Choosing Success Metrics for the Montana State Library

Metrics are different for different organizations and different websites. There are no universal measures of success that fit with all transactions. The differences stem from the different purposes that the content serves, the different strategies that the organizations or businesses pursue, different value propositions that the end-user may perceive, and so on. I would like to use the opportunity of the new fiscal year to start a review of the statistics gathering in the library and provide an opportunity for the Library Commission to help us come to an agreed-upon set of success metrics

Most discussions on metrics programs stress that the measures chosen to be collected should be simple, and if possible be those already being collected for other uses. Measurement collection is time consuming, people-intensive, and expensive and distracts workers from their primary task of developing software or providing services. Collecting measures can add anywhere from five to ten percent to the development cost of a program[1], so if a program can reuse data that is already being collected (e.g., timecard or financial data), the process is less expensive and more liable to be accepted.

Project managers need to select a measurement and metrics set appropriate to their project, and not pick a set and then try to apply their project to that set. There are many measures and derived metrics that can be proposed, but it should be the program management and technical issues and objectives that drive the measurement requirements. Whatever set is chosen, it should be easy to collect and analyze, cover all phases of the life cycle, give management the desired insight into the project, and deal with specific, defined issues or attributes of the program.

I would like to suggest a specific process in order to pick up the right metrics for the MSL. This process starts with *strategy* in order to understand the library's overall direction and missions. *Defining success* follows after; this step is in fact picking the right metrics and it should be in line with the strategy. The next step, *implementation*, is the process of gathering data and converting it into the most meaningful information so that business managers can get its implications right away and initiate actions immediately.

A good measurement program helps managers:

- communicate unambiguously throughout the organization
- identify and correct technical and management problems by focusing on early discovery
- make key tradeoffs by assessing the impact of decisions
- track the status of processes and products against program objectives
- defend and justify decisions by providing data to explain how issues are prioritized and managed.

Picking the right metrics is more an art than a science. Metrics that concentrate too much on technical outputs are not efficient. These metrics are able to identify only visitors' activities. Successful metrics concentrate on usability of the metrics to improve business operations. They are able to measure profitability and real performance. Examples for a web site are listed in the following table:

[1] Shari Lawrence Pfleeger, "Lessons Learned in Building a Corporate Metrics Program," IEEE Software, May 1993, pp. 67-74.

Table 1 Success Metrics for a commercial web-site[2]

Visitor Activity Metrics (technical oriented)		
Take Rate - Newsletter	(No of visits turn to activities) / (No of visits)	Measures of how compelling company's offerings are to the audience at the site and how well the company is marketing
Take Rate - Bookmark		
Take Rate - Downloads		
Repeat Visitor Share	(No of Repeat Unique Visitors) / (No of Unique Visitors)	Measure Content attractiveness and simplicity
Heavy User Share	(No of Visits with *n* or more pages) / (No of Visits)	Percentage of heavy users in terms of page view. *n* can be 10 or any depending on the site.
Committed Visitor Share	(No of Visits staying more than *t* minutes) / (No of Visits)	Percentage of long visits. *t* can be 20 or any depending on the site.
Committed Visitor Index	(No of Page Views of long Visits) / (No of Long Visits)	Average Pages Views of long visitors. Long visits are those staying more than *t* minutes.
Committed Visitor Volume	(No of Page Views of long Visits) / (No of Page Views)	% of Page views by long visitors
Visitor Engagement Index	(No of visits)/(No of Unique Visitors)	Average Sessions per Visitor
Reject Rate	(No of One-Page Visits) / (No of Visits)	% of visits not continuing to browse after the first page
Scanning Visitor Share	(No of 1 minute Visits) / (No of Visits)	% of visits just scanning through
Scanning Visitor Index	(No of Page views in 1 Minute visits) / (No of 1 minute visits)	Average page views in scanning visits
Scanning Visitor Volume	(No of Page views in 1 Minute visits) / (No of Page vies)	% of pages which are scanned through
Profitability and Real Performance Metrics (Usability oriented)		
Average Order Amount (AOA)	(Total Sales) / (Total Orders)	Measure of up-sell and cross-sell effectiveness
Conversion Rate (CR)	(Total Orders) / (Total Visits)	Measure the effectiveness of website to convert a visitors to a buying customers
Sales Per Visit (SPV)	(Total Sales) / (Total visits)	Measure marketing efficiency
Cost Per Order (CPO)	(Marketing Expenses) / (Total Orders)	Cost of generating one order.
Repeat Order Rate (ROR)	(Recurring Orders) / (Total orders)	Measure the ability to retain customers for repetitive purchase
Cost Per Visit (CPV)	(Marketing Expenses) / (Total Visits)	The cost of attracting traffic

Source Adapted from Einsberg, Novo (2002)

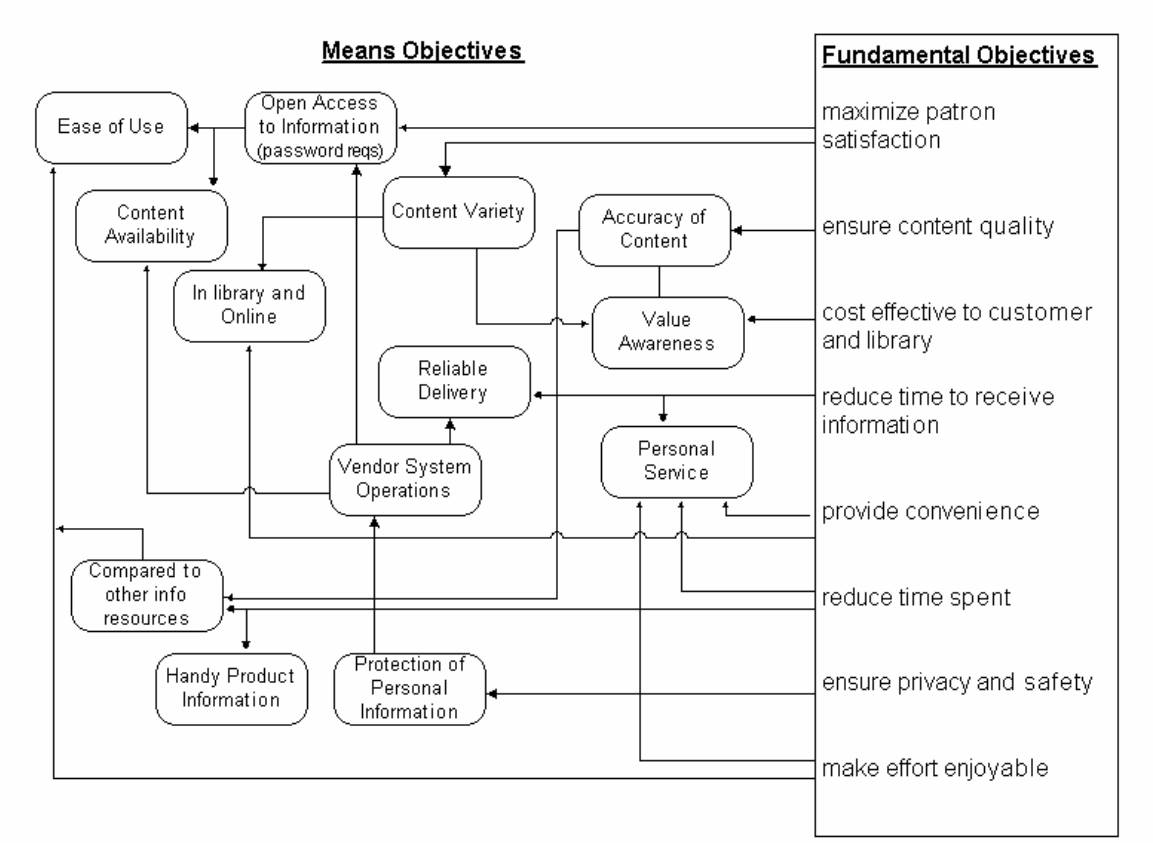
[2] Eisenberg, B., Novo, J., The Marketer's Common Sense Guide to E-Metrics, Research by Future Now www.FutureNowInc.com [Online], Available.

Tracking Library Services Performance

The table above listed several metrics that track web site performance. They tell whether the site has been successful in attracting and retaining users, and keeps the organization on track. However, they are measures, not factors leading to success.

There are two important values that organizations must offer and these can be organized into two groups. First, the **fundamental objectives** are those values important to users, and secondly **means objectives** are those intermediary values businesses must render to achieve fundamental ones. Achieving means objectives implies that a company is going closer to the fundamental objectives. This is the framework that we must bear in mind when designing digital applications to deliver products/services. In cases where it is inappropriate to offer the entire set of values, it is important that we concentrate on the "right" values and prioritize them. This framework can be a map of values with connecting path helping the organization find the values they want to offer. For an example of this mapping of library objectives see the illustration below.

These fundamental and means objectives are just my initial suggestions based on my assumptions and experience with end-user focused software development. You each may have others but I listed some universal ones that all libraries strive to accomplish in order to provide an example to work with. Our goal should be to reach agreement on these objectives and then find metrics that we believe would provide a statistical measure of the success of those objectives.



Until now we have simply been gathering statistics with no applicable use for those statistics. While it may be interesting to see how many visitors the library receives or how many hits a database accrues over the term, they require substantial effort to maintain are not used as efficiently as they could be. Our metrics should be examined holistically for the library as a whole based on library and division mission and vision. Rather than each division determining a separate set of statistics, with a unique method for gathering them, it would save effort, manpower and provide a better overall connection for greater legislative impact if the library divisions were to present a united front justified and supported by a cohesive set of success markers.

I understand this cannot be accomplished in one brief meeting or at one sitting. But this effort would be most powerful if combined with the strategy outlined by the Commission for the State Library and we would welcome your input since all reports are eventually delivered to you and you should understand their implications and they should be customized for your interests.

Thanks for your time. I look forward to your feedback on this document and input into this process.

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