major enterprise systems. Or consider how slowly scholarly practices change over time, even when there are demonstrable benefits from doing so; for example, many researchers have been slow to embrace citation managers or to adopt open science practices like sharing data.

Path dependency is another way of saying “history matters.” Due to their complexity, institutions tend to be slow to change.

The economist Paul David published a now-classic paper, “Clio and the Economics of QWERTY” in 1985,³¹ in which he used the example of the persistence of the QWERTY keyboard³² in the face of demonstrably more efficient keyboard designs to illustrate the fundamental ideas behind path dependence. He noted that a “path-dependent sequence of economic changes is one in which important influences upon the eventual outcome can be exerted by temporally remote events, including happenings dominated by chance elements rather than systematic forces.”³³ According to David, three factors contribute to path dependence:

- Compatibility: the usefulness of one system component depends on its ability to integrate with other components, even if integration means that the features of the first component are not, viewed in isolation, optimal or “best”
- Network effects: as more and more people use something, its value increases
- Switching costs: the costs of switching from one product, service, activity, strategy, etc., are perceived as greater than the value of making the switch

These conditions often lead to “lock-in”: the persistence of existing arrangements even when better, more efficient alternatives become available.³⁴ This constrains an organization’s ability to make nimble decisions and to shift direction within dynamic environments.

Path dependency is an important consideration when making sourcing choices. For example, compatibility issues may arise when a new capacity must interoperate with existing components. Suppose a data repository operated by an academic library is built on a particular technology stack. A long-term storage solution is then added, which, to be compatible with the repository, incorporates the same technology stack. In this way, sourcing choices perpetuate the original technology stack. And if the technology stack is proprietary, this may weigh against switching to a collaborative solution based on a different set of standards. And it is important to note that there may be nontechnical compatibility issues as well: for example, stakeholders whose participation is necessary for the collaboration’s success may simply not value collaboration as an option for sourcing capacity; in this sense, collaboration is “incompatible” with their perspective on how capacity should be acquired.

Network effects—the idea that the value of something increases as more and more people use it—can also induce path dependency and influence sourcing choices. For example, there may be a collaboratively sourced, open solution available, along with compelling reasons to choose it, but network effects may nevertheless point toward a different choice. Think of librarians advocating for open scholarly journals. Arguments can be made to a researcher about the many benefits of publishing in an open journal, but if most of their colleagues are still primarily citing or basing tenure decisions on articles in traditional journals, then the researcher is likely to choose that sourcing option for their needed capacity (in this case, a publishing platform). A better solution may exist, but path dependence diminishes the perceived benefits of adopting it.

Changing from one sourcing strategy to another—say, from an Outsource strategy to a Collaborate strategy—may also be difficult because of a variety of switching costs that inflate the perceived cost of doing so. Switching sourcing strategies might involve a change in the way that things are currently done, which in turn may disrupt existing stakeholder interests and relationships within the organization. In large, complex organizations with diffused decision-making power (like most universities in which academic libraries are embedded), getting everyone on board becomes more difficult as the number of decision makers involved in changing policies or procedures increases.

Change can also be difficult when a great deal of coordination and cooperation between organizational units is required to implement new ways of doing things. All of these factors fall under the category of switching costs: the investment of effort, time, and resources that must be made to move from one sourcing strategy to another.³⁵

The idea of switching costs as an impediment to adopting a different sourcing strategy applies both when evaluating whether to enter into a collaborative arrangement, as well as when considering a switch from a collaboration strategy to a different sourcing option such as Build, Outsource, or Refer. When switching to collaboration, libraries need to consider the conditions favoring the status quo both within the library and the parent university. But equally, library decision makers must be aware of the challenges that might impede their ability to extricate their institution from a collaboration if circumstances indicate that a different sourcing strategy is a better option.

Identifying and articulating significant “status quo costs” may be a good strategy for loosening the grip of path dependency.

While there may be costs associated with switching to a new sourcing strategy, there may also be “status quo costs” of persisting with the current strategy that must be taken into consideration. For example, costs may arise in the form of a system acquired through an external provider (Outsource strategy) that does not conform to desired data privacy practices, exposing the library and its stakeholders to unacceptable risks. In this sense, identifying and articulating significant “status quo costs” may be a good strategy for loosening the grip of path dependency.

TABLE 4. PATH DEPENDENCY—Change

Key concepts	Prompts to action and considerations
<p>Compatibility</p> <ul style="list-style-type: none"> Obstacles to adopting and integrating a collaborative approach 	<p>Evaluate</p> <ul style="list-style-type: none"> If systems will interoperate with, or be replaced by, the capacity produced by collaboration If new capacity will conform to prevailing technological environment (e.g., compatible standards, specifications, service levels) Costs of integrating collaboratively produced capacity into current systems and workflows (e.g., investment in legacy systems, proprietary “lock-in,” interoperability issues) If there are stakeholders who do not value collaboration as a sourcing option
<p>Network effects</p> <ul style="list-style-type: none"> Stakeholders invested in existing sourcing arrangements 	<p>Identify</p> <ul style="list-style-type: none"> Groups/individuals expected as stakeholders in the new capacity. Focus on users, decision makers, and related service providers like campus IT units. Are underrepresented stakeholders at risk of being overlooked without viewing sourcing initiative through DEI lens? Do projected users currently favor an alternative source for capacity, and do stakeholders have strong disincentives to change (e.g., “all of my colleagues are on a different platform”)? Review other sourcing arrangements campus stakeholders are invested in (e.g., a preferred external provider)? What is needed to secure their buy-in for a library-led collaborative effort?
<p>Switching costs</p> <ul style="list-style-type: none"> Costs Involved in <i>switching</i> to a collaborative sourcing arrangement Costs Involved in <i>exiting</i> an existing collaborative arrangement Costs in <i>maintaining</i> the status quo 	<p>Estimate</p> <ul style="list-style-type: none"> Costs in switching to new collaborative sourcing arrangement (e.g., terminating existing sourcing relationships, training staff to operate new systems, supporting outreach to stakeholders) Costs of withdrawing from existing collaboration (migrating operations, terminating formal or informal commitments, damaging partner capacity and trust) “Status quo costs” and communicate to stakeholders (e.g., lack of scope for innovation, termination of provider support)

PRINCIPAL-AGENT—Control

The principal-agent problem can occur when a person or organization (the principal) delegates responsibility to another person or organization (the agent) whose interests or incentives may not completely align with their own. Delegation of responsibility often occurs because the principal believes that the agent can better accomplish the task due to special expertise, managerial skills, available capacity or resources (e.g., time), and so on. Examining how this delegation

of responsibility works in practice begins with the premise that “ownership” is separated from “control.” Delegation is not in and of itself a problem. In many cases, delegation is the optimal option. Think of when someone needs to sell a house. Lacking expertise in real estate, they might have an agent sell the house in return for a percentage of the sale price. Focusing on the library domain, many examples exist of organizational structures in which a separate administrative unit operates a capacity on behalf of its members—for example, think of the Open Library Foundation, or the executive offices of library consortia such as BTAA or PALCI.

Nonetheless, delegation does lead to the possibility of a principal-agent problem when the interests of the principal and agent are not aligned. Returning to the example of selling a house, the real estate agent might want to try to sell the house quickly, even if keeping it on the market could lead to a higher selling price. While a higher selling price can be worth thousands of dollars to the seller, the impact on the real estate agent’s commission is likely to be only in the hundreds of dollars and may not be worth the additional labor of keeping the house on the market. Another common example of a principal-agent problem is corporate management acting on behalf of shareholders in a publicly traded company—perhaps the managers are allocating resources toward expensive, high-profile acquisitions that increase their power and prestige, instead of maximizing the company’s long-term value to its owners.

The principal-agent problem is pervasive in many economic activities. Michael Jensen and William Meckling, in a foundational 1976 paper, note:

The problem of inducing an ‘agent’ to behave as if he were maximizing the ‘principal’s’ welfare is quite general. It exists in all organizations and in all cooperative efforts – at every level of management in firms, in universities, in mutual companies, in cooperatives, in governmental authorities and bureaus, in unions, and in relationships normally classified as agency relationships such as those common in the performing arts and the market for real estate.³⁶

In the same paper, Jensen and Meckling introduce the concept of *agency costs*, which they define as the sum of costs incurred by:

- The principal, to verify the agent is acting in their interest, and where possible, induce them to do so (*monitoring costs*, e.g., allocating time and effort to sitting on a board that oversees the agent’s activities)
- The agent, to satisfy the principal that they are indeed acting in their interest (*bonding costs*, e.g., agreeing to meet certain obligations in regard to promoting transparency around executive decision-making)
- The principal, as a result of the agent’s decisions not being perfectly aligned with their interests (*residual loss*)

Residual loss is incurred to some extent as neither monitoring nor bonding measures can be perfectly effective.

The principal-agent problem is very relevant to libraries evaluating the collaboration option, as this can involve delegating responsibility for managing the activity to an existing or even an entirely new entity who will act on behalf of the participants in the collaboration. Examples include consortia, as well as independent organizations set up for the direct purpose of managing a collaborative activity (think HathiTrust or the Digital Public Library of America).

Examples where interests or incentives may begin to diverge between principals and agent in this context include issues like funding (Is the agent becoming a competitor with the principals for a limited resource pool?) or the scope of the collaboration (Is it to the benefit of the agent to recruit more members or expand the range of collaborative activities, even if this dilutes the control and benefits of the original participants?).³⁷

TABLE 5. PRINCIPAL-AGENT—Control

Key concepts	Prompts to action and considerations
<p>Separation of ownership and control</p> <ul style="list-style-type: none"> Separation of executive authority from direct membership control (i.e., an executive entity acting on their behalf) 	<p>Identify</p> <ul style="list-style-type: none"> Where final decision-making authority resides (e.g., majority vote among participating members or an executive director) Stability of current arrangement: Is it expected to transition to a new model in the future?
<p>Principals vs. agents</p> <ul style="list-style-type: none"> Organization or structure of entity acting on behalf of the collaborating institutions Exercising decision-making authority 	<p>Review</p> <ul style="list-style-type: none"> Structure of collaboration’s governance arrangements and the roles and responsibilities of group members in decision-making process Pros and cons of delegating authority to centralized decision-making entity vs full membership participation in decisions, including impact on equitable and inclusive decision-making Any decision-making areas of concern about member engagement
<p>Agency costs</p> <ul style="list-style-type: none"> Governance mechanisms to ensure alignment of interests between collaborating institutions and those of the entity acting on their behalf 	<p>Assess</p> <ul style="list-style-type: none"> Procedures and/or governance structures that are in place or will be in place to collect and act on members’ input Oversight mechanisms available to members to review decision-making within the collaboration: Are they proactive and enforceable? Time and resources needed to participate in these mechanisms Level of transparency and communication around decision-making expected of executive body

The collective action problem, transaction costs, path dependency, and the principal-agent problem provide useful vantage points from which to evaluate the collaboration option. Incorporating the insight these concepts provide into a broader understanding of collaboration can help library decision makers propose a more informed case for selecting this sourcing strategy from among the alternatives or steer away from collaborative opportunities that are poor fits for prevailing circumstances.

CONCLUSION

Many library leaders likely have already been considering some or all of the concepts, ideas, and other findings discussed in this report as part of their process of evaluating sourcing strategies and collaboration opportunities—perhaps without overtly realizing it. Explicitly surfacing the trade-offs and other factors involved in sourcing decisions can make these choices sounder. It can also make communication with impacted stakeholders clearer throughout the decision-making process, especially when the decisions are controversial and/or involve significant resource allocations.

The question of *how* to acquire capacity—and in particular, whether to acquire it through collaboration—deserves as much attention as the question of *what* capacity to acquire.

Libraries, collections and services, scholarly practices, and the university research enterprise itself are all undergoing transformation, both as a result of the COVID-19 pandemic and through patterns of change that emerged long before COVID came onto the scene. As these transformations occur,³⁸ libraries will find themselves identifying which new capacities are needed and which sourcing strategies to use to acquire them. Both of these decisions are strategic choices. This report demonstrates that the question of *how* to acquire capacity—and in particular, whether to acquire it through collaboration—deserves as much attention as the question of *what* capacity to acquire. The frameworks and tools for evaluating sourcing options introduced in this report serve to both highlight the importance of the first question, and to help libraries answer it.

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Dalhousie University

David Groenewegen
Director, Research
Monash University Library

David Minor
Program Director for Research Data Curation
University of California San Diego Library

Judy Ruttenberg
Senior Director of Scholarship and Policy
Association of Research Libraries

Michael Witt
Interim Associate Dean for Research
Purdue University Libraries and School of Information Studies

Maurice York
Director of Library Initiatives
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NOTES

1. Dempsey, Lorcan. 2019. "What Collaboration Means to Me: Library Collaboration Is Hard; Effective Collaboration Is Harder," p. 7. *Collaborative Librarianship* 10, no. 4: 227-233. <https://digitalcommons.du.edu/collaborativelibrarianship/vol10/iss4/3>.
2. Lewis, David. 2017. "The 2.5% Commitment." Working paper. Indiana University–Purdue University Indianapolis ScholarWorks Repository, 11 September 2017. <http://doi.org/10.7912/C2JD29>.

Fitzpatrick, Kathleen. 2021. *Generous Thinking: A Radical Approach to Saving the University*. Baltimore, MD: Johns Hopkins University Press.
3. Dempsey, "What Collaboration Means to Me."
4. Dempsey, Lorcan. 2018. "The Powers of Library Consortia 1: How Consortia Scale Capacity, Learning, Innovation And Influence." *LorcanDempsey.net* (blog), 28 February 2022. <https://www.lorcandempsey.net/orweblog/the-powers-of-library-consortia-1-how-consortia-scale-capacity-learning-innovation-and-influence/>.
5. University of Illinois at Urbana-Champaign Library. "Illinois Data Bank." <https://databank.illinois.edu/>.
6. For a detailed discussion of intra-institutional collaboration dynamics, see Bryant, Rebecca, Annette Dortmund, and Brian Lavoie. 2020. *Social Interoperability in Research Support: Cross-Campus Partnerships and the University Research Enterprise*. Dublin, OH: OCLC Research. <https://doi.org/10.25333/wyrd-n586>.
7. 4TU.ResearchData: Science, Engineering, Design. "4TU.Research Data." Accessed July 31, 2022. <https://data.4tu.nl/info/en/>.
8. Carnegie Mellon University. "Discover Research from Carnegie Mellon." KiltHub Research Repository. Accessed July 31, 2022. <https://kiltHub.cmu.edu/>.
9. See DMPTool. "Build Your Data Management Plan." Accessed July 31, 2022. <https://dmptool.org/>.

DMPTool is an interesting example, because it can also be utilized in a form more like a Collaborate strategy: institutions can sign up to be DMPTool "participating institutions," which confers the ability to incorporate local sign-in and customizations, while at the same time contributing to the maintenance and evolution of the general DMPTool resource.
10. The fact that the library does not control the capacity to which it refers its users raises some risk: first, that the capacity does not end up fulfilling the needs of the referred users, and second, that user disillusionment with the referral damages the reputation of the library as a trustworthy source of information.
11. Bryant, Rebecca, Brian Lavoie, and Constance Malpas. 2018. *Sourcing and Scaling University RDM Services*. The Realities of Research Data Management, Part 4, p. 13-14. Dublin, OH: OCLC Research. <https://doi.org/10.25333/C3QW7M>. p. 17-18.
12. Bryant, *Sourcing*, 11.

13. Simms, Stephanie. 2018. "Letter to the Community: CDL and Dryad Partnership." *CDLINFO, California Digital Library*, 30 May 2018. <https://cdlib.org/cdlinfo/2018/05/30/letter-to-the-community-cdl-and-dryad-partnership/>.
14. Dempsey, "What Collaboration Means to Me" (see n. 1).
15. Dempsey, Lorcan, Constance Malpas, and Mark Sandler. 2019. *Operationalizing the BIG Collective Collection: A Case Study of Consolidation vs Autonomy*. Dublin, OH: OCLC Research. <https://doi.org/10.25333/jbz3-jy57>.
16. Dempsey, *Operationalizing*, 17-18.
17. Operations strategy "involves configuring and developing resources and processes used to design, produce, distribute, and deliver goods and/or services." See:

Carnegie Mellon University. "Operations Strategy, Tepper School of Business, Carnegie Mellon University." Accessed August 1, 2022. <https://www.cmu.edu/tepper/programs/courses/45864.html>.
18. Dabhilkar, Mandar. 2011. "Trade-Offs in Make-Buy Decisions," p. 3. *Journal of Purchasing and Supply Management* 17, no. 3: 158-166. <https://doi.org/10.1016/j.pursup.2011.04.002>.
19. Dabhilkar, 3.
20. Hagel, John, 3rd., and Marc Singer. 1999. "Unbundling the Corporation." *Harvard Business Review* 77 (March–April): 133-41, 188. <https://hbr.org/1999/03/unbundling-the-corporation>.
21. Hagel.
22. Hagel.
23. Horton, Valerie, and Greg Pronevitz. 2015. *Library Consortia: Models for Collaboration and Sustainability*, 1. American Library Association Editions.
24. Dempsey, "What Collaboration Means to Me," 7 (see n. 1).
25. Olson, Mancur. (1971) 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups*, rev. ed., with a new preface and appendix. Harvard University Press.
26. Olson, 2.
27. Olson, 60.
28. Bryant, Rebecca, Brian Lavoie, and Constance Malpas. 2017. *Scoping the University RDM Service Bundle. The Realities of Research Data Management, Part 2*, p. 28. Dublin, OH: OCLC Research. <https://doi.org/10.25333/C3Z039>.
29. Olson, *Logic of Collective Action*, 51.
30. Coase, Ronald H. 1937. "The Nature of the Firm." *Economics* 4: 386-405 <https://doi.org/10.1111/j.1468-0335.1937.tb00002.x>.
31. David, Paul A. 1985. "Clio and the Economics of QWERTY." *The American Economic Review* 75, no. 2: 332–37.

32. So named because the first five letters in the upper left corner of the keyboard are Q, W, E, R, T, and Y.

33. David, "Clio," 332.

34. David ends his paper with this delightful passage:

I believe there are many more QWERTY worlds lying out there in the past, on the very edges of the modern economic analyst's tidy universe; worlds we do not yet fully perceive or understand, but whose influence, like that of dark stars, extends nonetheless to shape the visible orbits of our contemporary economic affairs. Most of the time I feel sure that the absorbing delights and quiet terrors of exploring QWERTY worlds will suffice to draw adventurous economists into the systematic study of essentially historical dynamic processes, and so will seduce them into the ways of economic history, and a better grasp of their subject.

David, "Clio," 336. <https://econ.ucsb.edu/~tedb/Courses/Ec100C/DavidQwerty.pdf>

35. A colleague noted that while working in a previous position at another organization, their co-workers used a variety of email and calendar applications, which created a good deal of friction for communication and scheduling. Despite this, individuals continued to use their preferred applications, even though switching to a single option across the department would have been much more efficient, even factoring in the learning curve to become proficient with an unfamiliar email/calendar application.


36. Jensen, Michael C., and William H. Meckling. 1976. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," 6-7. *Journal of Financial Economics* 3, no. 4: 305-360. <https://www.sfu.ca/~wainwrig/Econ400/jensen-meckling.pdf>.

37. Recognition of the principal-agent phenomenon can be found in John Wilkin's 2011 address to the HathiTrust Constitutional Convention, organized to determine the future governance model for the collaboration. Noting the lack of a centralized organizational structure for the partnership, he observed that ". . . our organizational distinctiveness tends to confound those who want to see a central office and central staff. It was important to document for CRL [Center for Research Libraries] the large commitment of staffing across the partnership to help them understand that HathiTrust is not apart from us, but rather a part of us—that HathiTrust is not separable from our institutions." See:

Wilkin, John. 2011. "HathiTrust's Past, Present and Future." Opening presentation at the HathiTrust Constitutional Convention, October 2011. <https://www.hathitrust.org/documents/HathiTrust-ConCon-Wilkin-remarks-201110.pdf>.

38. For a discussion of pandemic-related transformations in libraries, see the OCLC Research report *New Model Library: Pandemic Effects and Library Directions*:

Connaway, Lynn Silipigni, Ixchel M. Faniel, Brittany Brannon, Joanne Cantrell, Christopher Cyr, Brooke Doyle, Peggy Gallagher, Kem Lang, Brian Lavoie, Janet Mason, and Titia van der Werf. 2021. *New Model Library: Pandemic Effects and Library Directions*. With a foreword by Janice Welburn. Dublin, OH: OCLC Research. <https://doi.org/10.25333/2d1r-f907>.



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6565 Kilgour Place
Dublin, Ohio 43017-3395

T: 1-800-848-5878

T: +1-614-764-6000

F: +1-614-764-6096

www.oclc.org/research

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