Performance indicators at TUM library

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PERFORMANCE INDICATORS AT TUM LIBRARY

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Abstract

Strategic management relies on more than personal experience and intuition. Performance indicators define the essential factors an institution needs for benchmarking and for monitoring its output and efficiency. They provide the foundation for management decisions concerning the development of an organization and its services.

In Germany, the German Library Statistics (Deutsche Bibliotheksstatistik, DBS) gathers indicators reflecting library performance from more than 10,000 public and 271 academic libraries. The indicators are arranged in the divisions library facilities and equipment, holdings, loans, spending, budget and staff.

Facing constantly changing customers’ needs and roles for librarians, the library of Technische Universität München (TUM) has decided to develop tailor-made performance indicators to measure and evaluate innovative services such as the library’s communication and data management infrastructure project eRIC the library’s teaching role and its document and publication server mediaTUM.

TUM library implemented a quality management system according to the ISO 9001 standard in 2007. The presentation provides an insight into the developing and implementation process of the library’s set of performance indicators in the framework of its quality management system.

Keywords: Strategic Management, Performance Indicators
The Technische Universität München (TUM) was founded in 1868 as the first and to this day the only state technical university of Bavaria. Planning to become an entrepreneurial university, TUM is aiming to “compete in the international competition for knowledge and innovation” [Technische Universität München, “En route to the entrepreneurial University” 2003 – 2015]. As a central service institution of TUM, the university library is committed to this strategy. One means to contribute to the university’s entrepreneurial objective, is the establishment of a quality management system based on the globally recognized ISO 9001 standard. TUM Library is the first German university library certified according to the ISO 9001 standards. “Through quality management, the university library aims at continually offering excellent service at the highest level.” [Universitätsbibliothek der Technischen Universität München, “Quality Management”]. Besides its focus on customer orientation, the process-based ISO 9001 serves as a framework for planning and realization, measurement, analysis and improvement of services.

TUM Library comprises nine branch libraries, situated at the university’s four locations in Munich, Garching, Weihenstephan and Straubing. With a total staff of 115, TUM Library provides access to information and support for more than 37,000 students and almost 10,000 staff members.

Since the early 2000s, TUM Library is organized as a one-tier library system. Prior to 1976, the different branches of the library were considered as sections of university departments, each equipped with own budget, media stock and personnel. Several steps of centralization were taken since then. Due to TUM’s new strategy as an entrepreneurial university which was adopted in 1998, the library was reorganized. All branch libraries were integrated and put under the responsibility of the University Librarian, becoming head of the institution with the liability for budget and staff. Existing library regulations were unified, others established to define the objectives of TUM Library. Working procedures were evaluated and standardized in order to provide a portfolio of consistent services for all branch libraries. Along with the establishment of a mission statement, containing a commitment to professional innovation and efficiency [Universitätsbibliothek der Technischen Universität München, “Mission Statement”], these organizational changes were the first measures to implement quality management.

With the assistance of the ISO 9001 quality framework, TUM Library was able to

- identify who its customers are and what they expect from the library
- decide which expectations should be met and which not
- define the library’s tasks and responsibilities
- organize its services from the customer’s point of view
- develop a mission, goals and objectives
- define clear competencies, put down in an organizational chart
- establish library regulations to assure compliance with legal aspects

Today, more than 20 staff members contribute to maintaining the library’s quality management system on a regular basis. This group comprises the two library quality management officers, five quality management representatives for the library departments and a team of 13 members performing internal auditing.

With several years of experience in quality management, being regularly evaluated internally as well as externally, we are able to continuously improve our workflows and to adopt the customer’s point of view. In the last few years, we strengthened our quality management routines, assuring the systematic approach to implement measures and to evaluate their success. With these efforts, we felt a rising need to measure the effects of the actions we were taking. Would the typically collected statistical data match our needs?
Library Statistics and Benchmarking in Germany

The German Library Statistics (http://www.hbz-nrw.de/angebote/dbs/) contains a data set for the performance of more than 10,000 public and 271 academic libraries covering the sections library facilities and equipment, holdings, loans, spending, budget and staff. To compile this elaborate data set of up to 400 indicators is a returning assignment for German librarians in the first quarter of the year. Probably because it is very time-consuming to collect the required data, librarians often tend to regard this statistics as a necessary but cumbersome obligation and an end in itself.

TUM library is not using data from the German Library Statistics to support its decision making process systematically. One reason for this is that the data gathered is mainly collection-based. It is basically limited to more traditional objectives of libraries and changing parameters are only taken into account gradually. Moreover, key data of branch libraries - being part of a university library system - is not represented.

The German benchmarking project Library Index BIX (http://www.bibliotheeksindex.de/en/project-info/general-information.html) is offering a different approach to measuring library performance. BIX is a benchmarking project for public and academic libraries in Germany. Most of the indicators are calculated on the basis of data gathered by the German Library Statistics. For academic libraries, 17 indicators are used to measure performance in the dimensions services, usage, efficiency and development. Benchmarking enables an organization to compare its performance against the performance of its competitors and to identify room for improvement. The benefit of benchmarking is highly depending on the comparability within the peer group. Its use for developing a custom-tailored library profile end for measuring specific processes is limited.

Developing key indicators for TUM library

At TUM library, it has long been a wish of the University Librarian to dispose of a data set that would allow the university library to raise its profile and to support decision making for strategic library planning. Performance indicators should therefore state the library’s targets and allow measuring the extent to which they have been reached.

In 2013, the library’s quality management team consisting of the two quality management officers and the quality management representatives of the five library departments was assigned to carry out a project compiling a set of suitable indicators. The figures should:

- reflect the library's mission and goals
- focus on modern and profile defining services
- represent the main areas of our projects and innovations
- be able to visualize the changes of our customers' demands
- contain ratios as well as data to establish time series
- be relatively easy to be measured

In the process of defining our tailor-made indicators, we discovered that a multitude of data is available throughout the library. In some cases, the data was already used to support decision making on a regular basis, although other affected departments or staff members did not know about it. Gaining an overview of this data was one of the objectives within the project. This existing data as well as figures from the German Library Statistics and BIX provide the basis for TUM library’s own performance indicators.

According to the customer-oriented ISO 9001 approach, we decided to take the customer’s point of view on how they experience library services in order to detect and categorize suitable performance indicators. Finally, the indicators were divided into the dimensions:

- Literature supply (14)
- Data management, scientific writing and publishing (9)
- Staff (9)
TUM library’s data set contains a total of 87 indicators including different types of figures. Some of the indicators are used to establish time series. This kind of key figures provide a sequences of data points measured at different time intervals, permitting to derive future developments. An example for this is the number of physical library visits. Ratios are used to analyze data in relation to other data items, for instance the number of loans, digital accesses or study spaces per capita of the primary user group. Furthermore, TUM library’s data set distinguishes between indicators that matter for strategic planning and indicators that are useful on departmental level. Most of the indicators from the dimension “Library as a place” are used on departmental level whereas the performance in profile-building services such as the number of digital course reserves for e-learning is considered to be relevant for strategic planning. Ideally in terms of quality management, indicators should be related to the library’s mission and goals and should permit measuring the extent to which they have been reached. At TUM library, we distinguish between “target indicators” and “monitoring indicators”. “Target indicators” describe the performance in relation to the achievement of a defined target. Pre-defined targets could be specific numbers or a range, for example an increase of 10% or results should remain stable with a tolerance of 10% in both directions. Most of TUM library’s indicators are “monitoring-indicators”. We are planning to increase the number of “target-indicators” with more experience in using the indicators.

Ideas for suitable indicators were first discussed in the quality management team. To begin with, we talked about customer expectations of services in the defined dimensions with relevance to strategic planning. After identifying the involved departments, the quality management representatives for these departments prepared proposals for relevant data from the department’s point of view. The departmental heads were also involved in the process. The proposals were then discussed within the team where we tried to reach an agreement. The actual data was already collected at this early stage – as far as possible - in order to estimate the informative value of the proposed indicators. The proposals were submitted for discussion to the library’s executive committee - consisting of the heads of department and the University Librarian. After the adoption of the indicators by the executive committee, we proceeded with the retroactive collection of the required data, focusing primarily on indicators based on data from in the German Library Statistics.

**Data collection and analysis**

We started our data collection with the dimension “Literature supply”. This dimension is well represented in the German Library Statistics. After familiarizing ourselves with the indicators of German Library Statistics, everyone on the team selected ten indicators which reflect TUM library’s performance in this dimension. We had some overlap, but also several variations within our choices, showing the specific angles of the team members. We discussed the initial list in order to decide which indicators should be submitted to the library’s executive committee. Finally, in the dimension “Literature supply” 14 indicators were adopted. Examples for these indicators are the usage of print materials and in comparison to the usage of digital materials per capita of the primary user group. Whereas the usage of printed materials continuously declined, the usage of digital material has risen from roundabout 27 chapter-downloads in 2013 to 48 in 2014. During the same period, the acquisition of e-books per capita of the primary user group doubled.

The dimension “Data management, scientific writing and publishing” is the most forward-looking category. It contains indicators for measuring usage and access to documents on TUM’s institutional repository mediaTUM, Open Access publications or the usage of reference management software and digital course reserves. We gathered this data starting with the reference year 2013. Within one year, the percentage of the faculties using mediaTUM for their publications increased from 46% to 53%. The number of documents rose in the same time from roundabout 260,000 to 280,000. For a more detailed analysis, the collection data as well as the usage data are itemized according to different types of documents.
In the dimension “Library as a place”, data of all branches of TUM library is gathered and depicted separately. It contains amongst others the number of study spaces, the amount of places in individual or group study rooms and the number of scanners per 1,000 members of the primary user group. This data provides us valuable information for the decision making in regard to construction projects or the reorganization of study areas. We are also measuring the number of copies, scans or prints produced in the public areas of the library.

The indicators in the dimension “Customer contact: information, courses and public relations” are measuring TUM library’s ability to communicate with its customers irrespective of the communication channel (telephone, chat, e-mail, WhatsApp and Facebook). Personal customer contacts are not included because of the difficulties to measure these contacts. In contrast to electronic communication channels where the software often provides evaluation tools, personal contacts can only be collected through manually filled-in tally sheets. The number of e-learning material produced by ourselves and its usage per capita of the primary user group is also an important figure. In 2013, we provided 73 of such e-learning materials which were accessed more than 32,000 times, which means that statistically 3 out of 4 students or scientists made use of the material. Concerning public relations, one focus lies on our Facebook presence. Here, we are measuring the total reach coverage and the total likes of the page but also the average number of Facebook posts per week. This last indicator has a direct effect on processes in the public relations office: workload, procedures and resources have to be organized so that the target value of 3.5 posts per week can be reached.

The indicators in the dimension “IT and technical services” are aiming at a visualization of the workload for support services as well as the up-to-dateness of the technical equipment. The indicators should support us in planning the timelines for larger IT and technical acquisitions.

Taking the customer’s point of view can easily lead to focusing on the customer-related services of the library, overlooking relevant planning or controlling processes. TUM library’s first indicators to measure management performance were related to human relations management. In this area, we are measuring the personnel composition in relation to aspects such as gender, disabilities or employment contracts. Furthermore, indicators for staff training such as training days per FTE were established. Following the suggestion of our certifying body TÜV Süd to include more indicators for measuring other relevant management processes, we identified further key figures in order to measure the library’s budget and expenditures and the number of projects. We also added indicators reflecting the performance of our quality management system. These are the number of internal audits executed or the quota of updates of our standardized working procedures.

**Indicators in the framework of TUM quality management**

Defining the indicators was just one aspect of the project. Applying quality management standards to the indicators also means to define the responsibilities for gathering the data, and to institutionalize the discussion of the results with the involved parties.

In the framework of quality management, performance measurement and the evaluation of the processes serve as a basis for continuous improvement. In case a target value is not reached, different action lines are imaginable:

- evaluate the demand for the service
- promote the service
- increase manpower
- improve the workflow

TUM library’s quality management system offers variable tools to decide which alternative is the best in the specific case. The search for the causes why a target value has not been reached can be conducted in the framework of internal auditing. Via internal auditing, qualified staff is taking a closer look at selected business processes at TUM library to assure their effectiveness and efficiency. The auditors are independent in the sense that they are not in charge of the processes they are inspecting. Criteria for internal auditing of processes are questions as
• is the process regulated?
• do the staff members know about the regulations?
• is the process done according to the regulations?
• can it be proved?
• are there possibilities for improvement?

Also, the ISO 9001 is demanding quite an extensive documentation in order to proof that a quality management system is fulfilling its requirements. The documentation contains our mission and objectives, standardized working procedures, responsibilities and communication structures and serves as a repository of corporate knowledge. Although we sometimes complain about the extensive paperwork, it is a valuable support when it comes to identifying a starting point for improvements.

Outlook

With a set of indicators and the responsibilities for collecting the data being established, we are now looking forward to discussing our results of the year 2014. This discussion will take place in the framework of the annual management review. The results will be presented to the executive committee. The quality management team will assist the development and implementation of measures to improve the library’s performance.

In the future we will continue to collect data in order to visualize and to improve the library’s performance. The selected indicators will need to prove their practicability in the years to come. We will need to evaluate the indicators especially concerning quantity, coverage, informative value and the outcomes for library performance.

References:

