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Information and documentation — Library performance indicators

Information et documentation — Indicateurs de performance des bibliothèques

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 11620 was prepared by Technical Committee ISO/TC 46, *Information and documentation*, Subcommittee SC 8, *Quality — Statistics and performance evaluation*.

This second edition cancels and replaces the first edition (ISO 11620:1998), its Amendment 1 (ISO 11620:1998/Amd.1:2003) and ISO/TR 20983:2003, which have been technically revised. The revision incorporates performance indicators for electronic and traditional library services and resources into a single document, and includes technical updates to performance indicators of electronic and traditional library services and resources.

Introduction

This International Standard is concerned with the evaluation of libraries of all types.

The main purpose of this International Standard is to endorse the use of performance indicators in libraries and to spread knowledge about how to conduct performance measurement.

This international library community has expressed its commitment to the development of an International Standard for library performance indicators. By the establishment of this International Standard, the use of performance indicators can be advanced and libraries in developing and developed countries will benefit from the knowledge and skills associated with formal planning procedures and data collection processes.

The quality of library services is related to the broader topic of quality management and quality assurance. This International Standard acknowledges and supports the standards prepared by ISO/TC 176.

Every performance indicator in this International Standard is given a unique name. This name sometimes differs from the literature upon which its description is based. Such differences are documented in the descriptions of the performance indicators.

The performance indicators included in this International Standard are either in widespread use or well documented in the literature. Some of the descriptions of performance indicators incorporate modifications of performance indicators described elsewhere: these reflect practical experience or the need to generalize. Input and resource based ratios are very well documented in the literature and provide a context for library performance indicators as defined in this International Standard.

There are some library activities and services for which, during the development of this International Standard, there was a general lack of tested and well-documented performance indicators. These include outcome and impact measures for libraries. Electronic services will continue to develop and evolve, and such evolution will require monitoring as related to the performance indicators in this International Standard. The library and information community is encouraged to establish mechanisms and to give a high priority to developing relevant performance indicators for existing and emerging library services and resources.

This International Standard does not include performance indicators for the evaluation of the outcomes of library services either on individuals, the communities that libraries serve, or on society at this time. This is an evolving area of performance measurement for libraries. This International Standard will be maintained and developments monitored. Additional performance indicators will be incorporated as they are tested and validated.

Performance indicators may be used for comparison over time within the same library. Comparisons between libraries may also be made, but only with caution. Between library comparisons will need to take into account any differences in the constituencies of the libraries, with good understanding of the performance indicators used, and careful interpretation of the data (see 5.3.5).

There are other limitations to the performance indicators in this International Standard that depend on local factors such as the community the library serves, service mandates, and technology infrastructure configuration. It is advisable that results from the use of performance indicators listed in this International Standard be interpreted with regard to these factors.

The performance indicators included in this International Standard do not reflect all possible measures or evaluation techniques. The International Standard offers accepted, tested, and publicly accessible methodologies and approaches to measuring a range of library service performance.

This International Standard is not intended to exclude the use of performance indicators that have not been specified within it (see Clause 5).

More detailed information concerning methodology and analysis in establishing performance indicators in libraries can be found in References [1] to [30] listed in the Bibliography.

A group operating under the auspices of ISO/TC 46/SC 8 is responsible for maintaining this International Standard. Newly developed performance indicators are vetted by an appointed group of experts and descriptions are published as amendments to this International Standard as rapidly as possible after ballot submitted to the national committees.

Information and documentation — Library performance indicators

1 Scope

This International Standard specifies the requirements of a performance indicator for libraries and establishes a set of performance indicators to be used by libraries of all types. It also provides guidance on how to implement performance indicators in libraries where such performance indicators are not already in use. The list of performance indicators are summarized in Annex A and details given in Annex B.

This International Standard provides a standardized terminology and concise definitions of the performance indicators. Furthermore, this International Standard contains concise descriptions of the performance indicators and of the collection and the analysis of data needed.

This International Standard is applicable to all types of libraries in all countries. However, not all performance indicators are applicable to all libraries. Limitations on the applicability of individual performance indicators are listed for each performance indicator in Annex B.

This International Standard does not specify performance indicators for all services, activities, and uses of the resources of the library, either because such performance indicators had not been proposed and tested at the time of formulation of this International Standard, or because they did not fulfil the criteria specified (see 4.2).

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1
accessibility
ease of reaching and using a service or facility

2.2
active borrower
registered user who has borrowed at least one item during the reporting period

2.3
active user
registered user who has visited or made use of library facilities or services during the reporting period

NOTE   This may include the use of electronic library services.

2.4
appropriateness
suitability of any given performance indicator for evaluating a specific activity

2.5
availability
degree to which content, documents, facilities or services are actually provided by the library at the time required by users

2.6
computer file
data or software program, e.g. computer game, language course and other application software that is available on computer-readable disks, tapes or other storage media to users for loan or in-house use

NOTE   Adapted from ANSI/NISO Z39.7:2004.

2.7
content downloaded
content unit that is successfully requested from a database, electronic serial or digital document

[ISO 2789:2006, definition 3.3.3]

2.8
content unit
computer-processed uniquely identifiable textual or audiovisual piece of published work that may be original or a digest of other published work

NOTE 1   Adapted from **item** in COUNTER code of practice, Release 2:2004.

NOTE 2   Descriptive records are excluded.

NOTE 3   PDF, Postscript, HTML and other formats of the same content unit will be counted as separate items.

[ISO 2789:2006, definition 3.2.9]

2.9
database
collection of electronically stored descriptive records or content units (including facts, full texts, pictures, and sound) with a common user interface and software for the retrieval and manipulation of the data

NOTE 1   The units or records are usually collected with a particular intent and are related to a defined topic. A database can be issued on CD-ROM, diskette, or other direct-access method, or as a computer file accessed via dial-up methods or via the internet.

NOTE 2   Licensed databases are counted separately even if access to several licensed database products is effected through the same interface.

NOTE 3   A common interface providing access to a packet of serials or digital documents, usually offered by a publisher or vendor, is also to be counted as database. Additionally, the single serials or digital documents need to be counted as serials or digital documents.

[ISO 2789:2006, definition 3.2.10]

2.10
descriptive record
computer-processed bibliographic or other individual record in a standard format that references and/or describes a document in any physical form or a content unit

NOTE 1   A collection of descriptive records is usually published in the form of a database.

NOTE 2   The record can include elements such as title, author, subject, abstract, date of origin, etc.

[ISO 2789:2006, definition 3.2.11]

2.11
digital document
information unit with a defined content that has been digitized by the library or acquired in digital form as part of the library collection

NOTE 1   This includes eBooks, electronic patents, networked audiovisual documents and other digital documents, e.g. reports, cartographic and music documents, preprints, etc. Databases and electronic serials are excluded.

NOTE 2   Items incorporated in databases are covered by 2.9.

NOTE 3   A digital document can be structured into one or more files.

NOTE 4   A digital document consists of one or more content units.

[ISO 2789:2006, definition 3.2.12]

2.12
document
recorded information or material object, which can be treated as a unit in a documentation process

[ISO 5127:2001, definition 1.2.2]

NOTE   Documents may differ in their physical form and characteristics.

2.13
download
successful request of a descriptive record or content unit, e.g. for displaying, printing, saving, or e-mailing

NOTE   For web server logs, successful requests are those with specific return codes, as defined by NCSA (National Center for Supercomputing Applications).

[ISO 2789:2006, definition 3.3.4]

2.14
effectiveness
measure of the degree to which given objectives are achieved

NOTE   An activity is effective if it maximizes the results it was established to produce.

2.15
efficiency
measure of the utilization of resources to realize a given objective

NOTE   An activity is efficient if it minimizes the use of resources, or produces better performance with the same resources.

2.16
electronic book
eBook
digital document, licensed or not, where searchable text is prevalent, and which can be seen in analogy to a print book (monograph)

NOTE 1   The use of eBooks is, in many cases, dependent on a dedicated device and/or a special reader or viewing software.

NOTE 2   eBooks can be lent to users either on portable devices (eBook readers) or by transmitting the contents to the user's PC for a limited time period.

NOTE 3   Doctoral dissertations in electronic format are included.

NOTE 4   Documents digitized by the library are included.

[ISO 2789:2006, definition 3.2.15]

2.17
evaluation
process of estimating the effectiveness, efficiency, utility and relevance of a service or facility

2.18
external user
user of a library who does not belong to that library's population to be served

[ISO 2789:2006, definition 3.3.8]

2.19
facilities
equipment, study places, etc., provided for library users

NOTE   Includes photocopiers, online terminals, CD-ROM workstations, seats for reading and study carrels, but excludes toilets, cafes and public telephones.

2.20
free internet resource
internet resource with unrestricted access

[ISO 2789:2006, definition 3.2.18]

2.21
full-time equivalent
FTE
measurement equal to one staff person working a full-time work schedule for one year

EXAMPLE   If out of three persons employed as librarians, one works quarter-time, one works half-time, and one works full-time, then the FTE of these three persons would be $0,25 + 0,5 + 1,0 = 1,75$ librarians (FTE).

NOTE   Not all libraries may use the same number of hours per year to determine an FTE. Thus, any comparative measures between libraries may need to consider any differences in hours.

2.22
goal
desired state of affairs to be achieved by the implementation of agreed policies

2.23
performance indicator
expression (which may be numeric, symbolic or verbal) used to characterize activities (events, objects, persons) both in quantitative and qualitative terms in order to assess the value of the activities characterized, and the associated method

2.24
library
organization, or part of an organization, the main aims of which are to build and maintain a collection and to facilitate the use of such information resources and facilities as are required to meet the informational, research, educational, cultural or recreational needs of its users

NOTE 1   These are the basic requirements for a library and do not exclude any additional resources and services incidental to its main purpose.

NOTE 2   Where a library has more than one function (e.g. school library and public library), it generally either decides what is its primary function or, in extreme cases, divides its functionality and report data accordingly.

[ISO 2789:2006, definition 3.1.5]

NOTE 3   This may include virtual and/or electronic libraries provided that they adhere to the primary definition of a library.

2.25
library website
unique domain on the internet consisting of a collection of web pages that is published by a library to provide access to the library's services and resources

NOTE 1   The pages of a website are usually interconnected by the use of hypertext links.

NOTE 2   Excludes documents that fit the definitions of electronic collection and free internet resources that can be linked from the library website.

NOTE 3   Excludes web services in the library's domain that are operated on behalf of other organizations.

2.26
loan
direct lending or delivery transaction of an item in non-electronic form (e.g. book), of an electronic document on a physical carrier (e.g. CD-ROM) or other device (e.g. eBook reader), or transmission of an electronic document to one user for a limited time period (e.g. eBook)

NOTE 1   Loans include user-initiated renewals as well as registered loans within the library (on-site loans). Renewals need to be counted separately.

NOTE 2   Loans include copied documents supplied in place of original documents (including fax) and printouts of electronic documents made by library staff for the user.

NOTE 3   Loans of documents in physical form to distance users are included here.

NOTE 4   Mediated electronic transmission of documents is counted as electronic document delivery if their use is permitted for unlimited time. This includes transmissions to members of the population to be served.

[ISO 2789:2006, definition 3.3.14]

2.27
metadata
structured data about data, including data associated with either an information system or an information object for purposes of description, administration, legal requirements, technical functionality, use and usage, and preservation

NOTE   Adapted from Dublin Core Metadata Initiative.

2.28
mission
statement approved by the authorities formulating the organization's goals and its choices in services and products development

2.29
objective
specific target for an activity to be attained as a contribution to achieving the goal of an organization

2.30
performance
effectiveness of the provision of services by the library and the efficiency of the allocation and use of resources in providing services

2.31
performance indicator
numerical, symbolic or verbal expression, derived from library statistics and data used to characterize the performance of a library

2.32
population to be served
number of individuals for whom the library is set up to provide its services and materials

NOTE   For public libraries, this will normally be the population of the legal service area (authority); for libraries of an institution of higher education, this will normally be the total of academic and professional staff plus students.

2.33
quality
degree to which a set of inherent characteristics fulfils requirements

NOTE 1   The term "quality" can be used with adjectives such as poor, good or excellent.

NOTE 2   "Inherent", as opposed to "assigned", means existing in something, especially as a permanent characteristic.

[ISO 9000:2005, definition 3.1.1]

2.34
record downloaded
descriptive record that is successfully requested from a database or the online catalogue

[ISO 2789:2006, definition 3.3.19]

2.35
operating expenditure
ordinary expenditure
money spent on staff, and on resources which are used and replaced regularly, excluding capital expenditure such as main capital items, new buildings, extensions or modifications to existing buildings and computer equipment

NOTE   Operating expenditure is calculated in various ways in different institutions, authorities and countries, and it does not seem possible to prescribe only one way of doing it. Calculation will have to be done according to normal practice in the context where this measure is applied. This also means that comparisons are only valid when calculations are done according to the same principles. Operating expenditure normally includes: salaries and wages (including employee benefits, social costs, etc.), costs of acquiring documents for the collection, administrative costs, maintenance of buildings, collections, etc., rental costs or depreciation costs of buildings and equipment, and other operating expenses (heating, lighting, electricity, etc.).Value-added taxes, sales and service taxes or other local taxes are normally included, unless a performance indicator is used for international comparisons.

2.36
registered user
person or organization registered with a library in order to use its collection and/or services within or away from the library

NOTE   Users can be registered upon their request or automatically when enrolling in the institution.

[ISO 2789:2006, definition 3.3.20]

2.37
rejected session
turnaway
unsuccessful request of a database or the online catalogue by exceeding the simultaneous user limit

NOTE   Request failure because of wrong passwords is excluded.

[ISO 2789:2006, definition 3.3.21]

2.38
reliability
degree to which a measure repeatedly and consistently produces the same result

2.39
session
successful request of a database or the online catalogue

NOTE 1   A session is one cycle of user activities that typically starts when a user connects to a database or the online catalogue and ends with explicit (by leaving the database through log-out or exit) or implicit (timeout due to user inactivity) termination of activities in the database. The average timeout period would be 30 min. If another time period is used, this needs to be reported.

NOTE 2   Sessions on the library website are counted as virtual visits.

NOTE 3   Requests of a general entrance or gateway page needs to be excluded.

NOTE 4   If possible, requests by search engines need to be excluded.

[ISO 2789:2006, definition 3.3.25]

2.40
special grant
grant of a non-recurrent nature to fund (or partly fund) projects

[ISO 2789:2006, definition 3.5.4]

2.41
target population
groups of actual and potential users appropriate to an individual library as the object of a specific service or as the primary users of specific materials

2.42
title
words at the head of a document thus identifying it and normally distinguishing it from others

[ISO 5127:2001, definition 4.2.1.4.1]

NOTE   For measuring purposes, "title" describes a document, which forms a separate item with a distinctive title, whether issued in one or several physical units, and disregarding the number of copies of the document held by the library.

2.43
user
recipient of library services

NOTE   The recipient can be a person or an institution, including libraries.

2.44
user training
training programme set up with a specified lesson plan, which aims at specific learning outcomes for the use of library and other information services

NOTE 1   User training can be offered as a tour of the library, as library tuition, or as a web-based service for users.

NOTE 2   The duration of lessons is irrelevant.

[ISO 2789:2006, definition 3.3.28]

2.45
validity
degree to which a performance indicator actually measures what it is intended to measure

2.46
virtual visit
user's request on the library website from outside the library premises, regardless of the number of pages or elements viewed

NOTE 1   A website visitor is either a unique and identified web browser program or an identified IP address that has accessed pages from the library's website.

NOTE 2   The interval between two consecutive requests generally is no longer than a time-out period on 30 min if they are to be counted as part of the same virtual visit. A longer interval initiates a new visit.

NOTE 3   Web servers providing services whose statistics are reported at another site are to be excluded from the statistics of the library website.

[ISO 2789:2006, definition 3.3.29]

2.47
visit
person (individual) entering the library premises

[ISO 2789:2006, definition 3.3.30]

NOTE   Includes both simple counts and ratios between counts as long as they are used to characterize the performance of a library.

3   Notation

By convention, throughout the text, the names of performance indicators are printed with initial capitals for significant words, e.g. Library Visits per Capita so as to distinguish the names of performance indicators from supporting text.

4   Criteria and descriptive framework

4.1   General

4.1.1   The purpose of library performance indicators is

a)   to function as tools to assess the quality and effectiveness of services, resources, and other activities provided by a library, and

b)   to assess the efficiency of resources allocated by the library to such services and other activities.

4.1.2   Annex B presents a set of performance indicators that have been thoroughly tested by widespread use in libraries or through explicit testing by researchers and subsequent documentation in the literature. Some descriptions of performance indicators include modifications which reflect practical experience, or the need to generalize the performance indicators for general application.

4.1.3   All performance indicators included in Annex B fulfil the criteria presented in 4.2 and are specified according to the descriptive framework presented in 4.3. Performance indicators to be added in revisions of this International Standard will have to fulfil the same criteria and follow the same descriptive framework.

4.1.4   New or alternative performance indicators may be developed in order to cover other activities and services or to serve a specific purpose. It is recommended that such performance indicators be evaluated and described according to 4.2 and 4.3 (see also Clause 5).

NOTE   Care has been taken to describe the performance indicators individually and independently of other performance indicators. This need not imply that the performance indicators be used in isolation. When collecting data, it will in many cases be possible and practical to collect data for two or more performance indicators at the same time, as is shown in most manuals.

4.2   Criteria

4.2.1   In order to claim compliance with this International Standard, a library performance indicator has to be thoroughly tested, validated, and (preferably) documented in the literature. Performance indicators that are in widespread use in libraries may be accepted although they have not been explicitly documented.

4.2.2   The following criteria should be used to test a performance indicator:

a)   **Informative content**. The performance indicator has to be informative as a tool for measuring an activity, for identifying achievements, and for identifying problems and shortcomings in the performance of the library so that action can be taken to remedy these. It should provide information for decision-making, e.g. for setting goals, budget allocation, prioritizing services and activities.

b)   **Reliability.** A performance indicator has to be reliable in the sense that it consistently produces the same result when used repeatedly under the same circumstances.

NOTE   The fact that a performance indicator reflects the underlying variability of the data, such as seasonal variations or fluctuations in loan activities does not in itself mean that the performance indicator is not reliable.

c)   **Validity.** The performance indicator shall be valid in that it shall measure what it is intended to measure.

NOTE   The fact that some performance indicators are indirect performance indicators or rough estimates does not in itself mean that they are not valid.

d)   **Appropriateness.** The performance indicator shall be appropriate for its intended purpose. That is, the units and scale shall be suitable, and the operations necessary to implement the process of measurement should be compatible with the library's procedures, physical layout, etc.

e)   **Practicality.** The performance indicator has to be practical in the sense that it uses data that the library can produce with a reasonable amount of effort in terms of staff time, staff qualifications, operational costs and users' time and patience.

If the performance indicator is intended for comparisons between libraries, a sixth criterion [item f)] applies.

f)   **Comparability.** A library performance indicator allows comparisons between libraries if the same score, making allowance for the accuracy of the score, means the same level of quality of services or the same level of efficiency in the libraries to be compared (see also 5.3.5).

NOTE 1   It is vital to ensure that the activities being measured are comparable.

NOTE 2   This criterion is sufficient for ranking libraries according to the score of the performance indicator, but is not sufficient to determine, for example, that a library with twice the score of another is twice as good.

4.3   Descriptive framework

4.3.1   General

The performance indicators included in Annex B are described according to the following framework, which should also be used in developing descriptions of new or alternative performance indicators.

4.3.2   Balanced Scorecard Approach

The presentation of the performance indicators in this International Standard follows the Balanced Scorecard Approach (see Reference [11]). This approach creates a performance indicator framework with four major areas of measurement:

a)   **Resources, Access, and Infrastructure,** which presents performance indicators that measure the adequacy and availability of library resources and services (e.g. staff, titles, public access workstations);

b)   **Use,** which presents performance indicators that measure the usage of library resources and services (e.g. library materials loans, electronic resource downloads, and facilities use);

c)   **Efficiency,** which presents performance indicators that measure resource and service efficiency (e.g. costs per loan, electronic resource session or download; time required to acquire or process documents; and correct answer fill rate);

d)   **Potentials & Development,** which provides performance indicators that measure the library's input into emerging service and resource areas and its ability to gain sufficient funding for development (e.g. percentage of expenditures on electronic resources and attendances at formal training lessons by staff).

This organization provides users of this standard with the ability to identify major areas for performance measurement by content and type of performance indicator.

The performance indicators are further categorized along the five service/resource areas of collection, access, facilities, staff and general.

4.3.3   Description of performance indicators

4.3.3.1   General

The description of each performance indicator shall be presented as outlined in 4.3.3.2 to 4.3.3.9.

4.3.3.2   Name

Each performance indicator shall have a unique, descriptive name.

4.3.3.3   Objective

Each performance indicator shall have an explicit objective, stated in terms of the service(s), activity(ies) or use(s) of resources to be evaluated.

4.3.3.4   Scope of the performance indicator

The scope shall state the types of libraries to which the performance indicator can be applied.

The scope may state whether the performance indicator is suitable for comparison between libraries and whether there are any limitations concerning comparability.

The scope may include other limitations in the application of the performance indicator.

NOTE   The scope statement can include qualifications, instances and situations to show how the performance indicator can be applied. For example, the scope can state whether the performance indicator is only suitable for certain parts of the collection such as the loan collection or the reference collection; or whether the performance indicator can be used both for the library service or activity as a whole, and for parts of the library service, or for showing differences between subjects or parts of the population served.

4.3.3.5   Definition of the performance indicator

Each performance indicator shall be defined uniquely in terms of the data to be collected and/or the relationship to be established between the data.

This statement should also include definitions of special terms used in the definition of the performance indicator, that are not defined elsewhere in this International Standard, as well as terms used in the description of the method(s) to be used.

Unambiguous terms used in the customary sense need not be defined.

4.3.3.6 Method

The data to be collected and the calculations to be performed shall be described concisely.

If a measure needs to be repeated to determine the value of the performance indicator, this shall be stated clearly.

Two or more equivalent methods may be described, i.e. different data and calculations used to produce the same dial.

NOTE   Examples of this are using total count versus sampling, and using a direct measure versus an estimate based on different data.

If more than one method is described, the one most generally applicable shall be described first. The descriptions supplied shall not include general statistical methodology such as sampling procedures, sampling sizes, estimates of confidence intervals, statistical tests, etc.

If a questionnaire is to be used, only the question(s) to be asked and the score used are included, and not a detailed description of the total questionnaire design.

If possible, the descriptions of methods shall indicate the effort necessary for preparation, data collection and analysis of results.

4.3.3.7   Interpretation and factors affecting the performance indicator

The interpretation statement may include information necessary to interpret the results of using the performance indicator.

NOTE   The total range of the performance indicator can be given, as well as a statement telling the user of this International Standard if a maximum, a minimum or an optimal value represents the state valued the most.

The interpretation statement may include information about the variability to be expected, such as seasonal variations or variations in time of day.

This statement may also include information about factors internal or external to the library that will affect the results, in order to help using the performance indicator as a diagnostic tool. This information should be provided in such a way that it is possible to see what actions taken by a library can contribute to a desired change in the score.

4.3.3.8   Source(s)

References are supplied to document the source of the performance indicator. The description should state clearly whether the performance indicator as described in this International Standard is a modified version of the performance indicator described in the source document.

If the name of the performance indicator is different from the one used in the source, the original name is supplied in parentheses after the reference.

The references may include documents supplying more detailed information about the use of the performance indicator, methods of data collection and analysis, etc.

4.3.3.9   Related performance indicator(s) (optional)

Where appropriate, there should be a statement of the relationship of the performance indicator to other performance indicators within this International Standard.

5   Uses of performance indicators

5.1   General considerations

5.1.1   The performance indicators described in this International Standard can be used effectively in the evaluation of libraries. In this process, the quality and effectiveness of the services and other activities of the library, as well as the efficiency of the uses of the resources of the library, are evaluated against the mission, goals and objectives of the library itself.

5.1.2   Performance indicators should be linked to systematic library planning and evaluation. Furthermore, measurement and evaluation processes should occur regularly. The results should be reported in a way that informs the decision-making processes and demonstrates how the library fulfils its mission.

5.1.3   As a library planning and evaluation tool, performance indicators have two principal objectives:

a)   to facilitate control in the management process;

b)   to serve as a basis for reference and for dialogues between library staff, funding bodies, and the user community.

A secondary objective is to serve in comparative analysis of the performance of libraries and information services which have equivalent missions or objectives.

5.1.4   In recent years, libraries have been using a wide variety of performance indicators for this purpose. Several performance indicators are being used extensively and thus represent an established practice. Recent years have also seen attempts to consolidate previous research efforts in this field, and both have contributed to attain consensus among practitioners on a set of performance indicators and how to implement them in the day-to-day life of the library.

5.1.5   There are, and will continue to be, emerging areas of evaluation for libraries. For instance, recent years have witnessed the emergence of outcomes-based assessment (OBE) and new techniques for determining library quality under a number of circumstances using various protocols. A number of these evaluation efforts are in direct response to the need for libraries to demonstrate the value, quality, and impacts of their services on the communities that they serve. It is important that these evaluation approaches for performance indicators continually be reviewed, analysed, and considered for possible inclusion in future revisions of this International Standard.

5.2   Selection of performance indicators

5.2.1   The performance indicators included in this International Standard are those seen to be most useful for libraries in general. This International Standard recognizes that there are many different types of libraries, in different settings, serving different user groups, having a range of unique characteristics (structure, funding, governance, etc.), and affected by a number of situational factors that impact on the services and resources that the libraries can provide. Since there is such a wide variation around the world, it is important to understand that not all established performance indicators are useful to all libraries. The list of performance indicators included in this International Standard is best seen as a menu of possible performance indicators for use in a range of library settings.

5.2.2   Libraries, in consultation with their host institutions and relevant authorities, such as local and national government, as well as their users and other stakeholders, will need to decide which performance indicators are most appropriate to a particular situation. This decision shall be made in the light of the mission, goals and objectives of the library. For example, the assessment of publicly funded libraries takes place in the context of the development of public policy.

It is desirable that all interested parties should be in agreement on the appropriateness of the performance indicators used.

5.2.3   In order to determine which performance indicators are most appropriate for a particular library, to collect and analyse the data, and to interpret findings into a management strategy, a range of staff skills will be necessary. Some libraries will find it important and necessary to engage in staff training and development of educational skills prior to implementing performance indicators.

5.2.4   In selecting performance indicators for use in a particular library setting, consider the following factors.

a)   Will the performance indicator assist the management of the library, the funding body and the population to be served?

b)   Does the librarian have some knowledge that a particular activity or area may not be operating as well as it could? Even if this is only an intuitive feeling of the librarian, this could be a very good reason to use a performance indicator to find out whether there is a problem.

c)   What level of effort can the library staff commit to the collection and analysis of the data to produce the performance indicators? To produce performance indicators requires staff time and resources. Adequate staff time and resources are necessary to produce a particular performance indicator. Staff will need to have practical knowledge of a range of statistical procedures.

d)   Does any external authority require data to be reported on particular library service areas? If yes, it is necessary to decide whether the same data can also be used to produce library performance indicators.

Local factors important to the library can affect the selection of performance indicators. Librarians shall make a conscious decision in selecting the performance indicators that will be of most use in assessing the operation of the library in relation to its goals and objectives.

5.3   Limitations

5.3.1   Optimizing scores on performance indicators

Users of library performance indicators should recognize that it is impossible to achieve optimum scores simultaneously on all performance indicators. For example, a library may achieve a high level of user satisfaction, but incur a high expenditure per user. The scores on performance indicators shall be interpreted in the light of what the library intends to accomplish, and not simply in terms of optimizing scores on particular performance indicators.

5.3.2   Degree of accuracy

Care should be taken with the interpretation of results. Lack of precision may occur due to sampling errors, or to subjective aspects of the measuring process or to inadequate time or resources for the measuring process (e.g. performance indicators B.1.2.3 and B.2.2.4). It can also imply that the performance indicators are inherently imprecise (e.g. B.2.2.1).

NOTE   In some cases, a rough estimate is sufficient and to seek greater precision would be a waste of effort.

5.3.3   User skills versus library performance

To some extent, library performance indicators are affected by how well the user conducts various transactions with the library. For example, user satisfaction with the availability of materials may be extremely low at one library. This could indicate several things, one being that patrons lack adequate knowledge of how to locate materials in that particular library, or that the library has insufficient documents to meet demand. Thus, a low score suggests an area needing review. The review may suggest a need for strategies to improve user knowledge and skills related to library activities; or it may suggest a need to improve the availability of books by changing loan periods or buying additional copies.

5.3.4   Linking resources to services

While poor performance may seem to indicate that additional resources may be required to improve library services, this is not necessarily true. In fact, there may not be a strong correlation between resources and the quality of library services provided. The range of staff skills, management approaches, and a variety of other factors, including increased resources, may have different effects on increasing the quality of services at different libraries.

5.3.5   Comparability of performance indicator data

A primary purpose of using library performance indicators is self-diagnosis. This may include comparisons of one year's performance with another, within the same library. A secondary purpose is to encourage meaningful and useful comparisons across different libraries. Standardizing performance indicators and the procedures for collecting those data assist in that process. However, such comparisons shall always be made with respect for each library's

a)   mission, goals, and objectives;

b)   performance on a range of performance indicators;

c)   resources;

d)   user groups;

e)   governance structure;

f)   procedures.

If comparisons of performance indicator scores across different libraries are made, they should be done with considerable care and in full recognition of the limitations of such comparisons [see also 4.2.2 f)].

Annex A
(normative)

List of performance indicators for libraries

Table A.1 lists activities and services commonly undertaken or provided in libraries through a Balanced Scorecard Approach. The performance indicators described in this International Standard are categorized with respect to the activities or services to which they relate. A list of descriptions for each performance indicator categorized in Table A.1 is provided in Annex B. The notation is designed to facilitate future additions both to the list of activities, and to the list of performance indicators.

NOTE   There are a number of performance indicators in use in libraries which are not described.

Table A.1 — List of performance indicators for activities and services commonly undertaken or provided in libraries

Item reference	Performance indicator	*Description*/Objective
B.1	Resources, Access & Infrastructure	*Performance indicators that measure the adequacy and availability of library resources and services (e.g. staff, titles, public access workstations).*
B.1.1	Collection	
B.1.1.1	Required Titles Availability	To assess to what extent titles owned or licensed by the library, and in demand by the users, are actually available when required.
B.1.1.2	Percentage of Required Titles in the Collection	To assess to what extent titles in demand by the users are owned by the library. The performance indicator is used to assess the fit of the collection to the requirements of the users.
B.1.1.3	Subject Catalogue Search Success Rate	To assess the library's success in matching the user's subject search in the catalogue and in informing the user where and how to find information on a subject.
B.1.1.4	Percentage of Rejected Sessions	To establish whether there are sufficient licences for each electronic database to meet users' demands.
B.1.2	Access	
B.1.2.1	Shelving Accuracy	To assess to what extent documents that are recorded in the library's catalogue are in their correct place on the shelves.
B.1.2.2	Median Time of Document Retrieval from Closed Stacks	To assess whether the retrieval system is effective.
B.1.2.3	Speed of Interlibrary Lending	To assess the time interval for successfully completing an interlibrary loan or document delivery transaction, from initial request to shipment of requested item(s).
B.1.2.4	Percentage of Successful Interlibrary Loans	To assess the fulfilment of interlibrary loans and document delivery requests relative to the total number of interlibrary loans and document delivery requests.
B.1.3	Facilities	
B.1.3.1	Public Access Workstations per Capita	To assess the availability of workstations the library offers per 1 000 members of the population to be served.

Table A.1 (*continued*)

Item reference	Performance indicator	*Description*/Objective
B.1.3.2	Workstation Hours Available per Capita	To assess the availability of workstations by calculating the average number of hours a workstation could be available for a member of the population during a year.
B.1.3.3	User Area per Capita	To assess the importance of the library as a place for study, meeting, and as a learning centre, and indicates the institution's support for these tasks.
B.1.3.4	Seats per Capita	To assess the number of seats provided per 1 000 members of the population to be served for reading, studying, or working in the library.
B.1.3.5	Hours Open Compared to Demand	To assess to what degree the open hours of a library correspond to users' needs.
B.1.4	Staff	
B.1.4.1	Staff per Capita	To assess the number of library employees per 1 000 members of the population to be served. The number of persons in the population to be served can be considered proportional to the amount of work to be done.
B.2	Use	*Performance indicators that measure the usage of library resources and services (e.g. library materials loans, electronic resource downloads, and facilities use).*
B.2.1	Collection	
B.2.1.1	Collection Turnover	To assess the overall rate of use of a loan collection. The performance indicator can also be used to assess the fit of the collection to the requirements of the population to be served.
B.2.1.2	Loans per Capita	To assess the rate of use of library collections by the population to be served. It may also be used to assess the quality of the collections and the library's ability to promote the use of the collections.
B.2.1.3	Percentage of Stock Not Used	To assess the amount of stock not used during a specified period. The performance indicator may also be used to assess the fit of the collection to the requirements of the population to be served.
B.2.1.4	Number of Content Units Downloaded per Capita	To assess whether users find items of interest in an electronic resource.
B.2.1.5	In-library Use per Capita	To assess the amount of usage of materials within the library.
B.2.2	Access	
B.2.2.1	Library Visits per Capita	To assess the library's success in attracting users of all its services.
B.2.2.2	Percentage of Information Requests Submitted Electronically	To establish the use made of electronic means of communication (e.g. e-mail, digital reference) for submitting enquiries.
B.2.2.3	Percentage of External Users	To assess the percentage of library users who are external to the library's population to be served and thus the library's importance for learning and culture in the region. Also, the performance indicator provides an estimate of the impact or attraction of a library outside of its service area.
B.2.2.4	Percentage of the Total Library Lending to External Users	To assess the extent to which library services are used by external users. To indicate the attractiveness of the library's collection to users outside the population to be served.

Table A.1 (*continued*)

Item reference	Performance indicator	*Description*/Objective
B.2.2.5	User Attendances at Library Events per Capita	To estimate the attraction of library events for the library's population to be served.
B.2.2.6	Number of User Attendances at Training Lessons per Capita	To assess the success of the library in reaching its users through the provision of training on library services.
B.2.3	Facilities	
B.2.3.1	Public Seating Occupancy Rate	To assess the overall use rate of public seats provided for reading and working in the library, by estimating the proportion of the public seating in use at any given time.
B.2.3.2	Workstation Use Rate	To assess the overall rate of use of workstations provided in the library, by estimating the proportion of the workstations in use at any given time.
B.2.4	General	
B.2.4.1	Percentage of Target Population Reached	To assess the success of the library in reaching a target population.
B.2.4.2	User Satisfaction	To assess the degree to which users are satisfied with the library services as a whole or with different services of the library.
B.3	Efficiency	*Performance indicators that measure resource and service efficiency (e.g. costs per loan, electronic resource session or download; time required to acquire or process documents; and correct answer fill rate).*
B.3.1	Collection	
B.3.1.1	Cost per Loan	To assess the cost of the services of the library related to the number of loans.
B.3.1.2	Cost per Database Session	To assess the contractual costs of a database related to the number of sessions.
B.3.1.3	Cost per Content Unit Downloaded	To assess the contractual cost of an electronic resource related to the number of content units downloaded.
B.3.1.4	Cost per Library Visit	To assess the cost of the library's service related to the number of library visits.
B.3.2	Access	
B.3.2.1	Median Time of Document Acquisition	To assess the degree to which suppliers of library materials are effective, in terms of speed.
B.3.2.2	Median Time of Document Processing	To assess whether the different forms of processing procedures are effective as to speed.
B.3.3	Staff	
B.3.3.1	User Services Staff as a Percentage of Total Staff	To determine the library's effort devoted to public services in relation to the background services.
B.3.3.2	Correct Answer Fill Rate	To assess to what extent the staff are able to fulfil the primary requirement for a good reference service, namely to provide correct answers to enquiries.
B.3.3.3	Ratio of Acquisition Expenditures to Staff Costs	To relate acquisition costs to staff costs in order to assess whether the library invests a relevant part of its income in the collection.

Table A.1 (*continued*)

Item reference	Performance indicator	*Description*/Objective
B.3.3.4	Employee Productivity in Media Processing	To measure the average number of acquired media (print and electronic documents) processed per employee in a certain period (usually one year). The performance indicator exemplarily demonstrates employee productivity.
B.3.4	General	
B.3.4.1	Cost per User	
B.4	Potentials & Development	*Performance indicators that measure the library's input into emerging service and resource areas and its ability to gain sufficient funding for development (e.g. percentage of expenditures on electronic resources and attendances at formal training lessons by staff).*
B.4.1	Collection	
B.4.1.1	Percentage of Expenditure on Information Provision Spent on the Electronic Collection	To assess the extent to which the library is committed to building an electronic collection.
B.4.2	Staff	
B.4.2.1	Percentage of Library Staff Providing Electronic Services	To assess the extent to which the library invests human resources in providing technical support for electronic services.
B.4.2.2	Number of Attendance Hours at Formal Training Lessons per Staff Member	To assess the improvement of library staff skills by attending training lessons.
B.4.3	General	
B.4.3.1	Percentage of Library Means Received by Special Grant or Income Generated	To assess the library's success in obtaining additional financial resources.
B.4.3.2	Percentage of Institutional Means Allocated to the Library	To measure the importance of the library (expressed in monetary units) to and the support by the funding institution.

Annex B
(normative)

List of descriptions of performance indicators

See Table A.1 for the list of performance of indicators referenced in this annex.

B.1 Resources, Access & Infrastructure

B.1.1 Collection

B.1.1.1 Required Titles Availability

B.1.1.1.1 Objective

To assess to what extent titles owned or licensed by the library, and in demand by the users, are actually available when required.

B.1.1.1.2 Scope of the performance indicator

This performance indicator is applicable to all libraries. Reference and loan collections should be measured separately.

This performance indicator may be used for specified collections, subject areas, branches or time periods. For each specified area within the library, the resulting performance indicators may be compared to see if the availability differs significantly.

This performance indicator may be used for comparing libraries with the same mission, provided that the same method is used for calculating the performance indicator.

B.1.1.1.3 Definition of the performance indicator

The percentage of titles owned by the library and required by at least one user that are immediately available in either print or electronic format.

Available means, for the purpose of this performance indicator, that one or more copies of the title is available to users for loan, in-library use, or downloading. Copies to be retrieved from closed stacks are counted as being available.

Copies taken out for processing, such as cataloguing, classification, bookbinding, reshelving, etc., and copies missing because they are stolen, misplaced, etc., are counted as not available but the titles are included in the total number of titles. In addition, copies indicated as part of the electronic collection, but inaccessible to users at the time of request (e.g. simultaneous use, system downtime) are counted as not available but are included in the total number of titles.

Titles may, for the purpose of this performance indicator, include individual articles in journals, books, e-journals, or e-books, or other catalogued documents or resources, if they are included in the total number of titles as well. What is included has to be stated explicitly in each case.

B.1.1.1.4 Method

Draw a random sample of titles owned or licensed by the library in print and electronic formats and required by at least one user. For each title in the sample, record whether a copy of that title is available. For a rough

measure, check only the records of the library. For a more accurate measure, check the actual copies are checked.

The Required Titles Availability, I_{RTA}, is

$$I_{\text{RTA}} = A/B \times 100$$

where

A is the number of available required titles in the sample;

B is the total number of required titles in the sample.

Round off I_{RTA} to the nearest integer.

A random sample of required titles may be established in two ways as follows.

a) Ask for a random sample of users what they are looking for in the library's print and electronic collections and then discard any titles not owned or licensed by the library. Only specific titles, not subject searches, are included in the sample. Remove duplicates of the same title. In order to achieve a truly random sample, either all required titles shall be taken from each user, or one title should be selected randomly from each user.

b) Draw a random sample using actual loan transactions, requests for off-site storage retrieval, circulation recalls and in-library use of documents. Remove duplicates of the same title.

NOTE   This method is less obtrusive to the users, but reflects only the demands for titles already acquired that have resulted in a loan transaction. For some purposes, the result is adequate.

For libraries with marked variations, e.g. seasonal variations, a more accurate performance indicator may be attained by measuring the Required Titles Availability at intervals over a period of time and then calculating the mean availability.

If reference copies and copies for loan are intermixed in the collection, reference copies should ideally be left out of the calculation.

B.1.1.1.5   Interpretation and factors affecting the performance indicator

The performance indicator is an integer between 0 and 100. It estimates the probability that a randomly selected title owned or licensed by the library and required by users is available. A high score means high availability.

In some libraries, marked seasonal variations are to be expected. Variations during the week or during the day may also be expected.

The performance indicator is affected by several factors. The most important are the:

— number of copies of each title, especially titles in much demand;

— composition of the collection in relation to the demands of the users;

— standard loan period of the library, and specific loan periods for titles in heavy demand, and the number of documents authorized for borrowing simultaneously;

— number of titles available in electronic format at the time of calculation.

Minor factors like the number of titles taken out for bookbinding or other processing, speed of reshelving, etc., will influence the score.

B.1.1.1.6   Sources

See the following references in the Bibliography for more information:

— Reference [18], p. 300;

— Reference [24], pp. 84-89 ("Availability");

— Reference [29], pp. 60-71 ("Materials Availability").

B.1.1.1.7   Related performance indicator

See Percentage of Required Titles in the Collection (B.1.1.2).

B.1.1.2   Percentage of Required Titles in the Collection

B.1.1.2.1   Objective

To assess to what extent titles in demand by the users are owned by the library. The performance indicator is used to assess the fit of the collection to the requirements of the users.

B.1.1.2.2   Scope of the performance indicator

This performance indicator is applicable to all libraries.

This performance indicator may be used for specified collections, subject areas, branches or time periods. For each specified area within the library, the resulting performance indicators may be compared to see if the availability differs significantly.

This performance indicator may be used for comparing libraries with the same mission.

B.1.1.2.3   Definition of the performance indicator

The percentage of titles, required by at least one user, that are already owned by the library.

If a title has been published and ordered before the investigation, but has not been received by the library, it is counted as owned by the library.

Titles may, for the purpose of this performance indicator, include individual articles in journals or books, if they are included in the total number of titles as well. What is included has to be stated explicitly in each case.

B.1.1.2.4   Method

Draw a random sample of titles required by at least one user, by asking a sample of users what they are looking for in the library. Sample only specific titles, not subject searches.

NOTE   This method will not result in a truly random sample unless only one required title is taken from each user. For most purposes, the result is adequate even if all titles named are used.

Record whether the library owns a copy of that title for each title in the sample.

The Percentage of Required Titles in the Collection, I_{RTC}, is

$$I_{RTC} = A/B \times 100$$

where

    A is the number of required titles in the sample owned by the library;

    B is the total number of required titles in the sample.

Round off I_{RTC} to the nearest integer.

B.1.1.2.5 Interpretation and factors affecting the performance indicator

The performance indicator is an integer between 0 and 100. It estimates the probability that a title required by users is in the library's collection. A high score indicates a good fit between the collection and the requirements of the users.

NOTE   As well as indicating a poor fit between the collection and the requirements of the users, a low score might also indicate that the users have a wrong perception of the subject coverage of the library. This could be addressed through the promotion of the library's services.

The results to be expected will depend on the type of library (e.g. special library or general library, academic library or public library, etc.).

B.1.1.2.6 Source

See Reference [24], pp. 84-89 (Included in "Availability": called "Acquisition Rate" or "Ratio of Acquired items to Sought items"), in the Bibliography for more information.

B.1.1.2.7 Related performance indicator

See Required Titles Availability (B.1.1.1).

B.1.1.3 Subject Catalogue Search Success Rate

B.1.1.3.1 Objective

The objective of this performance indicator is to assess the library's success in matching the user's subject search in the catalogue and in informing the user where and how to find information on a subject.

B.1.1.3.2 Scope of the performance indicator

This performance indicator is applicable to all libraries with subject or classified catalogues.

Comparison between libraries would require that the libraries use the same cataloguing rules and a similar form of catalogue, usually an online catalogue.

NOTE   An online catalogue providing keyword or subject access is equivalent to a subject catalogue.

B.1.1.3.3 Definition of the performance indicator

The percentage of titles in the catalogue matching the user's subject that are found by the user.

B.1.1.3.4   Method

B.1.1.3.4.1   Users searching for a specific subject in the catalogue are asked to fill out a form showing:

a)   a short description of the subject they are seeking;

b)   the subject headings and/or notations they consulted;

c)   the subject headings and/or notations under which they found the titles they thought relevant;

d)   the status of the user (optional). In order to define the user's subject clearly, it has proved necessary to add an interview with the user after filling out the questionnaire. Users tend to start their search with broad terms or at a high (general) classification level. The interview helps to precisely define the subject desired by the user. The subject search is then repeated by library staff to check whether all subject headings and/or notations matching the subject have been consulted. Subject headings which are broader than, or more specific than, the user's defined subject, are excluded. All titles grouped under a subject heading and/or notation found by the user to be relevant are counted.

B.1.1.3.4.2   Users' subject seeking procedures can also be analysed through transaction log analysis. When using this method, data protection rights have to be considered. Under certain circumstances, transaction logs allow the tracking of individual searches and the identification of what titles have finally been ordered for loan or what electronic resources have been downloaded. This method may provide useful information about procedures and failures during the search.

Again, an interview, whether face-to-face or in online form, will be necessary in order to precisely define the user's subject. The subject search is then repeated by library staff to check whether all subject headings and/or notations matching the subject have been consulted. Subject headings which are broader than, or more specific than, the user's defined subject, are excluded. All titles grouped under a subject heading and/or notation found by the user to be relevant are counted.

B.1.1.3.4.3   For methods B.1.1.3.4.1 and B.1.1.3.4.2, The Subject Search Success Rate, I_{SSSR}, is

$$I_{\text{SSSR}} = A/B \times 100$$

where

   A is the number of titles matching the user's subjects found by the user;

   B is the number of titles matching the user's subject that are actually indexed in the catalogue.

Round off I_{SSSR} to the nearest integer.

B.1.1.3.5   Interpretation and factors affecting the performance indicator

The performance indicator is an integer between 0 and 100.

The success rate is affected by the user's level of competence. A low success rate points to failures in user information or in the user interface or retrieval system of the OPAC. It may also show that the subject cataloguing rules do not match the search mode of the user.

Possible management decisions could be:

⎯   better help screens;

⎯   specific information about catalogues in user education;

⎯   adding "see references" or additional subject entries;

⎯   if possible, change of cataloguing rules.

If the user status has been requested in the questionnaire, then specific activities could be directed at certain target groups. There may be seasonal variations, e.g. times when many new users come to the library. The decision whether a title matches the user's subject can be affected by the staff's communication or searching skills.

B.1.1.3.6 Sources

See the following references in the Bibliography for more information:

— Reference [24], pp. 73-76 ("Subject Search");

— Reference [21], pp. 181-206.

B.1.1.4 Percentage of Rejected Sessions

B.1.1.4.1 Objectives

To establish whether there are sufficient licences for each electronic database to meet users' demands.

B.1.1.4.2 Scope of the performance indicator

This performance indicator is applicable to all libraries with licensed electronic databases.

B.1.1.4.3 Definition of the performance indicator

The percentage of rejected sessions of the total attempted sessions for each licensed database during a specified time period.

Sessions by library staff and for user training should be included.

Sessions rejected because of incorrect passwords or user IDs are not included.

B.1.1.4.4 Method

Count the total number of attempted sessions on a database and the number of unsuccessful attempts during a specified time period.

The percentage of Rejected Sessions, I_{RS}, is

$$I_{RS} = A/B \times 100$$

where

    A is the number of rejected sessions on a licensed database during a specified time period;

    B is the total number of rejected and successful sessions on the electronic database during the same time period.

Round off I_{RS} to nearest integer, or one decimal place if less than 10.

B.1.1.4.5 Interpretation and factors affecting the performance indicator

The performance indicator is an integer in the range of 0 to 100. A high score indicates that the number of licenses is not adequate to users' needs.

The performance indicator should be considered separately for each database. There is nothing to be gained by calculating a global figure for all databases.

B.1.1.4.6   Source

See Reference [3], (PI 10), in the Bibliography for more information.

B.1.1.4.7   Related performance indicator

See Required Titles Availability (B.1.1.1).

B.1.2 Access

B.1.2.1   Shelving Accuracy

B.1.2.1.1   Objective

The objective of this performance indicator is to assess to what extent documents that are recorded in the library's catalogue are in their correct place on the shelves.

B.1.2.1.2   Scope of the performance indicator

This performance indicator is applicable to all libraries.

This performance indicator may be used for specified collections, subject areas or branch libraries. For each specified area within the library, the resulting performance indicators may be compared to see if the rate of accuracy differs significantly.

Comparisons between libraries may be possible if differences in storage and frequency of use are taken into consideration.

B.1.2.1.3   Definition of the performance indicator

The percentage of documents recorded in the library's catalogue that are in their correct place on the shelves at the time of investigation.

Documents whose absence is accounted for in the library's records, e.g. by being on loan, taken out for bookbinding or repair or noted as missing, are not included in the sample.

B.1.2.1.4   Method

B.1.2.1.4.1   Check a random sample of shelves with the help of a shelf-list. Record for each document in the list whether it is shelved correctly. For all missing documents, check whether their absence is accounted for in the library's records.

In free-access areas, the shelves should be checked out of opening times in order to include documents that have been used in-house. Documents awaiting shelving should be reshelved before counting.

The Shelving Accuracy, I_{SA1}, is

$$I_{SA1} = A/B \times 100$$

where

A   is the number of documents correctly shelved;

B   is the total number of documents in the sample (excluding those whose absence is accounted for in the library's records).

Round off I_{SA1} to the nearest integer.

NOTE   The number of missing documents comprises both documents that have been misplaced and those that have been stolen, if the latter have not been noted as missing in the library's records. This assumes that correct shelving implies frequent shelf-reading so that losses get noted at an early stage.

B.1.2.1.4.2   Check a random sample of shelves in the collection. Count the number of documents on each shelf in the sample. Record all documents that are found in the wrong place, irrespective of their being misplaced near to or far from their correct position. In free access areas, the shelves should be checked out of opening times in order to include documents that have been used in-house.

The Shelving Accuracy, I_{SA2}, is

$$I_{SA2} = (A - B/A) \times 100$$

where

  A is the total number of documents on the shelves at the time of investigation;

  B is the number of misplaced documents on the shelves.

Round off I_{SA2} to the nearest integer.

NOTE   As an estimate, the simpler method B.1.2.1.4.1 could be sufficient.

B.1.2.1.5   Interpretation and factors affecting the performance indicators

The performance indicator is an integer between 0 and 100. A high score means high Shelving Accuracy. The Shelving Accuracy is affected by several factors. The most important are:

⸺ the frequency of shelf-reading;

⸺ the speed of reshelving.

The performance indicator could also point to the classification or other shelf-location system not being transparent and easy to use or to the need for a security system.

For libraries, with part of their collection in closed stacks, and part in free access, or where use varies much between parts of the collection, Shelving Accuracy should be assessed for the different parts of the collection separately, as documents in free-access areas and in frequent use will be more liable to misshelving.

B.1.2.1.6   Source

See Reference [15], pp. 129-146 ("Shelf Availability"; includes shelf accuracy in the context of an availability study), in the Bibliography for more information.

B.1.2.1.7   Related performance indicator

See Required Titles Availability (B.1.1.1).

B.1.2.2   Median Time of Document Retrieval from Closed Stacks

B.1.2.2.1   Objective

The objective of this performance indicator is to assess whether the retrieval system is effective.

B.1.2.2.2   Scope of the performance indicator

This performance indicator is applicable to all libraries with part of their material in closed stacks.

Comparing libraries may be possible if local circumstances concerning buildings, transportation, etc., are taken into account.

B.1.2.2.3   Definition of the performance indicator

The median time elapsed between the request for a document placed in closed stacks and the moment it is available to the user.

B.1.2.2.4   Method

Draw a random sample of documents owned by the library, stored in closed stacks and requested by the users.

Register, for each request, the date and time of the day when the request was submitted and the time when the document was ready to be collected by the user. Subtract the starting time from the finishing time, expressed in minutes or hours as seems most fit.

The Median Time of Document Retrieval from Closed Stacks is established by ranking the requests in ascending order by the retrieval time. The median time is the value of the request in the middle of the ranking list. If the number of requests is even, the median time is the average of the two values in the middle of the ranking list, rounded off to the nearest minute.

The sample may be established in two different ways:

a)   The sample is drawn among the titles owned by the library and not on loan. The requests are made by the investigators or their proxies at random times during the sampling period and the time of handing in the request recorded.

b)   The sample is drawn among actual requests at the time when the documents are ready to be collected by the user. The method presumes that the date and time of the request is recorded as part of the normal routine.

NOTE   Failed requests are left out of the calculation, since no finishing time can be assigned to a failed request.

B.1.2.2.5   Interpretation and factors affecting the performance indicator

The performance indicator is a real number with no upper limit. The performance indicator is expressed in minutes or hours and minutes.

A short retrieval time is considered good. The retrieval time may be affected by the number of orders at peak times.

B.1.2.2.6   Sources

See the following references in the Bibliography for more information:

⎯   Reference [25], pp. 202-205 ("Lending Speed");

⎯   Reference [30], pp. 112-113 (items F 94, F 96, F 97, F 98).

B.1.2.2.7   Related performance indicator

See Speed of Interlibrary Lending (B.1.2.3).

B.1.2.3   Speed of Interlibrary Lending

B.1.2.3.1   Objective

The objective of this performance indicator is to assess the time interval for successfully completing an interlibrary loan or document delivery transaction, from initial request to shipment of requested item(s).

B.1.2.3.2   Scope of the performance indicator

This performance indicator is applicable to all libraries participating in interlibrary lending and document delivery services.

Includes interlibrary lending of library materials that are approved for loan outside of the library.

Includes document delivery.

B.1.2.3.3   Definition of the performance indicator

The number of hours required for library staff to successfully complete an interlibrary loan or document delivery request.

A request is complete when the item is sent to the requesting library by the lending library.

The time interval is measured in library business hours (the hours the library is open for business, excluding weekends, holidays or other days that the library is closed).

Interlibrary loan or document delivery request is all materials approved for loan or permanent delivery from one library to a library outside of the fulfilling library's administration.

Time received is the date and time the request is received by the lending library.

Time sent is the date and time the item requested was sent to the requesting library.

B.1.2.3.4   Method

The Speed of Interlibrary Lending, I_{SIL}, is

$$I_{SIL} = A/B$$

where

A is the total number of hours to complete a specified number of interlibrary loans or document delivery requests;

B is the number of interlibrary loans plus document delivery requests included in A.

Exclude days library is closed for business. Round I_{SIL} to the nearest whole hour.

Sampling is possible. The recommended method is "typical week." A "**typical week**" is a time that is neither unusually busy nor unusually slow. Avoid holidays, vacation periods, days when unusual events are taking place in the community or in the library. Choose a week in which the library is open regular hours.

If "full count" method is preferred, collect data monthly to reduce the burden to staff when analysing the results.

B.1.2.3.5   Interpretation and factors affecting the performance indicator

The performance indicator is a positive real number with no upper limit.

A lower score is usually considered as good. It will inform the library whether its processes are organized efficiently.

The performance indicator will be influenced by internal conditions. Staffing, collection size, days the library may be closed for business, and delivery delays can greatly influence the score.

The performance indicator shall be judged against the mission and objective of the library.

B.1.2.3.6 Source

See Reference [11], (4.3), in the Bibliography for more information.

B.1.2.3.7 Related performance indicators

See

— Percentage of Successful Interlibrary Loans (B.1.2.4);

— Median Time of Document Retrieval from Closed Stacks (B.1.2.2).

B.1.2.4 Percentage of Successful Interlibrary Loans

B.1.2.4.1 Objective

The objective of this performance indicator is to assess the fulfilment of interlibrary loans and document delivery requests relative to the total number of interlibrary loans and document delivery requests.

B.1.2.4.2 Scope of the performance indicator

This performance indicator is applicable to all libraries participating in interlibrary lending and document delivery services.

Includes interlibrary lending of library materials approved for loan to a library outside of the fulfilling library's administration.

Includes document delivery.

Excludes resource sharing within the same library administration.

B.1.2.4.3 Definition of the performance indicator

The percentage of successfully completed interlibrary lending or document delivery transactions for all materials approved for loan or permanent delivery from one library to a library outside of the fulfilling library's administration.

Successful completion of an interlibrary lending or document delivery transaction is when an item requested is delivered to the requesting library.

Delivery includes all methods of transmission of an item (e.g. facsimile, digital image, PDF, postal or other form of surface delivery service).

B.1.2.4.4 Method

The Percentage of Successful Interlibrary Loans, I_{SuIL}, is

$$I_{SuIL} = A/B \times 100$$

where

    A is the number of successful interlibrary loan and document delivery transactions;

    B is the total of all interlibrary loan and document delivery requests.

Round off I_{SuIL} to the nearest integer.

Collection point is the library department responsible for interlibrary lending.

The total number of all requests and successful interlibrary lending transactions is required.

Effort is low for libraries with automated methods for determining the number of interlibrary loan and document delivery requests and successfully completed transactions.

Sampling is possible. The recommended method is "typical week." A "typical week" is a time that is neither unusually busy nor unusually slow. Avoid holidays, vacation periods, days when unusual events are taking place in the community or in the library. Choose a week in which the library is open regular hours.

B.1.2.4.5 Interpretation and factors affecting the performance indicator

The performance indicator is an integer between 0 and 100.

A higher score is usually considered as good. It is a performance indicator of the quality of the library's collection and shows the library's importance to the library community.

The performance indicator will be influenced by a high percentage of documents on loan or not available for lending at the time of collection.

A low score may indicate that other libraries have an incorrect perception of the subject coverage of the library to which they send the requests.

The performance indicator shall be judged against the mission and objective of the library.

B.1.2.4.6 Source

See Reference [11], (3.0), in the Bibliography for more information.

B.1.2.4.7 Related performance indicator

See Speed of Interlibrary Lending (B.1.2.3).

B.1.3 Facilities

B.1.3.1 Public Access Workstations per Capita

B.1.3.1.1 Objective

The objective of this performance indicator is to assess the availability of workstations the library offers per 1 000 members of the population to be served.

B.1.3.1.2 Scope of the performance indicator

This performance indicator is applicable to all libraries with a defined population to be served.

Comparing libraries may be possible if differences in the mission of the library and the clientele are taken into account, and if only the same types of workstations (e.g. with internet access, stand alone, CD-ROM only, online catalogue) are included in the definition.

Libraries may make separate calculations for networked and non-networked workstations.

B.1.3.1.3   Definition of the performance indicator

The ratio of publicly accessible workstations per 1 000 defined library population to be served.

Workstations reserved exclusively for the use of staff are excluded. Libraries may wish to calculate separately the number of workstations connected to the internet.

B.1.3.1.4   Method

Establish the number of workstations that are publicly available to users in the library.

The Public Access Workstations per Capita, I_{PAWC}, is

$$I_{PAWC} = A/B \times 1\ 000$$

where

   A is the number of public access workstations;

   B is the number of the population to be served.

Round off I_{PAWC} to the nearest integer.

B.1.3.1.5   Interpretation and factors affecting the performance indicator

The performance indicator is a real number with no upper limit. A high number is regarded as better than a low one. The performance indicator measures the provision of resources related to the population.

The number of workstations available elsewhere in the institution will have a great effect on the interpretation of this performance indicator.

A low result here may not be so significant if workstations from which library services can be accessed are widely available to users elsewhere, or where libraries make available wireless internet access services.

B.1.3.1.6   Sources

See the following references in the Bibliography for more information:

— Reference [2], p. 28 (adapted from "Public access internet workstations in proportion to the legal service area population");

— Reference [5], p. 12 (adapted from "Total number of electronic workstations available to users per thousand population");

— Reference [10], p. 70 (adapted from "Number of students to a student workstation").

B.1.3.1.7   Related performance indicator

See

— Workstation Hours Available per Capita (B.1.3.2);

— Workstation Use Rate (B.2.3.2).

B.1.3.2 Workstation Hours Available per Capita

B.1.3.2.1 Objective

The objective of this performance indicator is to assess the availability of workstations by calculating the average number of hours a workstation could be available for a member of the population during a year.

B.1.3.2.2 Scope of the performance indicator

This performance indicator is applicable to all libraries with a defined population to be served. Comparing libraries may be possible if differences in the mission of the library and the clientele are considered. Libraries may make separate calculations for networked and non-networked workstations.

B.1.3.2.3 Definition of the performance indicator

The number of hours that a workstation is available for a member of the population to be served during a year.

Workstations reserved exclusively for the use of staff are excluded.

B.1.3.2.4 Method

Establish the number of workstations in the library, the number of hours that the workstations are available to users and the number of the population to be served. Make a correction to the number of workstations to allow for the workstations that are not working or being repaired. In order to make this correction, a count should be made at random times throughout a typical working day. The mean number of workstations that are not in service should be deducted from the total number of workstations. The number of hours that the workstations are at users' disposition is usually the same as the number of hours that the library is open.

The Workstation Hours Available Per Capita I_{WHAPC1} is

$$I_{WHAPC1} = [(A - B) \times C]/D$$

where

A is the total number of workstations;

B is the number of workstations not in service;

C is the number of hours the workstations are available to users during a year;

D is the population to be served.

If a part of the workstations are in library areas that have different opening hours, these workstations shall be calculated separately. Workstation Hours Available Per Capita I_{WHAPC2} are then

$$I_{WHAPC1} = \{[(A_1 - B_1) \times C_1] + [(A_2 - B_2) \times C_2]\}/D$$

where

A_1 is the total number of workstations in area 1;

B_1 is the number of workstations not in service in area 1;

C_1 is the number of hours the workstations at area 1 are at users' disposition during a year;

A_2 is the total number of workstations in area 2;

B_2 is the number of workstations not in service in area 2;

C_2 is the number of hours the workstations at area 2 are at users' disposition during a year;

D is the number of the population to be served.

Round off I_{WHAPC} to the nearest integer.

B.1.3.2.5 Interpretation and factors affecting the performance indicator

The performance indicator is a real number with no upper limit. The normal range will depend on the type of library. The performance indicator estimates the mean number of hours that a workstation is available to a person in the population to be served. The higher the number the better the library's ability to cope with demand from users for workstations.

For academic and special libraries, the number of workstations available elsewhere will have a great effect on the interpretation of this performance indicator.

A low result here may not be so significant if workstations from which library services can be accessed are widely available to users elsewhere, or where libraries make available wireless internet access services.

B.1.3.2.6 Sources

See the following references in the Bibliography for more information:

— Reference [3], (PI 9);

— Reference [10], p. 70 (adapted from "Hours of availability of open access workstations per student").

B.1.3.2.7 Related performance indicators

See

— Public Access Workstations per Capita (B.1.3.1);

— Workstation Use Rate (B.2.3.2).

B.1.3.3 User Area per Capita

B.1.3.3.1 Objective

The objective of this performance indicator is to assess the importance of the library as a place for study, meeting, and as a learning centre, and indicates the institution's support for these tasks.

B.1.3.3.2 Scope of the performance indicator

This performance indicator is applicable to all libraries with physical premises.

Comparison may be possible if differences in the mission of the library and clientele are considered.

B.1.3.3.3 Definition of the performance indicator

The sum of user area that the library offers to members of its population to be served.

User area in the sense of this performance indicator is the net useable area for user services. It includes space for reading, studying, information delivery, computer terminals and any other services delivered to users, also open-access storage areas as integrated parts of user service areas (see ISO 2789).

Premises not usually available to users should be excluded.

B.1.3.3.4 Method

Define the population to be served.

Calculate the relation between the library's user area in square metres and the size of the population to be served.

User Area per Capita, I_{UAC}, is

$$I_{\text{UAC}} = A/B$$

where

A is the library area available for user services expressed in square metres;

B is the population to be served.

Round off I_{UAC} to one decimal point.

B.1.3.3.5 Interpretation and factors affecting the performance indicator

The performance indicator is a real number with no upper limit. A higher score will usually be considered good.

The performance indicator is affected by the extent to which the institution provides studying, reading, and meeting facilities outside the library premises.

B.1.3.3.6 Sources

See the following references in the Bibliography for more information:

— Reference [6] (PI 1.1);

— Reference [25] pp. 46-50.

B.1.3.4 Seats per Capita

B.1.3.4.1 Objective

The objective of this performance indicator is to assess the number of seats provided per 1 000 members of the population to be served for reading, studying, or working in the library.

B.1.3.4.2 Scope of the performance indicator

This performance indicator is applicable to all libraries with a defined population to be served and with reading and working facilities.

B.1.3.4.3 Definition of the performance indicator

The ratio of publicly available seats, whether with or without equipment, per 1 000 defined library population to be served.

For this performance indicator, seats include seats in carrels, in seminar and study rooms and the audiovisual and children's departments of the library. Exclude seats reserved exclusively for the use of staff.

B.1.3.4.4   Method

Establish the number of seats available for reading, studying, or working in the library.

The Seats per Capita, I_{SC}, is

$I_{SC} = A/B \times 1\ 000$

where

  A is the number of available seats;

  B is the number of persons in the population to be served.

Round off I_{SC} to the nearest integer.

B.1.3.4.5   Interpretation and factors affecting the performance indicator

The performance indicator is an integer with no upper limit. A higher score is usually considered as good.

The number of seats provided elsewhere in the institution for reading, studying, or working may have an impact on the interpretation of this performance indicator.

B.1.3.4.6   Sources

See the following references in the Bibliography for more information:

⎯ Reference [22], 3.3a (variation of "Total Reading and Working Places");

⎯ Reference [28], pp. 82-88 (a special case of "Facilities Use Rate").

B.1.3.4.7   Related performance indicators

See

⎯ Public Access Workstations per Capita (B.1.3.1);

⎯ Public Seating Occupancy Rate (B.2.3.1).

B.1.3.5   Hours Open Compared to Demand

B.1.3.5.1   Objective

The objective of this performance indicator is to assess to what degree the open hours of a library correspond to users' needs.

B.1.3.5.2   Scope of the performance indicator

This performance indicator is applicable to all libraries.

Comparison may be possible if differences in the mission and clientele of the library are considered.

The performance indicator can be used with different target groups, e.g. students, academic staff, elderly people.

The performance indicator can be used for branch libraries or departments of the library with deviating opening times.

B.1.3.5.3   Definition of the performance indicator

The actual number of a library's open hours compared to the number of hours desired by users.

Open hours in the sense of this performance indicator are the hours in a normal week that the main services of the library (e.g. reference and loan services, reading rooms) are available to users.

B.1.3.5.4   Method

Design a simple questionnaire asking for satisfaction with open hours and giving the option to name additional times the library should be open. Questions about user status can be added as they will help to identify the needs of special user groups.

EXAMPLE   Example of a survey:

How would you rate your satisfaction with the present open times of the library?

[ ] Very Unsatisfactory

[ ] Unsatisfactory

[ ] Moderately Satisfactory

[ ] Satisfactory

[ ] Very Satisfactory

Please specify the hours other than the present hours you would like the library to be open, by placing an "O" in the appropriate box. The present open hours are already represented by an "X".

Opening hours	Day of the week						
	Mon	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**	**Sun**
0 to 7							
7 to 8							
8 to 9	X	X	X	X	X		
9 to 10	X	X	X	X	X		
10 to 11	X	X	X	X	X	X	
11 to 12	X	X	X	X	X	X	
12 to 13	X	X	X	X	X	X	
13 to 14	X	X	X	X	X	X	
14 to 15	X	X	X	X	X	X	
15 to 16	X	X	X	X	X	X	
16 to 17	X	X	X	X	X	X	
17 to 18	X	X	X	X	X	X	
18 to 19	X	X	X	X	X	X	
19 to 20	X	X	X	X	X		
20 to 21	X	X	X	X	X		
21 to 22	X	X	X	X	X		
22 to 23							
23 to 24							

Draw a random sample of users and ask them to complete the questionnaire. The data may be collected by handing out the questionnaire in the library, by postal questionnaire, by an electronic questionnaire, or by telephone interview, as appropriate. The survey could also be added to a comprehensive survey of user satisfaction with the library's services.

If libraries have different open hours during academic term or vacation, it would be advisable to have separate surveys during term and vacation time.

The Hours Opened Compared to Demand, I_{HOCD}, is

$$I_{HOCD} = A/B$$

where

A is the number of current hours open;

B is the number of hours that the users state that they need (present hours + additional hours).

If a library is open 60 h per week and in the questionnaire users ask for an additional 10 h, the score would be

$$I_{HOCD} = 60/70 = 0,86$$

B.1.3.5.5   Interpretation and factors affecting the performance indicator

The performance indicator shows not only whether users need additional hours open, but also for what time of the day/week such additional hours open are required.

If a high percentage of respondents is dissatisfied with the existing open hours and asks for extended hours or a different distribution of hours over the day/week, libraries should react to modify and/or extend their open hours. This may be difficult, especially if users demand extended times on weekends or during the night.

A possible solution might be to open the library without offering full service, so that non-professional staff could run the library during these times.

The performance indicator will be affected by other libraries nearby offering extended open hours for reading and studying.

Budgetary and other local factors may affect a library's ability to meet user requests for additional hours open.

B.1.3.5.6   Sources

See the following references in the Bibliography for more information:

⎯ Reference [9], p. 15 ("Opening Hours Compared to Demand");

⎯ Reference [25], pp. 54-59 ("Opening Hours Compared to Demand").

B.1.4 Staff

B.1.4.1   Staff per Capita

B.1.4.1.1   Objective

The objective of this performance indicator is to assess the number of library employees per 1 000 members of the population to be served. The number of persons in the population to be served can be considered proportional to the amount of work to be done.

B.1.4.1.2   Scope of the performance indicator

This performance indicator is applicable to all libraries with a defined population to be served.

Comparing libraries may be possible if differences in the mission of the library and socio-economic factors in the population are taken into account.

B.1.4.1.3   Definition of the performance indicator

The ratio of employees including student assistants and project-related employees defined per 1 000 members in the population to be served.

B.1.4.1.4   Method

Obtain the number of employees (FTE) including student assistants and project-related staff.

To calculate the FTE for part-time employees:

— Annual employment: weekly working hours divided by the regular working hours per week;

— Non-annual employment: weekly working hours divided by the regular working hours per week and then multiplied with the quotient (number of weeks employed divided by 52).

The Library Staff per 1 000 members of the Population, I_{LS}, is

$$I_{LS} = A/B \times 1\ 000$$

where

A is the number of employees in FTE;

B is the number of persons in the population to be served.

Round off I_{LS} to the nearest integer.

B.1.4.1.5   Interpretation and factors affecting the performance indicator

The performance indicator is an integer with no upper limit.

A high score is usually considered as good. This performance indicator should only be considered in combination with performance indicators measuring the quality of services and the efficiency of processes.

B.1.4.1.6   Sources

See the following references in the Bibliography for more information:

— Reference [6], (PI 1.2);

— Reference [25], pp. 82-87.

B.2 Use

B.2.1 Collection

B.2.1.1 Collection Turnover

B.2.1.1.1 Objective

The objective of this performance indicator is to assess the overall rate of use of a loan collection.

The performance indicator can also be used to assess the fit of the collection to the requirements of the population to be served.

B.2.1.1.2 Scope of the performance indicator

This performance indicator is applicable to all libraries with a loan collection.

This performance indicator may be used with specified collections, subject areas, branches or new acquisitions. For each specified area within the library, the resulting performance indicators may be compared to see if the turnover differs significantly.

This performance indicator may be used for comparing libraries with the same mission, if the same time period is used.

B.2.1.1.3 Definition of the performance indicator

The total number of loans in the specified collection during a specified period of time, normally one year, divided by the total number of documents in the collection.

B.2.1.1.4 Method

Count the number of loans registered in the specified period for the collection specified. Count the total number of documents in the collection.

The Collection Turnover, I_{CT}, is

$$I_{CT} = A/B$$

where

A is the number of registered loans in the specified collection;

B is the total number of documents in the specified collection.

Round off I_{CT} to one decimal place.

If the total number of documents is not available, an estimate may be substituted. Such estimates are the length of the shelf list, or the length of occupied shelves in the loan collection, multiplied by the estimated mean number of documents per unit length.

If a large number of reference copies are intermixed with copies for loan in the collection, the reference copies should not be included in the calculations.

B.2.1.1.5   Interpretation and factors affecting the performance indicator

The performance indicator is a real number with no upper limit. The normal range will depend upon the type of library. The performance indicator estimates the mean number of times the documents in the collection have been on loan during one year, but the library may measure the turnover during another period of time. The higher the number, the more intensive is the rate of use.

The Collection Turnover is influenced by several factors. The most important are as follows:

a)   the composition of the collection in relation to the demands of the users; a collection with a large proportion of out-of-date or inappropriate material will result in a lower turnover;

b)   the policy of the library in weeding out obsolete titles and extra copies no longer needed;

c)   the number of copies of titles in much demand;

d)   the proportion of in-library use to loans. High in-library use may result in lower turnover rates;

e)   the standard loan period of the library and any special loan periods for titles in demand, and the number of documents authorized for borrowing simultaneously;

f)   the promotional activities of the library and the skills of the staff in the area of promotion;

g)   the ease of effecting renewals.

Where data on individual documents is available from the library's circulation system, further details may be provided by calculating:

⎯   the percentage of stock not used within a specified period;

⎯   the percentage of stock used at least once within a specified period.

B.2.1.1.6   Sources

See the following references in the Bibliography for more information:

⎯   Reference [13], pp. 38-40;

⎯   Reference [20], p. 31 ("Circulation Rate");

⎯   Reference [25], pp. 128–131 ("Collection Use");

⎯   Reference [28], p. 47 ("Turnover Rate". Includes documents in reference collection);

⎯   Reference [29], pp. 54-55 ("Circulation per Volume Held", given as a variation of "Circulation". On p. 60 also "Total Materials Use by Volume Held", given as a variation on "Total Materials Use" and including in-library use).

B.2.1.2   Loans per Capita

B.2.1.2.1   Objective

The objective of this performance indicator is to assess the rate of use of library collections by the population to be served. It may also be used to assess the quality of the collections and the library's ability to promote the use of the collections.

B.2.1.2.2   Scope of the performance indicator

This performance indicator is applicable to all libraries with a loan collection.

This performance indicator may be used with specified collections, subject areas, or branches. For each specified area within the library, the results may be compared.

This performance indicator may be used for comparing libraries if differences in the mission of the library, socio-economic factors, and lending periods are taken into account.

B.2.1.2.3   Definition of the performance indicator

The total number of loans in a year divided by the population to be served.

B.2.1.2.4   Method

The Loans per Capita, I_{LPC}, is

$$I_{LPC} = A/B$$

where

   A is the total number of loans in a year;

   B is the number of persons in the population to be served.

Round to nearest integer, or to one decimal place if less than 10.

For the purpose of this performance indicator, copies provided by the library as substitutes for loans may be included. Interlibrary loans are excluded. It is important that the inclusions and exclusions are described when the performance indicator is used for comparing libraries.

B.2.1.2.5   Interpretation and factors affecting the performance indicator

The performance indicator is a real number with no upper limit.

A change in loan periods or in the number of books authorized for borrowing simultaneously can affect the performance indicator substantially. Further details may be provided by analysing the performance indicator by subject or by different categories of borrowers. The performance indicator can also be used to show areas where demand is low or unsatisfied and to point to areas where use could be increased.

The performance indicator is sensitive to a number of uncontrollable variables and relates only to lending. In particular, it can be affected by the studying conditions in the library, levels of literacy, levels of poverty, and other socio-economic variables.

There is a strong relation between the performance indicator and the ability of the library staff to promote the collection.

B.2.1.2.6   Source

See Reference [28] pp. 42-44 ("Circulation per capita"), in the Bibliography for more information.

B.2.1.2.7   Related performance indicator

See In-library Use per Capita (B.2.1.5).

B.2.1.3 Percentage of Stock Not Used

B.2.1.3.1 Objective

The objective of this performance indicator is to assess the amount of stock not used during a specified period. The performance indicator may also be used to assess the fit of the collection to the requirements of the population to be served.

B.2.1.3.2 Scope of the performance indicator

This performance indicator is applicable to all libraries.

This performance indicator may be used for specified collections, subject areas, branches or time periods.

Within each of these categories, the resulting performance indicators may be compared to see whether the percentage of items not used differs significantly.

B.2.1.3.3 Definition of the performance indicator

The percentage of physical items in stock not used during a specified period (rounded off to the nearest integer).

Used means, for the purpose of this performance indicator, that an item has been recorded as having been on loan, or has otherwise been registered as having been used in the library during the specified time period. In-house use is included only when a library records it on a continuous basis.

The period used for measurement is fixed by the user of the performance indicator. This should be done in a way that reflects the mission and policies of the library. In general, a period of one year is the minimum appropriate.

B.2.1.3.4 Methods

B.2.1.3.4.1 Draw a random sample of items owned by the library. For each item in the sample, record whether that item has been borrowed during the specified time period, or otherwise registered as having been used in the library.

The Percentage of Stock Not Used is, I_{PSNU1}, is

$$I_{\text{PSNU1}} = (C - A - B)/C \times 100$$

where

- A is the number of items in the sample which have been borrowed;

- B is the number of items in the sample which have been registered as used in the library and not borrowed;

- C is the total number of items in the sample.

Round off I_{PSNU1} to the nearest integer.

B.2.1.3.4.2 Using the records from a computerized issue system, count the number of items which have been on loan during the specified time period.

The Percentage of Stock Not Used, I_{PSNU2}, is

$$I_{PSNU2} = (B - A)/B \times 100$$

where

    A is the number of items which have been on loan;

    B is the total number of items in the loan stock.

Round off I_{PSNU2} to the nearest integer.

This second method overestimates the true rate, since it does not include data on items which have been used in the library, but not borrowed.

B.2.1.3.5   Interpretation and factors affecting the performance indicator

The performance indicator is an integer between 0 and 100. It estimates the probability that a randomly selected document owned by the library has not been used during the specified time period. A high score means a low rate of use.

The performance indicator is affected by several factors, including:

— the mission of the library, for example whether the library has an archival mission or not;

— the promotional activities of the library;

— the acquisition and weeding policies and practices in the library.

B.2.1.3.6   Sources

See the following references in the Bibliography for more information:

— Reference [15], pp. 36-39;

— Reference [25], pp. 132-136.

B.2.1.3.7   Related performance indicator

See Collection Turnover (B.2.1.1).

B.2.1.4   Number of Content Units Downloaded per Capita

B.2.1.4.1   Objective

The objective of this performance indicator is to assess whether users find items of interest in an electronic resource.

B.2.1.4.2   Scope of the performance indicator

This performance indicator is applicable to all libraries.

B.2.1.4.3   Definition of the performance indicator

The number of content units downloaded in part or in whole from each electronic resource, divided by the population to be served during a specified time period.

Use of electronic resources by library staff and for user training is included in the count of content units downloaded.

The population to be served is the preferred measure, however, a specific target population may be substituted and so specified when reporting.

B.2.1.4.4 Method

Count the number of content units downloaded from each electronic resource during a specified time period and divide that number by the number of population to be served by the same resource during that time period.

The Number of Content Units Downloaded per Capita, I_{NCUDC}, is

$$I_{\text{NCUDC}} = A/B$$

where

A is the number of content units downloaded from a specified electronic resource during a specified time period;

B is the population to be served.

Round off I_{NCUDC} to nearest integer, or to one decimal place if less than 10.

NOTE   In some special cases, the library may wish to use a particular target population (e.g. faculty, senior level students) for this performance indicator

B.2.1.4.5 Interpretation and factors affecting the performance indicator

The performance indicator is an integer with no upper limit. A high number is regarded as better than a low one.

The performance indicator may be affected by several factors, some outside the control of the library. Examples are: the level of users' skills, the level of network access, whether or not fees are charged for access or downloading, and the promotion of services.

The number of content units downloaded could be affected by the quality and efficiency of users' search strategies.

It is not recommended that the data should be used to obtain a global figure for all services, as services deliver different types of content units, e.g. some deliver full text, some citations. However, the data obtained for particular services may be compared. If libraries want to use performance indicators like

⎯ sessions per database, or

⎯ documents downloaded per electronic journal, digital document, or database,

these can be derived from the data elements used for the performance indicator Content Units Downloaded per Capita.

B.2.1.4.6 Source

See Reference [3], (adapted from PI 4), in the Bibliography for more information.

B.2.1.4.7 Related performance indicator

See Cost per Content Unit Downloaded (B.3.1.3).

B.2.1.5   In-library Use per Capita

B.2.1.5.1   Objective

The objective of this performance indicator is to assess the amount of usage of materials within the library.

B.2.1.5.2   Scope of the performance indicator

This performance indicator is applicable to all libraries. Further details may be provided by analyzing the documents used by subject. This performance indicator may be used with specified collections.

B.2.1.5.3   Definition of the performance indicator

The number of library documents used in the library in a year divided by the population to be served.

B.2.1.5.4   Method

Fix a period for sampling. During this period ask the users not to reshelve documents used in the library. Count the documents before reshelving.

The In-library Use per Capita, I_{IUC}, is

$$I_{IUC} = (A/B \times C)/D$$

where

A is the number of documents counted during the sampling period;

B is the number of opening days in the sampling period;

C is the total number of opening days in the full year;

D is the number of persons in the population to be served.

Documents which have been issued for loan are not included in A.

Round off I_{IUC} to nearest integer, or to one decimal place if less than 10.

B.2.1.5.5   Interpretation and factors affecting the performance indicator

The performance indicator is an integer with no upper limit.

Some high-use documents may be used by more than one person before they are reshelved; others may be taken off the shelves but not actually used. Some documents may be used by non-members of the population to be served.

The count can be affected by the library's policy concerning the binding of periodical volumes.

In-library use is affected by the speed with which documents are reshelved by staff, and the retrievability of documents waiting to be reshelved.

B.2.1.5.6   Sources

See the following references in the Bibliography for more information:

⎯   Reference [24], pp. 56-61 ("Collection Use");

⎯   Reference [29], pp. 55-59 ("In-library Materials Use").

B.2.1.5.7   Related performance indicator

See Loans per Capita (B.2.1.2).

B.2.2 Access

B.2.2.1   Library Visits per Capita

B.2.2.1.1   Objective

The objective of this performance indicator is to assess the library's success in attracting users of all its services.

B.2.2.1.2   Scope of the performance indicator

This performance indicator is applicable to all libraries with a defined population to be served.

Comparing libraries may be possible if differences in the mission of the library and socio-economic factors in the population are taken into account.

B.2.2.1.3   Definition of the performance indicator

The total number of visits to the library, either physical or virtual, during a full year divided by the total number of persons in the population to be served.

For the purpose of this performance indicator, a visit is the act of entering the library premises or accessing the library's website in order to use one of the services provided by the library.

B.2.2.1.4   Method

B.2.2.1.4.1   Use a turnstile or similar device to automatically count the number of people leaving or entering the library. Count either entries or exits, not both.

Count the number of *external* virtual visits to the library's website.

The Library Visits per Capita, I_{LVC1}, is

$$I_{LVC1} = A/B$$

where

  A is the estimated total number of physical plus virtual (turnstile + *external* virtual visits) library visits in a full year;

  B is the number of persons in the population to be served.

Round off I_{LVC1} to the nearest integer, or to one decimal place if less than 10.

B.2.2.1.4.2   Count the number of persons entering or leaving the library during one or more sampling periods. Only count one entry or exit, not both. Calculate the *external* virtual visits for the same sampling period. The number and length of the periods are selected by the user of the performance indicator. Estimate the total number of visits for one year by extrapolation, using available information about variations during the year.

NOTE   Public libraries will typically use one period of one week; academic libraries, two or more periods reflecting the cycle of academic activities.

The Library Visits per Capita are

$$I_{LVC2} = A/B$$

where

A is the total number of physical plus virtual (turnstile + *external* virtual visits) library visits in a full year;

B is the number of persons in the population to be served.

Round off to the nearest integer, or to one decimal place if less than 10.

For the calculation of virtual visits, see ISO 2789:2006, A.5.3. The library should select one of these methods of calculation for use with this performance indicator.

B.2.2.1.5   Interpretation and factors affecting the performance indicator

The performance indicator is an integer with no upper limit. A high score is normally considered good.

If a turnstile is used, the count may be too high because staff and other nonusers are included, or because users have to exit and re-enter for a variety of reasons.

The capturing of virtual visits can depend on the method of calculation, software used, and the ability of the library to extract only *external* virtual visits.

Where there is a substantial amount of seasonal variation, the count should be made for shorter periods of time during which use is more regular.

B.2.2.1.6   Sources

See the following references in the Bibliography for more information:

— Reference [2], pp. 29, 34-35;

— Reference [6], (PI 2.1);

— Reference [25], pp. 112-119.

B.2.2.1.7   Related performance indicator

See Cost per Library Visit (B.3.1.4).

B.2.2.2   Percentage of Information Requests Submitted Electronically

B.2.2.2.1   Objective

To establish the use made of electronic means of communication (e.g. e-mail, digital reference) for submitting enquiries.

B.2.2.2.2   Scope of the performance indicator

This performance indicator is applicable to all libraries.

B.2.2.2.3   Definition of the performance indicator

The number of information requests submitted electronically during a specified time period as a percentage of the total number of information requests received during the same period.

B.2.2.2.4 Method

Record all information requests received by all library staff within a representative (sample) period of time, noting the means of submission. As a subdivision, count the number of information requests submitted electronically, whether by e-mail to the library's service points, to individual librarians, or online in a chat or other digital reference service.

The Percentage of Information Requests Submitted Electronically, I_{PIRSE}, is

$$I_{\text{PIRSE}} = (A/B) \times 100$$

where

A is number of information requests submitted electronically during a specified time period;

B is total number of information requests received during the same time period.

Round off I_{PIRSE} to the nearest integer.

B.2.2.2.5 Interpretation and factors affecting the performance indicator

The performance indicator is an integer in the range of 0 to 100. This figure gives an indication of the extent to which the library's users are switching to electronic means of communication. For example, a high number may indicate that:

a) a high proportion of the library's users are comfortable with electronic media and use them to access the library's services;

b) a high number of users operate at some distance from the library.

A low number may indicate that:

— a high number of users are not familiar with electronic media (there is a need for user training or promotion of electronic reference services);

— users possibly avoid submitting information requests electronically because of bad response times of the library staff (e.g. only once per week).

The score can be affected by the usability of the library website or by the online reference service being restricted to certain times of the day.

B.2.2.2.6 Sources

See the following references in the Bibliography for more information:

— Reference [2], p. 30 ("Percentage of virtual reference transactions to total reference questions");

— Reference [3], (PI 7);

— Reference [5], p. 78 ("Percentage of electronic reference transactions of total reference").

B.2.2.2.7 Related performance indicator

See Percentage of Target Population Reached (B.2.4.1).

B.2.2.3 Percentage of External Users

B.2.2.3.1 Objective

The objective of this performance indicator is to assess the percentage of library users who are external to the library's population to be served and thus the library's importance for learning and culture in the region. Also, the performance indicator provides an estimate of the impact or attraction of a library outside of its service area.

B.2.2.3.2 Scope of the performance indicator

This performance indicator is applicable to all libraries serving external users.

B.2.2.3.3 Definition of the performance indicator

The percentage of external library users out of all library users.

In the sense of this performance indicator, an external user is defined as an external active borrower, a registered user who has borrowed at least one item during the reporting period.

For institutions of higher education, this normally includes users who are not members of the academic and professional staff or students. For public libraries, this will normally be the population outside the legal service area (authority).

B.2.2.3.4 Method

Determine the number of external active borrowers and the total number of active borrowers at a specified point of time, usually at the end of the year.

The Percentage of External Users, I_{PEU}, is

$$I_{PEU} = (A/B) \times 100$$

where

A is the number of external active borrowers;

B is the total number of active borrowers.

Round off I_{PEU} to the nearest integer.

B.2.2.3.5 Interpretation and factors affecting the performance indicator

The performance indicator is an integer between 0 and 100.

A higher score indicates the library's importance and attractiveness beyond its population to be served, and can reflect the relevance of the library's services to a broader population. Whether this is considered as good depends on the library's mission and goals.

The performance indicator could provide information on the weakness of library service in some areas and potential or required developments in other areas.

The performance indicator can also be used to estimate the library's workload in the area of external users.

B.2.2.3.6 Source

See Reference [7], p. 2 (Table 2), in the Bibliography for more information.

B.2.2.3.7   Related performance indicators

See

⎯ Loans per Capita (B.2.1.2);

⎯ Percentage of Target Population Reached (B.2.4.1);

⎯ Percentage of the Total Library Lending to External Users (B.2.2.4).

B.2.2.4   Percentage of the Total Library Lending to External Users

B.2.2.4.1   Objective

The objective of this performance indicator is to assess the extent to which library loan services are used by external users.

The objective of this performance indicator is to indicate the attractiveness of the library's collection to users outside the population to be served.

B.2.2.4.2   Scope of the performance indicator

This performance indicator is applicable to all libraries that provide loan services to users outside the population to be served.

B.2.2.4.3   Definition of the performance indicator

The percentage of the library's total loans to non-members of the population to be served.

For institutions of higher education, this normally includes users who are not members of the academic and professional staff or students. For public libraries, this will normally be the population outside the legal service area (authority).

B.2.2.4.4   Method

Count the number of loans to external users and the number of the library's total loans. The library system shall be able to count separately the numbers of loans to external users and loans to active users in the population to be served.

The Percentage of the Total Library Lending to External Users, I_{PTLLEU}, is

$$I_{\text{PTLLEU}} = (A/B) \times 100$$

where

A is the number of loans to external users;

B is the total number of loans.

Round off I_{PTLLEU} to the nearest integer.

B.2.2.4.5   Interpretation and factors affecting the performance indicator

The performance indicator is an integer in the range of 0 to 100. A high rate indicates that the library offers a high amount of services to users outside the population to be served. Whether this is considered as good will depend on the library's mission and goals.

The performance indicator will be affected by the extent to which the library offers services to external users.

B.2.2.4.6   Source

See Reference [14] in the Bibliography for more information.

B.2.2.4.7   Related performance indicator

See Loans per Capita (B.2.1.2).

B.2.2.5   User Attendances at Library Events per Capita

B.2.2.5.1   Objective

To estimate the attraction of library events for the library's population to be served.

B.2.2.5.2   Scope of the performance indicator

Predominantly public libraries, but may also apply to other libraries that offer various events for their population.

B.2.2.5.3   Definition of the performance indicator

The total number of attendances at the library's events during a full year per 1 000 members of the population. Events, in the sense of this performance indicator, include events with literary, cultural or educational intent, e.g. author visits, reading groups, literary discussions, workshops.

There may be different events for children, youths and adults.

Only events arranged by the library are included.

Exhibitions are excluded.

B.2.2.5.4   Method

Count the number of attendances at each library's event and sum up for the year.

When the same person attends more than one event, he/she should be counted every time.

Determine the number of persons in the population to be served.

The Attendances at Library Events per Capita, I_{ALEC}, is

$$I_{ALEC} = (A/B) \times 1\ 000$$

where

    A is the number of attendances at the library events;

    B is the number of persons in the population to be served.

Round off I_{ALEC} to the nearest integer.

The performance indicator could be used separately for events for adults, youths or children separately, if the number of persons belonging to each group in the population to be served is known.

B.2.2.5.5 Interpretation and factors affecting the performance indicator

The performance indicator is an integer with no upper limit.

A high score indicates that the events that the library arranged were suited to the population to be served.

Attendants not belonging to the population to be served might be included in the counts.

B.2.2.5.6 Sources

See the following references in the Bibliography for more information:

— Reference [9], (PI 8);

— Reference [25], pp. 154-157.

B.2.2.5.7 Related performance indicator

See Number of User Attendances at Training Lessons per Capita (B.2.2.6).

B.2.2.6 Number of User Attendances at Training Lessons per Capita

B.2.2.6.1 Objective

The objective of this performance indicator is to assess the success of the library in reaching its users through the provision of training on library services.

B.2.2.6.2 Scope of the performance indicator

This performance indicator is applicable to all libraries with a defined population to be served.

B.2.2.6.3 Definition of the performance indicator

The number of user attendances at training lessons during a specified time period per 1 000 of the population to be served.

User training is defined as a training programme established with a specified lesson plan, which aims at specific learning outcomes for the use of library and other information services. User training can be offered as tour of the library, library tuition, or as a web-based service for users.

B.2.2.6.4 Method

Count the number of persons that attend library instruction (and, if applicable, tours of the library) during a specified time period (usually one year). These numbers should be cumulated at the end of the period. Count the number of sessions on the library's (interactive) online training modules during the same period. These numbers should also be cumulated at the end of the period. The sum of these numbers is used for the performance indicator.

The Number of User Attendances at Training Lessons per Capita, I_{NUATLC}, is

$$I_{\text{NUATLC}} = [(A + B)/C] \times 1\ 000$$

where

   A is the number of attendances at library instructional sessions (and, if applicable, tours);

   B is the number of sessions on the library's (interactive) online training modules;

   C is the population to be served.

Round off I_{NUATLC} to nearest integer.

NOTE   In some special cases, the library might wish to use a particular target population (e.g. faculty, senior level students) for this performance indicator.

B.2.2.6.5   Interpretation and factors affecting the performance indicator

The performance indicator is a real number with no upper limit. A higher number shows efficiency in reaching users by training lessons.

The performance indicator is affected by the amount of training provided by the library. The performance indicator does not allow evaluation of the quality of the training programme, nor assessment of the optimal expenditure on training activities.

B.2.2.6.6   Sources

See the following references in the Bibliography for more information:

— Reference [6], (PI 2.3);

— Reference [25], pp. 145-149.

B.2.2.6.7   Related Performance indicator

See User Attendances at Library Events per Capita (B.2.2.5).

B.2.3 Facilities

B.2.3.1   Public Seating Occupancy Rate

B.2.3.1.1   Objective

The objective of this performance indicator is to assess the overall use rate of public seats provided for reading and working in the library, by estimating the proportion of the public seating in use at any given time.

B.2.3.1.2   Scope of the performance indicator

This performance indicator is applicable to all libraries with reading and working facilities.

Measurement may be conducted at specified time of the day, the week or the year, e.g. peak times or off-peak times. This should be stated explicitly when using the performance indicator.

B.2.3.1.3   Definition of the performance indicator

The percentage of public seats in use at the time of investigation. Public seats reserved exclusively for the use of staff are not included.

B.2.3.1.4   Method

Make a survey of public seats provided for reading and working, whether with or without equipment at the time specified.

Count the number of public seats in use. Informal seating is included. Public seats in seminar rooms or group study rooms are included when under the library's administration. Public seats in halls, lecture and auditory theatres intended for audiences and special events are excluded.

The Public Seating Occupancy Rate, I_{PSOR}, is

$$I_{PSOR} = (A/B) \times 100$$

where

    A is the number of public seats in use;

    B is the total number of public seats provided.

Round off I_{PSOR} to the nearest integer.

Public seats which show evidence of being used, such as coats, bags, notebooks, etc., placed at seats, are counted as being in use, even if the user is absent. Due to the inherent variability of the performance indicator, a more accurate performance indicator may be attained by measuring the Public Seating Occupancy Rate at random intervals over a period of time and then calculating the mean occupancy rate (using the cumulated sum of the public seats in use, divided by the cumulated sum of the public seats provided, times 100).

B.2.3.1.5 Interpretation and factors affecting the performance indicator

The performance indicator is an integer in the range 0 to 100. It estimates the probability that a randomly selected public seat in use at any time, or at the times specified.

B.2.3.1.6 Source

See Reference [29], pp. 82-88 (A special case of "Facilities Use Rate"), in the Bibliography for more information.

B.2.3.1.7 Related performance indicator

See Workstation Use Rate (B.2.3.2).

B.2.3.2 Workstation Use Rate

B.2.3.2.1 Objective

The objective of this performance indicator is to assess the overall rate of use of workstations provided in the library, by estimating the proportion of the workstations in use at any given time.

B.2.3.2.2 Scope of the performance indicator

This performance indicator is applicable to all libraries.

Measurement may be carried out at representative (sample) times of the day, the week or the year, including peak times or off-peak times, and should be added up to achieve a mean value. Libraries may make separate calculations for networked and non-networked workstations.

B.2.3.2.3 Definition of the performance indicator

The percentage of workstations in use at the time of investigation.

B.2.3.2.4 Method

The most accurate value will be found by measuring the Workstation Use Rate at random intervals over a period of time and then calculating the mean use rate (using the cumulated sum of the workstations in use, divided by the cumulated sum of the workstations provided, times 100). Make a correction to the number of

workstations to allow for the workstations that are not working or being repaired each time a count is taken. In order to make this correction, a count should be made at random times throughout a typical working day. The mean number of workstations that are not working should be deducted from the total number of workstations.

Some workstations may offer different electronic library services, e.g. Online Catalogues, stand alone CD-ROMs, or internet only, and these machines may have differing patterns of use and demand. If this is the case, it is preferable to calculate this performance indicator for workstations offering different services separately. If a global figure for all workstations is required, this will be the mean of all separate values.

The Workstation Use Rate, I_{WUR1}, is

$$I_{WUR1} = (A/B) \times 100$$

where

A is the mean number of workstations in use;

B is the mean number of operable workstations provided.

Round off I_{WUR1} to the nearest integer.

A less accurate method is to make a survey of the workstations provided at the time specified.

Count the number of workstations in use.

The Workstation Use Rate, I_{WUR2}, is

$$I_{WUR2} = (A/B) \times 100$$

where

A is the mean number of workstations in use;

B is the mean number of operable workstations provided.

Round off I_{WUR2} to the nearest integer.

B.2.3.2.5   Interpretation and factors affecting the performance indicator

The performance indicator is an integer in the range 0 to 100. It estimates the probability that a randomly selected workstation is in use at any one time, or at the times specified. A higher number indicates that the workstations provided are being heavily used and may indicate a need for increased resources.

The performance indicator may be affected by the policy for booking workstations, the connect time, the number of internet connected workstations, and the availability of printed reference sources that can act as alternatives to electronic sources.

B.2.3.2.6   Sources

See the following references in the Bibliography for more information:

⎯ Reference [2], p. 83 ("Percentage of public access workstations in use");

⎯ Reference [3], (PI 8).

B.2.3.2.7   Related Performance indicator

See Public Seating Occupancy Rate (B.2.3.1).

B.2.4 General

B.2.4.1   Percentage of Target Population Reached

B.2.4.1.1   Objective

The objective of this performance indicator is to assess the success of the library in reaching a target population.

NOTE   The target population may be the population to be served by the library, a specific group within that population, or some other group that the library is aiming to serve.

B.2.4.1.2   Scope of the performance indicator

This performance indicator is applicable to all libraries.

This performance indicator may be used for comparing libraries aiming to serve similar target populations, provided that the same method is used for calculating the performance indicator.

B.2.4.1.3   Definition of the performance indicators

The percentage of the target population using the library.

A *user* is, for the purpose of this performance indicator, a person who has visited the library or used the services of the library in other ways during the last year. The number of users with registered loans may be used as an estimate of the number of users in the target population.

A *user* may, for the purpose of this performance indicator, be an individual or a corporate body (an organization, institution or company).

B.2.4.1.4   Methods

B.2.4.1.4.1   Draw a random sample from the target population. Ask each person in the sample whether they have visited the library, or used the services of the library in other ways, during the last year.

The Percentage of Target Population Reached, I_{PTPR1}, is

$$I_{\text{PTPR1}} = (A/B) \times 100$$

where

   A is the number of persons answering "Yes";

   B is the total number of persons answering.

Round off I_{PTPR1} to the nearest integer.

B.2.4.1.4.2   Using the records of the computerized issue system, count the number of users (belonging to the target population) who borrowed documents within the last year.

Estimate the number of persons in the target population.

The percentage of the target population reached, I_{PTPR2}, is

$$I_{PTPR2} = (A/B) \times 100$$

where

    A is the number of active borrowers belonging to the target population;

    B is the total number of persons in the target population.

Round off I_{PTPR2} to the nearest integer.

Since not all uses by an individual are taken into account, this method may result in a score that is lower than the true percentage.

B.2.4.1.5   Interpretation and factors affecting the performance indicator

The performance indicator is an integer in the range of 0 to 100. A higher score is normally considered better than a lower score, but a relatively low score may be considered satisfactory from the point of view of a specific library, e.g. with a specific type of target population.

The proportion of the target population using the library may be affected by several factors, many outside the influence of the library. Examples are: demographic composition of the target population; level of urbanization; level of education; characteristics of institutions served (e.g. teaching methods, level of financial support to students); book-buying habits; geographical distances between libraries and users; general social conditions; economic climate; etc.

The score ought to be sensitive to active promotion of the library services, as well as improvement of the services provided.

B.2.4.1.6   Sources

See the following references in the Bibliography for more information:

Reference [6] (PI 2.1);

Reference [20], p. 35 ("Percentage of the Population who have Books on Loan", using loans as an estimate of the percentage of the population who has used the library);

Reference [25], pp. 100-104 ("Market Penetration");

Reference [28], pp. 41-42 ("Registrations as Percentage of Population");

Reference [30], pp. 88-90.

B.2.4.1.7   Related performance indicator

See

— Library Visits per Capita (B.2.2.1);

— In-library Use per Capita (B.2.1.5);

— Collection Turnover (B.2.1.1).

B.2.4.2   User Satisfaction

B.2.4.2.1   Objective

The objective of this performance indicator is to assess the degree to which users are satisfied with the library services as a whole or with different services of the library.

B.2.4.2.2   Scope of the performance indicator

This performance indicator is applicable to all libraries.

Comparing the same library at different points in time is possible. Comparing different libraries is, in general, very difficult, and only valid if the circumstances, questions and procedures are identical. For example, if surveys are carried out simultaneously in branches of the same public library, meaningful comparisons would be possible.

The performance indicator may be used to assess the satisfaction of specific user categories, e.g. undergraduates, faculty members, or elderly people.

The performance indicator can be used for measuring users' perceptions of any of the public services of a library. For example:

— opening hours;

— study facilities;

— availability of documents;

— interlibrary lending service;

— inquiry and reference service;

— user training;

— attitudes of library staff;

— library service as a whole.

Different aspects of individual services may also be assessed within the same survey.

B.2.4.2.3   Definition of the performance indicator

The average rating by users of the library services as a whole or of different services of the library. The rating should be on a numeric scale, either:

— a four-point scale, from 1 to 4 with 1 as the lowest value; or

— a five-point scale, from 1 to 5 with 1 as the lowest value; or

— a seven-point scale, from 1 to 7 with 1 as the lowest value.

B.2.4.2.4   Method

Design a simple questionnaire listing the specific services, and/or aspects of services, which are to be assessed. A four-, five-, or seven-point scale is provided for answering the questions. The same scale should be used throughout the questionnaire.

Questions about user status can also be included in the questionnaire. Different categories of users have different needs, so the data may be analysed to identify how satisfaction is related to these variables.

Draw a random sample of users and ask them to fill out the questionnaire. The data may be collected by a postal questionnaire, by an electronic questionnaire, by face to face interview, or by telephone interview, as appropriate.

The average User Satisfaction for each service or aspect of service, I_{AUS}, is

$$I_{AUS} = A/B$$

where

A is the sum of the values for each service indicated by the users;

B is the number of persons answering the questions.

Round off I_{AUS} to one decimal place.

This performance indicator is calculated and reported separately for each question in the survey. For each service, also count the frequency with which each value appears. Then calculate the percentage for each value. This additional analysis shows how the users' perceptions are distributed across the range of possibilities.

A specific selection of questions in the survey can be used to identify specific sources of dissatisfaction, and to identify the relative importance of various services.

B.2.4.2.5   Interpretation and factors affecting the performance indicator

For each service or aspect of a service, this performance indicator is a number with one decimal point between 1 and 4, 1 and 5, or 1 and 7, depending on the scale chosen.

Users' opinions are very subjective, and depend on individual circumstances at the time of the survey. An important factor is the expectation of the users. If they have not had experience of high quality services they may be satisfied with lower quality, which is one reason why it is difficult to compare one library with another.

B.2.4.2.6   Sources

See the following references in the Bibliography for more information:

— Reference [13], pp. 118-122;

— Reference [25], pp. 105-111;

— Reference [29], pp. 43-53.

B.3   Efficiency

B.3.1   Collection

B.3.1.1   Cost per Loan

B.3.1.1.1   Objective

The objective of this performance indicator is to assess the cost of the services of the library related to the number of loans.

B.3.1.1.2   Scope of the performance indicator

This performance indicator is applicable to all libraries with a loan collection.

This performance indicator may be used to compare the:

— unit cost of loans for a specific library for a given period with that during another period;

— unit cost of loans for a specific library with that of another library of equivalent type.

B.3.1.1.3   Definition of the performance indicator

Total recurrent expenditure in a full financial year divided by the total number of loans in the same period.

The total recurrent expenditure is the sum of expenditures for:

a) acquisitions (including binding, licenses, and pay-per-view costs);

b) staff (including project staff, student assistants, etc.);

c) all other purposes: operations and maintenance of computers and network, software licenses and telecommunication, rent and maintenance of premises, utility costs (heat, electricity, water, sewage), repair or replacement of existing furnishings and equipment, and other costs like cataloguing records, copying, postage, promotion of services, stationery, insurance, transport and communications, consulting, etc.

Capital expenditure (on acquisition of, or addition to, building sites, new buildings and extensions, on computer systems, furniture and equipment) is excluded.

When used for international comparisons, value-added taxes, sales and service taxes and other local taxes are not included in recurrent expenditure.

B.3.1.1.4   Method

Calculate the total recurrent expenditure for one financial year, using accounts data. To get an estimate for the current year, data from the budget may be used instead.

The Cost per Loan, I_{CPL}, is

$$I_{CPL} = A/B$$

where

A is the total recurrent expenditure for one financial year, expressed in the relevant currency;

B is the total number of loans in the same period.

Round off I_{CPL} in the manner customary with the currency used.

For the purpose of this performance indicator, copies provided by the library as substitutes for loans may be included. Outgoing interlibrary loans are included. Incoming interlibrary loans are excluded. It is important that the inclusions and exclusions are described when the performance indicator is used for comparing libraries.

B.3.1.1.5   Interpretation and factors affecting the performance indicator

The performance indicator is a real number with no upper limit. The normal range will depend on the type of library and the currency used.

The performance indicator establishes a relation between the number of loans and the cost of providing all the services of the library, but cannot in the normal case be interpreted as an estimate of the average cost of a loan transaction. Especially in libraries where loans are the dominant service, the performance indicator may be used to assess the overall efficiency of the service.

Interpretation of the results is dependent on local factors such as negotiated licensing agreements, service contracts, etc.

This performance indicator should not be used by itself. It is useful for placing the service performance indicators in a more general context.

B.3.1.1.6 Source

See Reference [13], pp. 50-51 ("Cost per use", using an estimate of the actual cost of the circulation service), in the Bibliography for more information.

B.3.1.1.7 Related performance indicators

See

— Cost per User (B.3.4.1);

— Cost per Library Visit (B.3.1.4).

B.3.1.2 Cost per Database Session

B.3.1.2.1 Objective

The objective of this performance indicator is to assess the costs of a database related to the number of sessions.

B.3.1.2.2 Scope of the performance indicator

This performance indicator is applicable to all libraries.

This performance indicator may be used for comparisons over time, to other databases or the same database in another library if differences in collection policies and socio-economic factors in the population are taken into account.

B.3.1.2.3 Definition of the performance indicator

The cost of each database divided by the number of sessions during a specified period.

The cost of a database is the acquisitions, subscription or licensing costs paid by the library. Pay-per-view costs paid by the library are included; pay-per-view costs paid by the users are not included in this definition. This performance indicator applies only to priced databases.

B.3.1.2.4 Method

For each database, the costs during a specified period (usually a full financial year) are divided by the number of sessions during that period. If the time periods between costs and sessions measured differ, they should be normalized.

For multiple databases comprised of several individual databases, further information should be provided as to the separate databases.

Sessions by library staff and for user training should be included in the number of sessions.

Electronic versions of titles acquired in a package with the print versions should be excluded if cost per use can not be clearly separated. The costs of databases acquired by bulk purchase should be allocated pro rata.

The Cost per Database Session, I_{CDS}, is

$$I_{CDS} = A/B$$

where

A is the cost of each database for a specified period;

B is the number of sessions on each database during the same period.

Round off I_{CDS} in the manner customary with the currency used.

B.3.1.2.5   Interpretation and factors affecting the performance indicator

The performance indicator is a real number with no upper limit. The normal range will depend on the currency used.

A lower value indicates cost efficiency for the database. This should, however, be considered in conjunction with the impact value of the database, especially with the number of documents or entries downloaded per session.

Data of sessions will not be readily available in all cases. Vendors may deliver differing or incomplete data. In some cases, several users one after the other might make use of the same established connection.

User surveys or interviews can be used to validate the value of the performance indicator.

The performance indicator should not be used by itself, but in conjunction with the performance indicator Cost per Content Unit Downloaded and with user satisfaction surveys. If libraries want to use performance indicators like

⎯ sessions per database,

⎯ content units downloaded per electronic journal, digital document, or database,

they can derive these from the data elements used for the performance indicator Content Units Downloaded per Session.

Interpretation of the results is dependent on local factors such as negotiated licensing agreements, service contracts, etc.

B.3.1.2.6   Source

See Reference [3], (PI 5), in the Bibliography for more information.

B.3.1.2.7   Related performance indicators

See

⎯ Cost per Content Unit Downloaded (B.3.1.3);

⎯ Cost per Loan (B.3.1.1).

B.3.1.3   Cost per Content Unit Downloaded

B.3.1.3.1   Objective

The objective of this performance indicator is to assess the cost of an electronic resource related to the number of content units downloaded.

B.3.1.3.2   Scope of the performance indicator

This performance indicator is applicable to all libraries.

This performance indicator may be used for comparisons over time, to other electronic resources or the same resource in another library if differences in collection policies and socio-economic factors in the population are taken into account. The performance indicator only applies to priced electronic resources.

B.3.1.3.3   Definition of the performance indicator

The costs of each electronic resource divided by the number of content units downloaded in part or in whole from that electronic resource during a specified period.

The cost of an electronic resource is the acquisitions, subscription or licensing cost paid by the library for that resource. "Pay per download" costs are not included in this definition as the costs per download are evident.

For the purpose of this performance indicator, an entry in an electronic resource or database is a downloadable information entity consisting of one or more data files, the essential information usually being full text. Downloading is achieved by requesting a content unit from a server, usually by means of a web browser.

B.3.1.3.4   Method

For each electronic resource, the cost during a specific period (usually a full financial year) is divided by the number of downloads during that period. If the time periods between costs and sessions measured differ, they should be normalized.

Downloading or viewing by library staff and in user training should be included in the number of downloads.

Electronic versions of content units acquired in a package with print versions should be excluded if costs per use can not be clearly separated. The costs of resources acquired by bulk purchase should be allocated pro rata.

The Cost per Content Unit Downloaded, I_{CCUD}, is

$$I_{\text{CCUD}} = A/B$$

where

A is costs of each electronic resource for a specified period;

B is number of content units downloaded from each electronic resource during the same period.

Round off I_{CCUD} in the manner customary with the currency used.

B.3.1.3.5   Interpretation and factors affecting the performance indicator

The performance indicator is a real number with no upper limit. The normal range will depend on the currency used.

A lower value indicates cost efficiency for electronic resources. This should, however, be considered in conjunction with the demand for the resource, especially with the number of sessions.

Depending on the users' browser cache configurations and use of proxy servers, the number of documents downloaded indicated by server statistics will usually be lower than the real number.

User surveys or interviews might validate the value of the performance indicator.

The performance indicator should not be used by itself, but in conjunction with the performance indicator Cost per Database Session and with user satisfaction surveys. If libraries want to use performance indicators like

— sessions per database,

— content units downloaded per electronic journal, digital document, or database,

they can derive these from the data elements used for the performance indicator Content Units Downloaded per Session.

Interpretation of the results is dependent on local factors such as negotiated licensing agreements, service contracts, etc.

B.3.1.3.6   Source

See Reference [3], (PI 6), in the Bibliography for more information.

B.3.1.3.7   Related performance indicators

See

— Cost per Database Session (B.3.1.2);

— Cost per Loan (B.3.1.1).

B.3.1.4   Cost per Library Visit

B.3.1.4.1   Objective

The objective of this performance indicator is to assess the cost of the library's service related to the number of library visits.

B.3.1.4.2   Scope of the performance indicator

This performance indicator is applicable to all libraries.

The performance indicator may be used for comparison between libraries with the same mission, provided the calculation of expenditure is conducted in the same way.

B.3.1.4.3   Definition of the performance indicator

The total recurrent expenditure of the library in a full financial year divided by the number of visits (including virtual visits) to the library.

The total recurrent expenditure is the sum of expenditures for

a)   acquisitions (including binding, licenses, and pay-per-view costs),

b)   staff (including project staff, student assistants, etc.),

c)   all other purposes: operations and maintenance of computers and network, software licenses and telecommunication, rent and maintenance of premises, utility costs (heat, electricity, water, sewage), repair or replacement of existing furnishings and equipment, and other costs like cataloguing records, copying, postage, promotion of services, stationery, insurance, transport and communications, consulting, etc.

Capital expenditure (on acquisition of, or addition to, building sites, new buildings and extensions, on computer systems, furniture and equipment) is excluded.

For the purpose of this performance indicator, a visit is a person (individual) entering or leaving the library premises (only count one entry or exit, not both). A virtual visit is a user's request on the library website from outside the library premises, regardless of the number of pages or elements viewed.

B.3.1.4.4 Methods

B.3.1.4.4.1 Use a turnstile or similar device to automatically count the number of people leaving or entering the library. Count the number of virtual visits for the same time period. Calculate the total recurrent expenditure for one financial year using accounts data. An estimate for the current year may be made using budget data.

The Cost per Library Visit, I_{CLV1}, is

$$I_{CLV1} = A/(B + C)$$

where

 A is the total recurrent expenditure of the library in a full financial year, expressed in the relevant currency;

 B is the total number of physical library visits in a full year;

 C is the total number of virtual visits in a full year.

Round off I_{CLV1} in the manner customary with the currency used.

B.3.1.4.4.2 The number of visits and virtual visits can also be assessed by sampling. Count the number of persons entering or leaving the library and of requests on the library website during one or more sampling periods. The number and length of the periods is selected by the user of the performance indicator. Estimate the total number of visits and virtual visits for one year by extrapolation, using available information about variations during the year.

NOTE   Public libraries will typically use one period of one week; academic libraries, two or more periods reflecting the cycle of academic activities.

The Cost per Library Visit, I_{CLV2}, is

$$I_{CLV2} = A/(B + C)$$

where

 A is the total recurrent expenditure of the library in a full financial year, expressed in the relevant currency;

 B is the total number of physical library visits in a full year;

 C is the total number of virtual visits in a full year.

Round off I_{CLV2} in the manner customary with the currency used.

For the calculation of virtual visits, see ISO 2789:2006, A.5.3.

B.3.1.4.5 Interpretation and factors affecting the performance indicator

The performance indicator is a real number with no upper limit.

This performance indicator should not be used by itself. It is useful for placing the service performance indicators in a more general context. It should be considered in relation to the scope and quality of the services and, more generally, to library objectives. When judged against objectives, it can be useful in justifying expenditure of public funds and helping to understand differences of costs between similar libraries.

The calculation could be affected by differences in accounting methods.

Remote use of a library via campus-wide networks, etc., can significantly change the users' behaviour.

If a turnstile is used to count visitors, the count may be too high because staff, and possibly other nonusers, are included.

This performance indicator is less relevant for libraries with a substantial amount of electronic or telephone requests or other types of services to remote users.

Where there is a substantial amount of seasonal variation, the count should be made for shorter periods of time during which use is more regular.

Interpretation of the results is dependent on local factors such service contracts.

B.3.1.4.6 Source

See Reference [4], pp. 52-53 (variant of "Cost per User"), in the Bibliography for more information.

B.3.1.4.7 Related performance indicators

See

⎯ Cost per User (B.3.4.1);

⎯ Library Visits per Capita (B.2.2.1).

B.3.2 Access

B.3.2.1 Median Time of Document Acquisition

B.3.2.1.1 Objective

The objective of this performance indicator is to assess the degree to which suppliers of library materials are effective, in terms of speed.

B.3.2.1.2 Scope of the performance indicator

This performance indicator is applicable to all libraries. The performance indicator is especially useful for monograph acquisition.

Comparing suppliers may be possible.

B.3.2.1.3 Definition of the performance indicator

Median number of days between the date of ordering a document and the date it arrives at the library. Exclude documents acquired by gift or exchange, and documents ordered before publication.

B.3.2.1.4   Methods

B.3.2.1.4.1   For libraries with a computerized acquisition system: All monographs recently ordered or received by the library are checked in the order file as to

— day of ordering;

— day of receipt;

— supplier's name (if the library uses different suppliers).

For each title, calculate the number of days between ordering and receipt. Rank the titles according to the number of days elapsed.

The Median Time of Document Acquisition is the number of days that is in the middle of the ranking list.

NOTE   Documents which have not yet been received are left out of the calculation, since no finishing time can be assigned to an incomplete transaction.

If the number of titles is even, the Median Time of Document Acquisition, I_{MTDA}, is

$$I_{\text{MTDA}} = (A + B)/2$$

where A and B are the two values in the middle of the ranking list.

Round off I_{MTDA} to the nearest integer.

B.3.2.1.4.2   For libraries without a computerized acquisition system: Draw a random sample of monographs in different subjects. If the library uses a number of suppliers, make sure that different suppliers are represented in the sample.

Proceed as in B.3.2.1.4.1.

The results can be analysed by supplier and by subject.

B.3.2.1.5   Interpretation and factors affecting the performance indicator

The performance indicator is an integer with no upper limit.

The performance indicator could point to failures in vendor performance (the publishers as well as the vendors) and inefficient library claiming procedures.

Management decisions based on the results could lead to

— online ordering;

— approval plans;

— improved claiming of overdue orders;

— change of vendors;

— improved vendor performance (if they are informed of the results).

Acquisition speed is affected by the time taken by publishers to respond to orders from vendors. It may be difficult to reach a sufficient sample of recently acquired books out of one publisher's production to assess the publisher's reaction to orders.

Libraries that place most of their orders before the publication date will get a sample with an undue proportion of older, foreign, grey and similar documents, resulting in a very high score.

B.3.2.1.6   Sources

See the following references in the Bibliography for more information:

— Reference [1];

— Reference [19];

— Reference [23];

— Reference [25], pp. 189-192 ("Acquisition Speed").

B.3.2.1.7   Related performance indicators

See Median Time of Document Processing (B.3.2.2).

B.3.2.2   Median Time of Document Processing

B.3.2.2.1   Objective

The objective of this performance indicator is to assess whether the different forms of processing procedures are effective as to speed.

B.3.2.2.2   Scope of the performance indicator

This performance indicator is applicable to all libraries. The performance indicator is especially useful for monographs. It can be applied to different types of documents or different subjects.

Comparisons between libraries are possible, but only if differences in mission affecting the level of descriptive cataloguing, subject cataloguing, binding policies, etc., are taken into account. When interpreting the results, differences in computerization and the use of copy cataloguing should be given special attention.

B.3.2.2.3   Definition of the performance indicator

Median number of days between the day a document arrives at the library and the day it is available for the user.

B.3.2.2.4   Methods

B.3.2.2.4.1   The period used for measurement (e.g. one month) is fixed by the user of the performance indicator. Collect data on documents arriving in the library during the specified period. Keep a log, either by a computerized library system or by a log sheet accompanying the document through the process.

For each title, record the exact dates of all of the following stages of document processing:

— receipt, including administrative process;

— cataloguing/metadata tags;

— subject cataloguing/metadata tags;

— bindery preparation;

— binding;

— shelving.

For each title, calculate the number of days between arrival and availability. Rank the titles according to the number of days elapsed.

The Median Time of Document Processing is the number of days that is in the middle of the ranking list.

NOTE   Documents for which processing has not been completed are left out of the calculation, since no finishing time can be assigned to an incomplete process.

If the number of titles is even, the Median Time of Document Processing, I_{MTDP1}, is

$$I_{MTDP1} = (A + B)/2$$

where A and B are the two values in the middle of the ranking list.

Round off I_{MTDP1} to the nearest integer.

Special processing procedures for different documents (e.g. rush procedures, rare documents, gift and exchange documents) should be analysed separately. The median time of each stage of processing can be calculated in the same way.

B.3.2.2.4.2   The period used for measurement (e.g. one month) is fixed by the user of the performance indicator. Collect data on documents which complete their processing in the library during the specified period. Inspect the documentation or computer files to determine the dates of

— receipt, including administrative process,

— completion of cataloguing/metadata process,

— completion of subject cataloguing/metadata process,

— completing bindery preparation,

— completing binding,

— shelving.

For each title, calculate the number of days between arrival and availability. Rank the titles according to the number of days elapsed. The Median Time of Document Processing is the number of days that is in the middle of the ranking list.

If the number of titles is even, the Median Time of Document Processing I_{MTDP2}, is

$$I_{MTDP2} = (A + B)/2$$

where A and B are the two values in the middle of the ranking list.

Round off I_{MTDP2} to the nearest integer.

Special processing procedures for different documents (e.g. rush procedures, rare documents, gift and exchange documents) should be analysed separately. The median time of each stage of processing can be calculated in the same way.

B.3.2.2.5   Interpretation and factors affecting the performance indicator

The performance indicator is an integer with no upper limit.