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Label-Less Library Logistics: Implementing Labor-Saving Practices in Massachusetts' High-Volume Resource Sharing System

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Abstract

This paper presents important aspects and issues related to the merging of six regional library delivery services in a single statewide system that serves more than 550 libraries, that together circulate more than 15 million items annually throughout the Commonwealth of Massachusetts. The purpose of marrying the six distinct systems was to reduce redundancies and incorporate innovative features to improve library processing efficiency. Most libraries are members of one of nine separate shared integrated library systems. The paper covers the background, objectives, benefits, issues, lessons learned, and a successful request for proposal procurement process for this complex project.

Keywords

Library; logistics: physical delivery; label-less; shipping; delivery; materials; trucks; sorting; sort; sort-to-light; pick-to-light; rfp; request for proposal

Label-Less Library Logistics: Implementing Labor-Saving Practices in Massachusetts' High-Volume Resource Sharing System

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Abstract

This paper presents important aspects and issues related to the merging of six regional library delivery services in a single statewide system that serves more than 550 libraries, that together circulate more than 15 million items annually throughout the Commonwealth of Massachusetts. The purpose of marrying the six distinct systems was to reduce redundancies and incorporate innovative features to improve library processing efficiency. Most libraries are members of one of nine separate shared integrated library systems. The paper covers the background, objectives, benefits, issues, lessons learned, and a successful request for proposal procurement process for this complex project.

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Executive Summary

The Massachusetts Library System (MLS) recently signed a contract for statewide delivery services that will save about 8,000 hours in library staff time per year while reducing delivery costs and increasing the number of delivery stops to libraries using the service. It will also provide next-working-day turnaround for deliveries and improved accuracy for sorting.

The current cost structure for library delivery services includes contracts with four separate vendors providing delivery and sorting services in parts of the state as well as separate personnel, equipment, maintenance, and administrative costs to provide services with in-house staff in one area. Current costs, excluding MLS administration are approximately $2.85 million per year.

The new delivery system will use sort-to-light technology at two central distribution hubs. Sort-to-light is a manual sorting system that allows libraries to ship materials without requiring a label to indicate the item's destination. Hand-held scanners are used to read the barcodes off items. The system queries the appropriate integrated library system to determine the destination and then turns on a light above the bin into which the item should be placed. Because it is a manual system, items that must rely on routing slips (because they do not have a Standard Interchange Protocol 2 (SIP2) connection or the barcode is unreadable) can also be easily sorted using a label.

The contract for the new service will cost $2.75 million dollars in the first year, a savings of about $100,000 over the previous system, and includes a fuel surcharge that recognizes current fuel costs. In addition, 8 stops per week have been added for a total of 2,150 stops per week. The savings will be used to add more libraries to the schedule and enhance resource sharing.

In addition to cost savings, the new system will improve sorting accuracy, provide libraries with sorted "holds" and "returns" bins for high-volume members, save many miles of paper la-

bels each year, as well as eliminate thousands of hours of processing work. When small savings are multiplied by 15 million transactions, the savings add up to very large numbers. Simply eliminating the use of labels is expected to save over $100,000 worth of staff time.

Introduction

The Massachusetts Library System's delivery services supports more than 550 libraries with 2,150 stops per week on over 20,000 miles of weekly delivery routes, and an annual volume of 15 million items to support over 7.5 million loans. After a thorough investigation of delivery options, the release of a request for information (RFI) in 2009 and a request for proposal (RFP) in 2010, our new contractor was selected. Optima Shipping Systems, Inc., located in Woburn, Massachusetts, will take over responsibility for delivery to more than 550 libraries as well as the sorting for all material. Both delivery and sorting of materials had previously been handled by four different vendors and in-house staff.

Optima proposed using sort-to-light sorting technology to improve efficiency in library processing. This technology is not new. It has been used for many years in other industries where it is also referred to as pick-to-light or put-to-light. As far as we know, this is the first implementation of sort-to-light technology in a library logistics setting. Optima implemented sort-to-light as a creative solution for users of one integrated library system (ILS) who were unable to print useable delivery labels automatically. In Optima's proposal, the innovation of sort-to-light allows the flexibility for MLS to implement label-less shipping on a network-by-network basis.

The following is the new workflow for MLS. An employee (sorter) at the contractor's distribution center opens a tote full of unsorted materials shipped by a library. The sorter scans a barcode located on the front of the item with a wrist-worn scanner. The scanner polls the shared integrated library system (ILS) at a remote site via the Internet. The ILS responds with a Standard Interchange Protocol 2 (SIP2) message that indicates the destination for that item, an action similar to a transaction with a self-check station. An LED light flashes to identify the tote in the sorting rack into which the item should be placed. This technology allows for the separation of materials by other characteristics, e.g., items "on-hold" versus "returns." The sort-to-light technology employed for MLS includes error detection to improve sorting accuracy. Another by-product is the elimination of many hand-written delivery labels, which is also expected to enhance sorting accuracy.

The sort-to-light technology will improve efficiency in the libraries by eliminating the need to place a routing slip on outbound material. Our tests show that processing an item for delivery at the circulation desk takes six seconds when a routing label is involved. Eliminating the label saves two seconds per transaction.

Under the previous system, none of the vendors separated material for library branches or bookmobiles, or separated "on-hold" from "returns." The new system will enable libraries with branches and bookmobiles to receive materials bound for these collections in separate totes and the largest libraries will receive items "on-hold" in separate containers from those containing ready-to-shelve returns.

Another reason we chose the sort-to-light technology is its flexibility. It allows for the use of barcodes as well as traditional routing labels. This will make it possible for all members to participate even if they do not have external barcodes or a SIP2 connection to the sort center.

Two years ago, the statewide delivery committee established a standard for barcode placement so, as older material is phased out, more and more material will be compliant with the new standard. However, because of the flexibility of the system, we will not have to make full compliance with external barcodes a condition of participating in the new delivery system.

MLS will provide assistance to libraries to place barcodes onto items retrospectively according to the policy by arranging a discount to purchase barcode duplication devices and by providing rental barcode duplicators to libraries that would like to use them for short-term projects.

Benefits of Consolidating

The new statewide service provider will replace all of these services throughout Massachusetts resulting in a more cost-effective service that is easier to manage. MLS staff will have a single contact for delivery communications, billing, and a single set of policies. This will simplify communications and paperwork for MLS and all participants of the service.

In a multi-vendor delivery arrangement, some libraries were encouraged to presort most material into totes while others were encouraged to bundle groups of items, rubber band the bundles, and then label the bundle with a routing slip to allow drivers to sort on-board. The new system will eliminate the need for both bundling and presorting, and material preparation procedures will be consistent throughout the system. However, the same day delivery possibilities provided by on-board sorting will not be possible.

A unified system can build on the benefits and cost savings of automation with widespread labor savings, improvements in safety and ergonomics, mini-automated materials handling systems (AMHS) and self-check installations at high-volume branches, and pooled resources for retrospective barcoding to enable enhancements. As transaction times decrease and patron services are improved for many millions of transactions, the savings and benefits build up quickly.

Why Manual Sorting Instead of Automated Sorting?

Sort-to-light is not an automated sorting system. Throughout most of the process, we thought that there was a good possibility that we would adopt a fully automated sorting solution. We looked at large unified systems with sophisticated automation like the King County Library System and Seattle Public Library as examples and sought information to emulate the model.

Many of the respondents to the RFP are well-known, highly respected automated materials handling system manufacturers. And while an automated materials handling system solution would provide additional benefits over the sort-to-light solution we selected, it would have required significant costs to cover the capital investment over time and the Massachusetts budget structure is such that labor savings in individual libraries does not provide a financial incentive to MLS to make large capital investments. Each member library has its own unique budget and governance entity.

The AMHS vendors' proposals included commitments of up to ten years and the Task Force felt that a lengthy contract could have diminishing returns because of the explosive growth of online and downloadable content that could significantly affect the volume of delivery. We were also concerned that technology could evolve more quickly and we might be "stuck" with old technology in a long-term contract.

Our goal was to stay as close as possible to our current delivery budget. Opting for a solution that locked MLS into a longer, more expensive contract was too risky especially considering the state budget for our services had been cut by 29 percent in the previous year and any additional delivery costs would result in service reductions for other programs.

While sort-to-light cannot handle a large number of sort destinations as efficiently as an AMHS system can, we felt it was an appropriate model for Massachusetts because we would still be able to eliminate routing slips, the system would be more accurate, and we would have more flexibility. Should delivery volume explode, we may wish we had found a way to install the AMHS system. However, if volume fluctuates, stays level, or decreases, the sort-to-light system will continue to provide important benefits without tying us to a capital and equipment intensive system we do not need.

Background: About MLS

The Commonwealth of Massachusetts supports libraries in several ways. The Massachusetts Library System (MLS) is one of those. MLS was established in 2010 by the merger of six former regional library systems in response to a severe reduction in state funding. MLS is funded through the Massachusetts Board of Library Commissioners, a state library agency, with a

mission to foster cooperation, communication, innovation, and sharing among member libraries of all types by promoting equitable access to excellent library services and resources for all who live, work, or study in Massachusetts. MLS serves 1,750 member libraries, including 370 public libraries, 1,033 school libraries, 120 academic libraries, and 300 special libraries in all Massachusetts communities. It is a not-for-profit corporation governed by an elected Executive Board comprised of representatives of member libraries.

The 6.5 million residents of Massachusetts reside in 49 cities and 302 towns. Boston, with a population of 589,141 is the largest community and Gosnold with a population 86 is the smallest. The population is growing slowly and becoming more racially diverse. Its residents are older when compared to other states. Its libraries, like those across the country, are very busy. In the last decade, library visits have risen 50 percent, library delivery rose by 500 percent, and library staffing has not increased due to two recessions.

Timeline of the Project

Library delivery service has a long history reaching back to 1972. The service evolved over time and from 1998 through 2010, each of six former Massachusetts regions supported delivery with separate budgets and services, which were chiefly subcontracted. The six regional delivery systems were connected by a daily delivery run to each distribution center to provide cross-state delivery. Even before the financial crisis that precipitated the regional merger, plans were underway for a statewide delivery service.

Library delivery services are funded by the Commonwealth. The libraries do not pay for this service even though the demand for library delivery service is driven most strongly by 239 libraries that participate in one of the nine shared integrated library systems (ILS). Each shared ILS is referred to as an Automated Resource Sharing Network (a.k.a. network). The networks employ ILS technology from three separate vendors, i.e., Innovative Interfaces Millennium, SirsiDynix Horizon and Symphony. Three networks are in the process of migration to an open-source solution, Evergreen. In addition to the nine networks, MLS also hosts a Koha-based open-source solution for about 70 members and intends to include this system in the sort-to-light operation in the future.

Some delivery is driven by the statewide virtual catalog, which provides an inter-network system for discovery and requests. However, at this point, the virtual catalog drives only a small proportion of lending due to the fact that it is not as convenient as borrowing within a single network and also because it is not widely publicized to the public.

During the 1990s and 2000s, many ILS vendors added a feature to allow patrons to place holds without library mediation. As this feature was added to Massachusetts networks, the volume of requests for materials from other libraries grew dramatically because patrons liked it and used it heavily. This phenomenon was widespread. MLS, like many other library systems around the world, struggled to keep up with the ever-increasing lending volume and the resulting cost increases and management problems.

This explosive growth led to the formation of the independent library delivery interest group, Moving Mountains (http://movingmountainsproject.wordpress.com/) and then the Physical Delivery Discussion Group, a section of the American Library Association's Association of Specialized Libraries and Agencies' Interlibrary Cooperation and Networking. (http://www.ala.org/ala/mgrps/divs/ascla/asclaourassoc/asclasections/ican/ican.cfm). Several conferences and publications emerged from these groups (see resources below). In addition to meetings at every ALA Annual and Midwinter Conference, the Moving Mountains group sponsored two national conferences in an attempt to help libraries develop solutions for delivery issues.

In Massachusetts, each region responded to the delivery pressures in its own way. The organizations with more discretionary funds shifted funding to library delivery to cover the cost increases. The vendors were surprised with the volume increases, which came on quickly, and

they often fell behind in sorting and delivery. This led, in some cases, to large backlogs. Librarians became concerned about the delays and missing materials in the backlogs. One vendor was unable to cope to the increased volume and had to be replaced on short notice resulting in a significant disruption and in cost increases. One region relied solely on in-house staff and could not afford to add sufficient additional staff to perform all of the necessary sorting and delivery. A creative solution was developed and members were encouraged to presort materials destined for large lending partners into separate totes and were also encouraged to bundle items for smaller lending partners to allow for faster sorting on the truck. The drivers sorted about one-half of the materials on-board to improve turnaround time.

The additional workload placed on libraries to accommodate insufficient funding was symptomatic of the ability of libraries to "do more with less" and bend over backwards to provide patron services. Moreover, the ability for patrons to request material from any other library in the network was a very popular service. In addition, it was much cheaper than the traditional interlibrary loan request, one that is mediated by library staff for an item not part of the same network or region. Requests within the regions cost as little as 50 cents per round trip, whereas the cost for a loan to a library outside of the regions exceeds two dollars.

Eventually, the regions decided to work together. They began with informal discussions and commissioned studies to find solutions. These discussions and studies led to the formation of the Massachusetts Statewide Delivery Committee (MSDC) with regional, network, and library representatives to act as a policy-making body endorsed by the Massachusetts Board of Library Commissioners.

The MSDC formed three task forces to study and make recommendations to manage library delivery issues. One task force was charged with the responsibility to study and encourage safe, ergonomic, and efficient practices in libraries. This group put on a series of events and produced a humorous video to promote awareness of ergonomic and efficient practices in library processing such as self-check, self-service patron hold pick up, and reducing steps and redundancy in workflows.

A second task force was formed to make recommendations on labeling and packaging. Its recommendations were to reduce packaging requirements. While labeling standards were deferred in anticipation of label-less shipping, in 2009 Massachusetts established a policy to eliminate almost all packaging and use of rubber bands for items in delivery to improve processing efficiency. This had multiple benefits without a significant increase in damage to items. The benefits include faster processing, reduced cost and waste, and delivery totes that could accommodate more items. It also allows the ability to scan external barcodes to employ sort-to-light.

The third task force (the Autosort Task Force) was charged with determining the feasibility of moving to a single statewide delivery system with automated sorting. During these discussions, regional staff were alerted to an innovative materials handling project at the King County Library System (Washington state) by an article in *Library Journal* (see "Choosing the robot," in which Jed Moffitt advises that there are other ways to automate materials handling in *Library Journal* 129.17 (Oct 15, 2004): p.SS27(3)). We began to have conversations with the vendors of automated materials handling systems and arranged visits to the King County and Seattle Public Library installations during an ALA Midwinter meeting in Seattle. Vendor discussions continued throughout this process and several of these vendors later responded to the RFI and RFP. Regional staff was intrigued by the possibility of automated sorting and how it might reduce costs and improve services.

The Autosort Task Force was formed prior to the state budget reaction to the 2008 worldwide financial crisis. Membership was comprised of representatives from regional library system network staff, the state library agency, as well as member libraries. The group planned a two-stage process beginning with a significant data gathering exercise followed by the release of an RFI in the summer of 2009 with an overall goal to identify ways to reduce costs, save staff time,

and increase service quality of the interlibrary delivery service provided to Massachusetts libraries. The RFI was issued to gather the best ideas from vendors prior to issuing an RFP so that the Task Force could avoid putting limitations in the RFP that might prevent us from allowing creative responses.

Respondents were from two groups: nine were from transportation companies and seven were from automated materials handling system manufacturers. We asked vendors to provide innovative solutions to fit within our then existing budget of approximately $2.3 million with no additional capital investment. Responses indicated that vendors were willing to meet our budget if we were willing to make longer-term agreements to allow for capitalization of equipment over time.

We were ready to move to the procurement stage and gathered more information to provide the most current information to potential vendors. During the information-gathering phase, gloomy budget forecasts came down from the state budget office and the process to consolidate the six regional offices ran simultaneously with RFP preparation. The RFP was ultimately delayed so that it would be released by the successor organization to the six regional offices, i.e., by the Massachusetts Library System. MLS began operations in July 2010 with two offices—in Whately and Waltham. The RFP was issued in that month.

In order to ensure that at least one of the proposals would be affordable, we decided to allow each vendor to provide responses to two different models. One model would utilize the barcode for sorting and thereby eliminate the need for routing labels. The second model was a manual system. In either case, the new vendor would provide a single delivery solution in place of six separate operations. Due to the worsening economic climate, we felt it prudent to consider manual (and therefore cheaper and less capital-intensive solutions) in conjunction with automated solutions. Ten companies submitted proposals, some for both models. A committee of over twenty members was faced with the challenge of synthesizing and evaluating the information that was presented and ultimately recommending a suitable company with which to negotiate. Each member scored all the responses and turned in their scores for tabulating. Members participated in meetings and conference calls to discuss each proposal. Luckily, a preferred solution clearly emerged, supported by the tabulated responses.

Next Steps

MLS, its contractor, and member libraries are moving in a new direction to improve efficiency in libraries and reduce costs overall. Although this new direction resulted in some difficult and emotional parting of ways, particularly with delivery specialists some of whom had been employed with one of the regional systems for over twenty years, the need for increased efficiencies on a statewide basis was indisputable. We see the implementation of label-less shipping as the first step.

Our agreement includes later implementation of tote-level check-in at libraries and a web interface to allow libraries to track their own items while they are in the delivery system. Tote-level check-in would involve placing a barcode identifier on each tote. The contractor's system would create a manifest of the contents of each tote as they are loaded at the sort site. When the tote arrives at a library, the barcodes for the items inside could be recalled in a batch and a global check-in could be initiated.

We hope that the networks/members will be able to enable tote-level check-out using a handheld barcode reader in the stacks as items are paged for shipping. This batch of barcodes would be input to the ILS with a global command to check out to 'in-transit' status.

As we work to enhance resource-sharing opportunities, methods to allow delivery to libraries with low or sporadic volume are needed. This is especially true for those located far from an existing delivery route. One option is to establish an agreement with an existing stop to use that stop as a 'ship via' point, enabling the more remote library to pick up materials at that stop. We will also explore the possibility of using a third-party service such as UPS (United Parcel Service) or the United States Postal Service

(USPS) in conjunction with our own delivery service to reach certain locations more efficiently. Another option is for the contractor to consolidate items for the light stops and aggregate them for a weekly shipment. In order that turnaround time is not negatively affected at the lending libraries, the libraries receiving a weekly shipment would also receive a UPS or USPS return label for returning items to the sort site. This would allow most shippers to use the MLS delivery service and only the light stops and contractor would use the third party shipper thereby avoiding complications of multiple workflows in libraries.

We are committed to continually seeking out ways to improve efficiency, ergonomics, and safety in library workflows. MLS and the delivery contractor have identified several other potential areas for improvement, including:

Equipment recommendations to reduce or eliminate the need for library staff to lift full totes, e.g., lift tables and small fork-lift type devices.
Equipment recommendations to reduce or eliminate bending by library staff, e.g., adjustable height work tables.
Demonstration of successful self-service models that could be implemented in other libraries, e.g., self-check, automated materials handling systems, and self-service hold pick up.
Evaluation of RFID technology in terms of library and delivery efficiency.
Member libraries can piggyback on the MLS agreement in several ways. For example, the MLS contract does not include delivery to branches. A library could contract to have the MLS contractor perform this service separately, thereby eliminating several steps and miles from the route of another contractor. Individual libraries may contract to add sorting granularity. For example, a library might prefer to have media or children's materials separated from other items and could contract for this service at a reasonable price because the infrastructure is in place.
With implementation of a successful discovery system and agreements with nearby states, a seamless model for borrowing and shipping items across state lines could enhance services around New England as has been successfully demonstrated in Colorado, Kansas, and Missouri (COKAMO: A Model for Fast, Inexpensive Interstate Delivery)

Future Considerations

The MLS delivery service and sort-to-light are ideal for our current environment. However, as systems evolve and new opportunities present themselves, we will make adjustments as needed. Upcoming activities may require MLS, networks, and libraries to make adjustments.

For example, Massachusetts is seeking improved technology for its statewide virtual catalog. A more effective and more user-friendly system will increase shipping between networks (inter-network shipping). With the new delivery and sort system, inter-network shipping will require even more double handling by sorters. If inter-network shipping increases, we will need to find ways to eliminate double handling by sorters.

Another area of change is the anticipated growth of a tenth shared ILS—MassCat. This statewide shared catalog is used primarily by smaller libraries. Because these libraries are not geographically co-located but rather are interspersed throughout the various regions, our current system of network based sorting pods will not work. In other words, if MassCat gets larger, we will need a better way to integrate these materials into the sort operation.

And finally, we are watching the huge level of interest in e-book and other electronic content and wondering if and when the adoption of online and streaming content models in libraries might slow or reverse the growth of physical delivery in libraries.

Appendix

Lessons Learned

Making Big Changes That Affect Many Different Stakeholders

1. Get all the right people to the table as early as possible.

   In our case, we started with a working group, which included representatives from each region. Later we added representatives from each network and finally, additional library representatives, including circulation staff. With each new batch of people involved in the process, we had to go over many of the same issues again and again. This slowed the process down but sometimes turned up new critical issues that we should have learned about sooner. While starting with a small group to get the project off the ground makes sense, when you are ready to open up your group for broader participation, get all of the stakeholders to the table.

2. Be okay with incremental changes. Big changes happen in small steps and this is probably just as well.

   You may have the "Big New Idea" that will revolutionize the way you do business if only everyone would buy into it. It isn't necessarily the best idea to move from 0 to 60, even if you are right. Most big changes require many adjustments along the way and, necessarily, have an element of risk associated with them. Do not be surprised when people resist. Instead, make sure to develop options that stakeholders can choose that move toward the Big Idea but which do not entail too much risk and upheaval at once. Presenting two or three options that can move people forward incrementally are likely to have more success and can result in movement toward the ultimate goal. In our case, moving to an equipment-intensive fully automated sort represented a very big change from how things had been done. Centralizing the sort, without automating it, was a much easier transition to make. This was something people could get their heads and hands around and they were willing to move even though this incremental move would still require a lot of change.

   Remember, incremental movements in the right direction are better than a big lurch in the wrong direction.

3. Make sure people understand what is being proposed.

   New technology and new workflow processes are scary and resistance can be high. It is particularly high when people cannot envision how the proposed solution works. In our case, we were never able to convince many staff that tote-level check-in, allowing multiple-item check-in with each tote, would save them a lot of time and money. Despite its successful implementation at other libraries, library staff generally focused on all the problems that they were sure would result from this process.

   What we should have done is found a way to demonstrate it through the use of videos or library visits so that people could see it work in action.

Developing the RFP

1. Learn everything you can from potential solution providers and generate interest in your project.

   Long before you start writing an RFP, talk to everyone you think might be a potential solution provider and get their ideas. Listen to their questions so you know what information you will need to include in your RFP. It is important to reach beyond what you think is the right solution and open yourself up to other options. You do not want to rule out great ideas before you even get started.

   Sometimes some of the best ideas come from outside of "libraryland" so do not be shy about talking to vendors who have not worked with libraries before. You may have to spend more time educating these vendors to library-specific issues but there is nothing wrong with that. Sometimes our needs are not as different as we think they are.

2. Make sure you include the information that is critical to respondents.

   If you have not given the vendor respondents the information they need to design a great solution for you, you will not be able to get all the information you need from them either. If you have worked with the vendors in advance of the RFP, you should know which pieces of information are critical for them. Make sure you have it in your RFP. Without spending time with vendors, you may not know what they need to know so make sure you have plenty of meetings with individual vendors where you can talk in detail.

3. Have plenty of opportunities for vendors to ask questions well in advance of the proposal due date.

   Even if you think you have covered it all, you need to give at least two opportunities for vendors to ask questions, request more info, and clarify questions in your RFP. Make sure all vendors have access to the questions and answers that each vendor poses. Keeping an up-to-date project website where all the documentation lives is critical. Videotaping the Q&A session is a great way to make sure all vendors have access to the same information about your project. Put all the videos and responses on your website. Once you have done all that, if a vendor does not take advantage of these resources, it should tell you something.

4. Have vendor respondents score their own responses.

   RFP respondents do not always answer the question you have asked or if they do, they may not pay attention to each aspect of the question. Forcing them to evaluate themselves provides another incentive for them to look more closely at what you perceive as a complete and optimal response.

   You will learn very quickly which vendors are trying to win your business. If they skip over details and provide a lot of "trust me" or "we'll cover that later" responses and then give themselves high scores, you can be sure they have not done their homework or maybe the marketing department has prepared the response. Either way, this tells you that this is a company that is not taking your project seriously.

5. If you do not have financial flexibility, make sure you state your limits clearly, early, and often.

   Vendors want you to have as much money available as they want to charge and will find ways to hear what they need to hear. Be careful about confusing out-of-pocket costs with soft costs because vendors will try to include the savings from the soft costs as revenue available to support the costs of the project, but this often is not possible.

   In our case, we clearly stated what we spent on sorting and delivery services in the RFI (hard costs) and this represented how much we could spend in the future. However, we also estimated the costs of library staff preparing outgoing and receiving incoming deliveries (soft costs). Our goal was to reduce the workload in those libraries, but our budget was limited to our hard costs regardless of how successful we were reducing the library workloads. Because delivery is paid for by the regions instead of the libraries, we could not use any savings from the reduced library workload to pay for the new system. Even so, many of the proposals conflated hard and soft costs and presumed those savings could be used on the new delivery system. As a result, many proposals were out of our price range.

Evaluating RFP Responses

1. Make it clear to vendors and evaluators how each response will be scored.

   We included the evaluation criteria we used for evaluating each question in the RFP. Vendors could see what would be included in the ideal response (labeled A). They could also see which pieces were most important to us even if they could not cover everything we wanted (labeled B). We also described what we would

characterize as an unsatisfactory (labeled C) response.

Clearly articulating our scoring criteria made it easier for the evaluation team to score each proposal objectively and relatively quickly. It eliminated the guesswork. It also helped clarify for vendors what we were looking for in a response.

2. Weight Each Question Appropriately.

Each question in the RFP was given a weight so that the most important issues made the most difference. If a question addressed a mandatory requirement, we made sure to weight it such that the vendor would be rejected based on not meeting that mandatory requirement. The relative importance of various other issues needed to be sorted out as well. There are many more desirable issues than mandatory ones but these needed to be weighted to reflect their importance.

3. Turn everything into a number.

Once we weighted each question, we used one of three multipliers to determine how many points the vendor received for each question. An "A" answer would get a 5x multiplier, a "B" answer a 3x multiplier and a "C" responses (or no response at all) received a score of zero. The multiplier was applied to the weight to determine the total number of points for each answer.

The benefit of this approach is that it distills everything down to a number. Each evaluator was able to provide a score for each proposal. This gave us a chance to look at the evaluations in more than one way. We could simply tally up all the points and see which vendor got the most points, and we could see how our evaluators ranked each of the proposals. This helped us see where there were differences that needed to be discussed and where there was a general consensus.

4. Evaluate cost of proposed solution separately.

Because we did not want our evaluators to be prejudiced by the cost of the proposal, we did not let the evaluators see the cost information. This helped people focus on other aspects of the responses that could have easily been overlooked. People tend to want the "best deal" but often the "best deal" is not the cheapest solution.

5. Find a way to normalize total cost of the solutions proposed.

Pricing in proposals can vary wildly with different base measurements and reasoning behind the pricing models. In order to allow for easy comparison of pricing schemes, it was essential to normalize the pricing. This involved several steps:

Create incremental units on which to base pricing (such as number of items per time period and/or number of stops per time period) from real world data. Previous delivery surveys proved useful.

Deconstruct proposals pricing schemes into the incremental costs based on data provided. Normalize pricing schemes using the real world data increments and create per annum pricing for comparison.

List of Online Resources and Acknowledgements

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Massachusetts Library System Links:
RFI Task Force Roster
RFP Task Force Roster
RFP (2010)
RFP Score Sheets

MLS Announcement
MLS Policies
RFI (2009)
Consultant Study (2009)
Member Library Testimonial Video

Professional Activities:
Moving Mountains Blog
ALA, ASCLA, ICAN Physical Delivery Discussion Group
NISO Physical Delivery Working Group

Publications:
Moving Materials: Physical Delivery in Libraries,
Valerie Horton and Bruce Smith, Editors