VALUE FOR MONEY: BEST PRACTICE OPTIONS FOR DEMONSTRATING RETURN ON INVESTMENT FOR LIBRARIES

Abstract:

Introduction
Pressure from stakeholders to demonstrate value for money is a growing trend in libraries in Australia and worldwide. More than 60% of libraries report that they anticipate undertaking a return on investment project [ROI] in the near to mid-term. Yet most lack the tools required to accurately measure ROI and deliver a good outcome for stakeholders. Beginning with an environmental scan and survey conducted by Oranjarra Partners regarding ROI in academic libraries from Australia, New Zealand, the US, Hong Kong, Singapore, Malaysia, and Philippines, together with input from major global library suppliers, this paper describes the evolution of, and posits future development in, best practice methods for demonstrating value for money in libraries using Australian and international examples. The paper then synthesizes the disparate strands of ROI development into a provisional toolkit that may be selectively customised to the particular needs of individual libraries.

Methods
In addition to an explication of the Oranjarra survey methodology, its results and its conclusions, this paper describes the author's research into the current state of relevant ROI development and demonstrates both its practical applications and its limitations. In particular, aspects of implied or empirical value, explicit value and contingent value are discussed and illustrated and case studies examined. Differing approaches, based on the type of library, its focus and funding, in demonstrating ROI is placed in a useful context.

Results/Outcomes
The major trends in ROI for libraries is described and clarified. The implications of these trends are discussed. The result of the paper is a compendium of best practice methods comprising a toolkit that libraries may use in demonstrating value to stakeholders.

Conclusions
The paper will confirm that demonstrating ROI or value for money is a growing trend that many libraries are ill-prepared to confront. The paper will conclude by showing libraries how the best practice methods may be used selectively and in combination to produce, at minimum, an acceptable result for stakeholders such as funding bodies, administration, staff, users (patrons, students, researchers, academics) and the library's wider community.

Paper:

> "All public institutions…should give returns for their cost; and those returns should be in good degree positive, definite, visible and measurable […] Common sense demands that a publicly-supported institution do something for its supporters and that some part at least of what it does be capable of clear description and downright valuation."—John Cotton Dana, key figure in early 20th century librarianship, writing in 1920 (Dana, 1991)
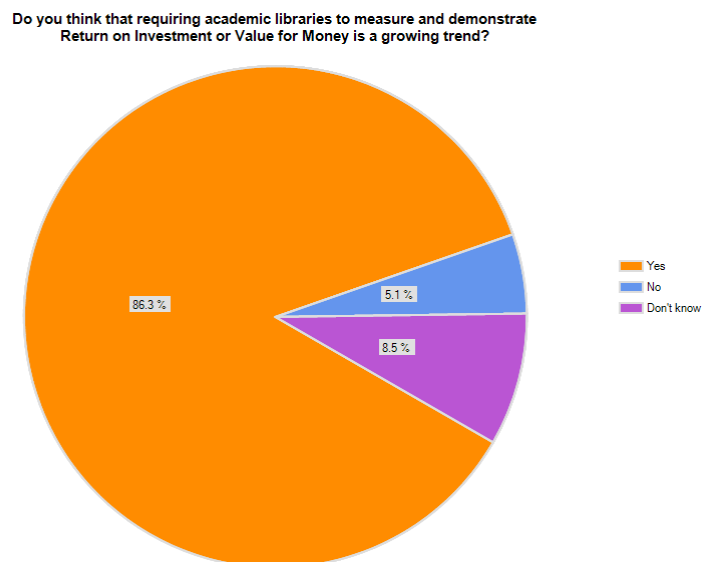
In the past several years, Oranjarra Partners has been working with Australian academic libraries and those in other regions of the world on a number of projects ranging from workflow consultation to digital collection development strategies. At the heart of each of these projects, and driven in part by relentless modern economic pressures, is a sometimes

unarticulated awareness of the need to demonstrate a return on investment (ROI) for the library's stakeholders. This awareness reveals itself in concern over rising resource costs; contraction, cuts and outsourcing; reliance on high use collections and usage in general; and, a growing resistance to "Big Deal" packages. It is brought into sharp focus by the rapidly changing commercial landscape that confronts and challenges academic libraries.

In August and September of 2011, Oranjarra Partners conducted a survey designed to elicit and quantify academic librarians' views on ROI and their perceptions on value for money. Two hundred surveys were sent to librarians and industry professionals in Australia, New Zealand, the United States, Canada, Hong Kong, Singapore, Macau, Malaysia and Philippines with 135 responses received (67.5%). Readers are encouraged to view a summary of the survey results, including commentary from the respondents. A link may be found to the summary on the Oranjarra website (www.oranjarra.com). A headline review of the questions, results and respondent comments is detailed below.

The Oranjarra ROI Survey: Selected Results and Commentary

First, the survey clearly indicated that perceived knowledge regarding ROI or value for money in libraries is widespread throughout the regions surveyed. Over 86% of respondents are aware of the concept. An almost identical (and overwhelming) percentage of respondents agree that measuring or demonstrating ROI is a growing trend in academic libraries. In light of Oranjarra Partners' recent professional experience, this is not an unexpected outcome and it does serve to establish a good evidentiary baseline for the subsequent survey results.

Do you think that requiring academic libraries to measure and demonstrate Return on Investment or Value for Money is a growing trend?

86.3 % — Yes
5.1 % — No
8.5 % — Don't know

Some representative comments from Australian respondents regarding the concept include:

- *"Not really in Australia, but I think it is emerging with libraries questioning the "big deal"."*
- *"This demand is made by administrators who do not understand libraries or the use and re-use of information."*
- *"We constantly have to justify our worth to the organization."*
- *"It's a lot easier for research-intensive libraries (which in Australia are primarily, but not exclusively, the Go8 libraries) than for teaching-intensive unis like ours that DO do research but are more interested in teaching and learning."*
- *"With diminished library acquisitions and operating budgets, libraries are under increasing pressure to operate as traditional businesses. Each dollar spent requires an unprecedented level of justification and future budget allocations will be justified from the proven ROI and value for money savings realized in the past and current years."*

Having established that measuring or demonstrating ROI is a growing trend, the survey divided library stakeholders into several categories and asked respondents to rate them in order of their perceived interest in ROI. This question was designed to elicit the source of the pressures that drive the trend. The results clearly show that the respondents believe it is university administrators, library administrators, and funding bodies/government that are the primary sources of the pressure. Academics, researchers, library staff, students and the community are interested in ROI, but at a much lesser level.

Please rate how important demonstrating Return on Investment or Value for Money is to your stakeholders. 1 indicates the highest importance, 5 the lowest importance.
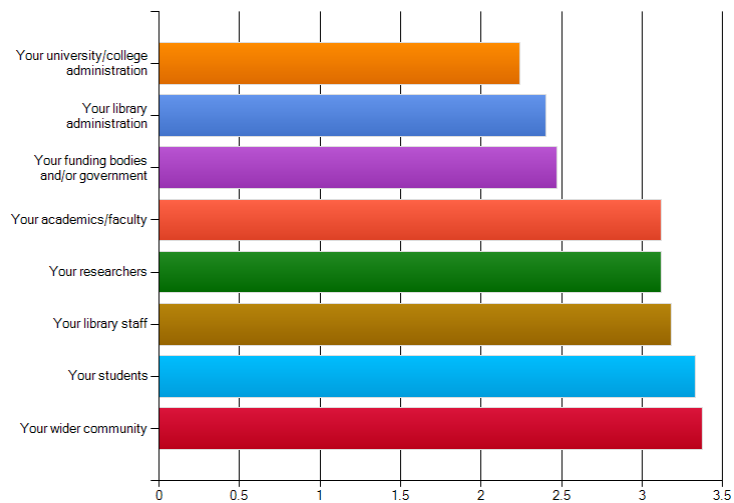
Commentary from respondents on stakeholder pressure include:

- *"Externally, only the overall institutional figures matter. Internally, Uni admin are the only ones who care. Library staff may need to know in order to 'spread the word'. Researchers only care about their own work - it may be important to convince them of library ROI if we are trying to get them to part with grant money to fund a repository or data storage."*
- *"Users are not aware of costs and ROI."*
- *"The push to demonstrate ROI definitely seems to come from the administrators. We the staff are often too busy to keep track of measures, and as long as our faculties, academics, researchers and students are happy with our services, I don't think they think too much about us demonstrating ROI."*
- *"I am responding to this as if the University really had a consistent approach to ROI instead of using it as an excuse to slash and burn. Trying to get a concentrated focus by senior administrators is impossible, not almost impossible. Just impossible!!"*

The survey also revealed a deep and abiding vein of cynicism among librarians regarding the practical utility of measuring ROI. An impressive number of respondents suggested that using business models such as ROI is not suitable or appropriate for libraries, or for qualifying scholarly pursuits. A strong plurality of nearly 45% doesn't believe ROI can be accurately measured or demonstrated at all. Only 32% believe it can and the remainder either

Do you think that measuring and demonstrating Return on Investment or Value for Money is a political and marketing exercise rather than an application of professional metrics or methodology?
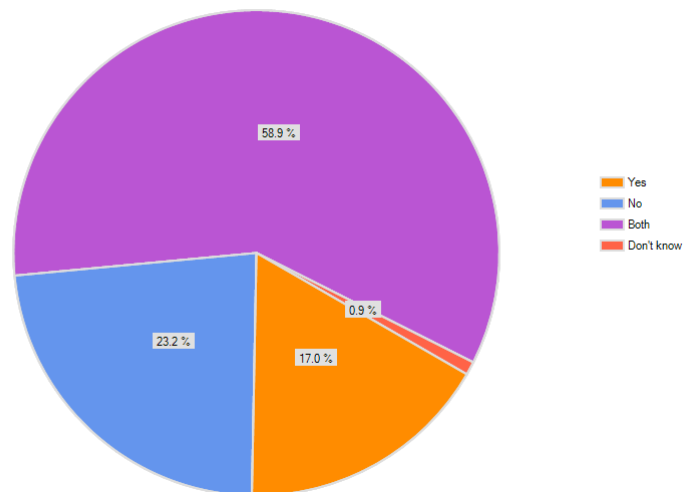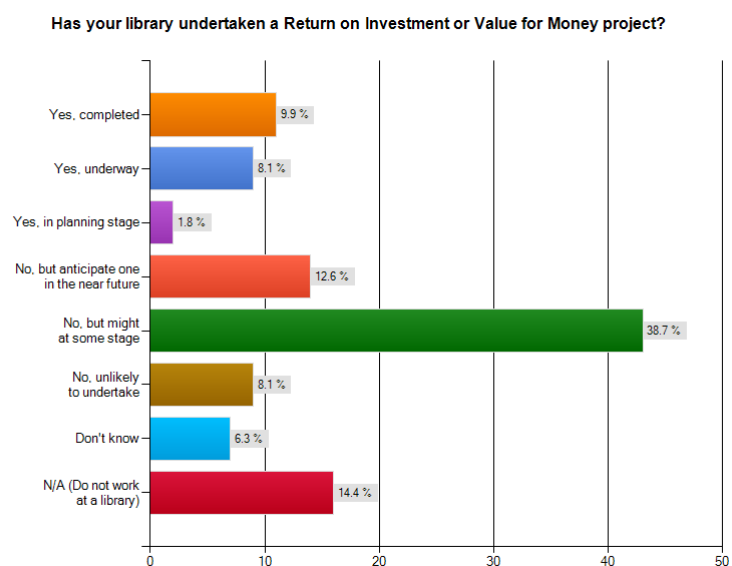
don't know or have not formed an opinion. Somewhat paradoxically, when asked if metrics can be usefully applied to collection development activities (the discovery, selection, acquisition/access of relevant content), a large majority of nearly 80% agreed that they could. This suggests that librarians agree that professional activity might be usefully measured, but that the outcome of such activity cannot. Most tellingly, however, when asked if stakeholder interest in ROI was a political or marketing exercise rather than an application of professional metrics or methodology, nearly 60% of respondents said it was both, 17% said it was, and only about a quarter of respondents said it was not.

Representative commentary from Australian respondents:

- *"Definitely becoming more political, however the days of libraries receiving increased funding year after year are gone, prime real estate being used to house meter after meter of dusty books is also a thing of the past."*
- *"Absolutely, but not, of course, in all disciplines. It is easy to overlook the calibre of local material which may not be highly cited on an international scale - say, for example, research on Australia-specific diseases which will mostly be read by Australians (a much smaller audience than lots of US/European readers)."*
- *"It is impossible to look at ROI without looking at the motivations for academic publishing which is ego/fund/ranking focused. Publishing now is more focused on these issues rather than the dissemination of scholarship."*
- *"I think certain functions can be roughly quantified, but any overall measurement of library ROI etc. will be largely made up. 'Plausible' rather than 'accurate' is probably as good as it's going to get."*
- *"While I think there's value in the concept, accurate measures of ROI in general are a fiction."*
- *"Almost impossible to measure accurately the impact we have on our clients' activities."*
- *"If you're a professional manager and you can't manage your funds, by allocating them to the best possible use, then what are you doing? And how do you allocate if you aren't looking for a high ROI?"*
- *"I think that the longstanding measures of satisfaction to evaluate the success of a library will no longer be sufficient for most key stakeholders. Libraries 'should' be pushing their thinking to how they impact on their clients."*

Having established some degree of knowledge and of the opinions among respondents regarding ROI, the survey attempted to discern the degree to which libraries have undertaken or are actively considering ROI projects.

Nearly 20% of the respondents report that their library has completed an ROI project, that a project is underway, or that a project is in the planning stage. As the survey included a relatively small number (14.4%) of non-librarian industry professionals, this percentage is actually

Has your library undertaken a Return on Investment or Value for Money project?

Response	Percentage
Yes, completed	9.9 %
Yes, underway	8.1 %
Yes, in planning stage	1.8 %
No, but anticipate one in the near future	12.6 %
No, but might at some stage	38.7 %
No, unlikely to undertake	8.1 %
Don't know	6.3 %
N/A (Do not work at a library)	14.4 %

higher. A few indicated that, rather than undertaking a finite project, their libraries are under a consistent ROI evaluation as a matter of routine. Over 12% of respondents report that they anticipate an ROI project in the near future and close to 40% believe they will undertake a project at some stage. Only 8.1% believe it is unlikely their library will undertake a project and an additional 6.3% just don't know. These results clearly underline the trend perception.

Representative commentary from Australian respondents:

- *"We constantly report in terms of ROI & value for money. This is a way of operating, not a project."*
- *"We will have to get on this bandwagon, albeit reluctantly."*
- *"I've like to say we'd look at it, but we don't have time to develop the metrics etc ourselves so if someone else came up with a RELEVENT set of measures that were collectable we might be more interested. We are not under immediate pressure to do so, as far as I know."*
- *"We are in the process of deselecting and have become very aware of the cost involved in do this activity. Even nominating titles to go into off-site storage for low usage titles involves additional and ongoing costs."*
- *"I have not seen any convincing methodologies and my administration talks the talk but then quickly move onto another crisis, so why bother."*
- *"In small areas, but not in any clear substantive way."*
- *"Within a consortium. Would not be in a hurry to do things like contingent valuation for example. A combination of internal data addressing quality, quantity and effectiveness, plus good client feedback and benchmarking with similar institutions should be enough to let library managers know if they are on or off the track."*

The results of the survey strongly support the hypothesis that ROI is a growing trend in academic libraries worldwide. There is, however, no consensus on its validity as an objective exercise or its efficacy as a unified, standardised and comprehensive set of tools for demonstrating value. The large differences among academic libraries, their funding sources, their missions and their practices argue against a "one size fits all" solution to demonstrating and measuring ROI. For example, the use of grants received as a measure of value might work very well for a research library, but would have devastating outcome for a library focused on teaching and learning. If libraries are to be pushed (or jump willingly) into ROI projects, they must learn to pick and choose among the various best practices available and "vector in" on the legitimate result or perception desired. This paper will now take a closer look at a few of these best practices.

Best Practices

> *"Libraries do a really good job at output and input measures, but we're not so good at doing outcomes assessment."*—Patricia Iannuzzi, Dean of University Libraries, University of Nevada, Las Vegas, commenting after attending the Association of College and Research Libraries (ACRL) Summit on the Value of Academic Libraries (James & Iannuzzi, 2012)

There is a large and ever-growing body of literature regarding return on investment (ROI) for libraries (American Library Association 2011). Much of it relates specifically to public libraries (Imholz and Arns 2007), and one important study has been conducted in Victoria (SGS Economics and Planning 2011). Despite their caveats, most happily demonstrate the value of public libraries and assert that libraries make an economic contribution by just being there and include interesting statistics such as *"…for every US$3,491 invested in libraries, one job is created"* (Havens and Storey 2010).

Studies and research on ROI in academic libraries are not new (Pritchard, 1996), however until recently academic libraries have been more lightly treated compared to public libraries. Academic methodologies are now developing rapidly, if belatedly. In Australasia, to cite but two examples, Macquarie University Library conducted an *Academic Consultations Report* designed in part to support efforts aimed at demonstrating and improving value (Kattau & Spencer, 2010), and, New Zealand academic libraries have supported a Performance-Based Fund for academic libraries for some time now (Tertiary Education Commission - Te Amorangi Matauranga Matua, 2012).

In the United States, the ACRL, together with the Association of Public & Land-grant Universities, the Council of Independent Colleges, and the Association for Institutional Research recently held a Value of Academic Libraries Summit to address the pressures and questions surrounding ROI. Featured speakers included Megan Oakleaf and Karen Brown authors of the excellent *Value of Academic Libraries: a Comprehensive Research Report*. In the report, the authors stress that in approaching ROI, a library must first define its approach to determining value for money (Oakleaf, 2010).

There are two important approaches to measuring value; evaluation and assessment:

- Evaluation has to do with standards
- Assessment has to do with goals

In addition, there are three types of value benchmarking that libraries have to consider (University of Tennessee. Center for Information and Communication Studies 2011):

- Usage, Peer Comparison, and other Measures = Implied/Empirical Value
- Stakeholder Testimonials = Explicit Value
- Time and Cost Savings = Contingent Value

The Library must also define its research agenda, especially if its parent institution is participating in any competitive grants scheme. The research agenda can be usefully advanced by describing the library's impact on the university's mission. The ACRL report (Oakleaf 2010) recommends ten specific research areas for which the following questions should be answered:

- How does the library contribute to student enrolment?
- How does the library contribute to student retention and graduation?
- How does the library contribute to student success?
- How does the library contribute to student achievement?
- How does the library contribute to student learning?
- How does the library contribute to the student experience?
- How does the library contribute to faculty research productivity?
- How does the library contribute to faculty grant proposals and funding?
- How does the library contribute to faculty teaching?
- How does the library contribute to institutional reputation or prestige?

In working with a library concerned with demonstrating ROI, Oranjarra Partners generally recommends the library consider the approaches below in measuring and demonstrating implied/empirical value, especially with regard to its identified areas of research expertise.

Peer Review: It is possible to measure holdings (both print and digital) against a set of self-defined peers using the databases of many commercial suppliers. An Australian library can compare its holdings and other content against the Group of Eight or any other Australian or

international peer (assuming all are using that supplier). Using classification and a host of other parameters, a library can obtain peer rankings and develop lists, for example, of titles bought and not bought in the peer group.

Measuring Grants Received: An impressive body of work has been conducted in measuring the academic library's role in helping faculty obtain grant monies. The research has been done in three phases and has now expanded beyond grants to measure other factors. It has also lead to the development of a toolkit for measuring value that the library might usefully employ (ACRL Assessment Committee 2010).

The first phase was a study done at the University of Illinois at Urbana-Champaign (an ARL research library) and described in an Elsevier White Paper (Luther 2008). In it, the following formula was developed:

$$\frac{\left(\begin{array}{c} \textit{Percentage of faculty who use citations in grant proposals who are also PIs:} \\ \left(\dfrac{\textit{number of PIs} \times \text{\% of faculty who use citations in grant proposals}}{\textit{number of tenure system faculty}}\right) \\ \times \\ \textit{Percentage of proposals that are successful and use citations obtained through library:} \\ \left(\dfrac{\textit{number of grant awards} \times \text{\% of faculty who say citations are important to grant awards}}{\textit{number of grant proposals} \times \text{\% of proposals that include citations obtained through library}}\right) \\ \times \\ \textit{average size of grant} \times \textit{number of grants expended in one year} \end{array}\right)}{\textit{total library budget}}$$

The second phase (Tenopir 2010) attempted to refine the methodology and expanded the test to cover eight international libraries, including the University of Adelaide. In it, the formula was revised as indicated below:

$$\frac{\left(\left(\dfrac{\textit{number of grant awards} \times \text{\% of faculty who say citations are important to grant awards}}{\textit{number of grant proposals} \times \text{\% of proposals that include citations obtained through library}}\right) \times \textit{average size of grant} \times \textit{number of grants expended in one year}\right)}{\textit{total library budget}}$$

This approach, while sound, does not work well unless the university has a significant research/grant-derived component. However, as indicated above, it might work well in a library's world standard research areas.

The author recently had an opportunity to discuss the toolkit and the continuing research (ACRL Assessment Committee 2010) with Carol Tenopir and Judy Luther at the Fiesole (Italy) Collection Development Retreat in April 2012. They indicate that the third phase of their research has expanded well beyond grants received and should be available soon.

Measuring Against World Indices: It is possible to measure a library's present print and electronic collections against world indices such as:

- Hathi Trust
- Resources for College Libraries
- WorldCat (OCLC)
- Choice
- Choice Outstanding Academic Titles

This is an expensive and time-consuming process and requires a great deal of data file application, data discovery and mapping, loading, and comparison, but it is a useful measure against these world indices/standards. It may also be refined to include peer comparison.

Paying for this kind of sophisticated service may give librarians pause however. Typical costs can be as much as $35,000 plus consultation and project fees from companies such as Sustainable Collections Services.

> *"As a publisher, I sense librarian dissatisfaction about how publishers offer their wares to libraries. Traditional single journal subscriptions are condemned as too expensive; discounted multi-journal 'Big Deals' often entail taking a proportion of unwanted, unused, content"*—Bill Hughes, Director, Multi-Science Publishing Co, Ltd., posted at Liblicense Discussion Forum, 18 January 2012 (Center for Research Libraries, 2012)

Usage is probably the most popular method of expressing implicit value. The literature is overflowing with methodologies and services, both professional and commercial, designed to measure it s value to academic libraries. Most show, or are meant to address, an alarming lack of use of content in libraries—both print and digital. It is not the purpose of this paper to review this literature or the many products and processes it has engendered in depth, but they do include the enormous rise in the use of demand-driven acquisition and access models for e-books (use being confirmed prior to purchase) and the growing resistance to the "big deal" package schemes for acquiring digital books and journals. In a very real sense, journal subscriptions are the biggest big deal of them all and interest is growing in buying only the journal articles wanted (i.e. that will be used). Models that will accommodate this preference are already in development.

Finally, contingent values measure things like "*What would it cost a user to buy or access services now provided by the library*?" In other words, what would it cost an individual or a society to duplicate these services if the library did not exist? Contingent values also include externalities such as how "green" the library is. The difficulty lies in trying to find a single model or set of simple indicators that can be used by different institutions, and that will compare something across large groups that is by definition only locally applicable—i.e., how well a library meets the needs of its institution." (Havens and Storey 2010). Traditional ROI studies do not account for a library's impact on the reputation of its university or college as a whole, on graduation rates, or on the library's positive effect on student and faculty recruitment and retention. However, studies have shown (Cain and Reynolds 2006) that there is now enough solid evidence to make a convincing case for the library's seemingly under-valued contribution to the reputation and prestige of the university it serves. For example, the study finds that library expenditures are a significant predictor of institutional reputation. Libraries are

encouraged to usefully employ these and other methods to demonstrate value for money. For a final example, in the United States, a study by *Facilities Management* measured, among many things, the university facilities that are extremely or very important to students and their parents when selecting a preferred university. Remarkably, the library came in at number 2 behind only facilities for the students' intended major/degree. Librarians would be well advised not ignore these factors when asked to demonstrate the value of their libraries to funding bodies and other stakeholders.
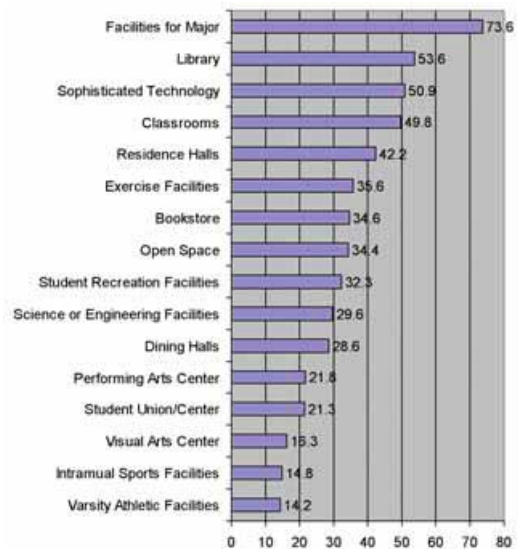
ROI is very much a work in progress, but academic libraries now have an impressive and growing set of tools in demonstrating their value to stakeholders.

Citations

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