

***Standardized measures  
for the changing  
information environment***

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# Why should we standardize the measures?

## What standards ensure (ISO)

effectiveness

safety

quality

reliability

economy

compatibility

interoperability

efficiency



## What library standards want to achieve

- to spread the knowledge about existing tested methods and practices
- to standardize
  - ◆ **terminology and definitions**
  - ◆ **methods of data collection**
  - ◆ **methods of analyzing the data**

with the aim of comparing and aggregating results

**ISO Technical committee 46:**

Information and documentation

**Subcommittee 8:** Quality, statistics and performance evaluation

### **WG 2: International library statistics**

- ISO DIS 2789 (2005) International library statistics  
3rd revision

### **WG 4: Performance indicators for libraries**

- ISO 11620 (1998) Library performance indicators  
Amendment 1 (2003)
- ISO TR 20983 (2003) Performance indicators for electronic library services
- Integration of the standards. ISO CD 11620 coming

### **WG 5: Price indexes**

- ISO DIS 9230 (2005) Determination of price indexes for books and serials

### **WG 6: Statistics on the production of books**

- ISO CD 9707 (2005) Statistics on the production and distribution of books, newspapers, periodicals and electronic publications

## Stages of an ISO standard

- **Approved New Work Item**
- **Working Draft**
- **Committee Draft (CD)**
- **Draft International Standard (DIS)**
- **Final Draft International Standard (FDIS)**
- **Standard**

voting  
required



*Assessing  
quantity*

*(ISO 2789)*






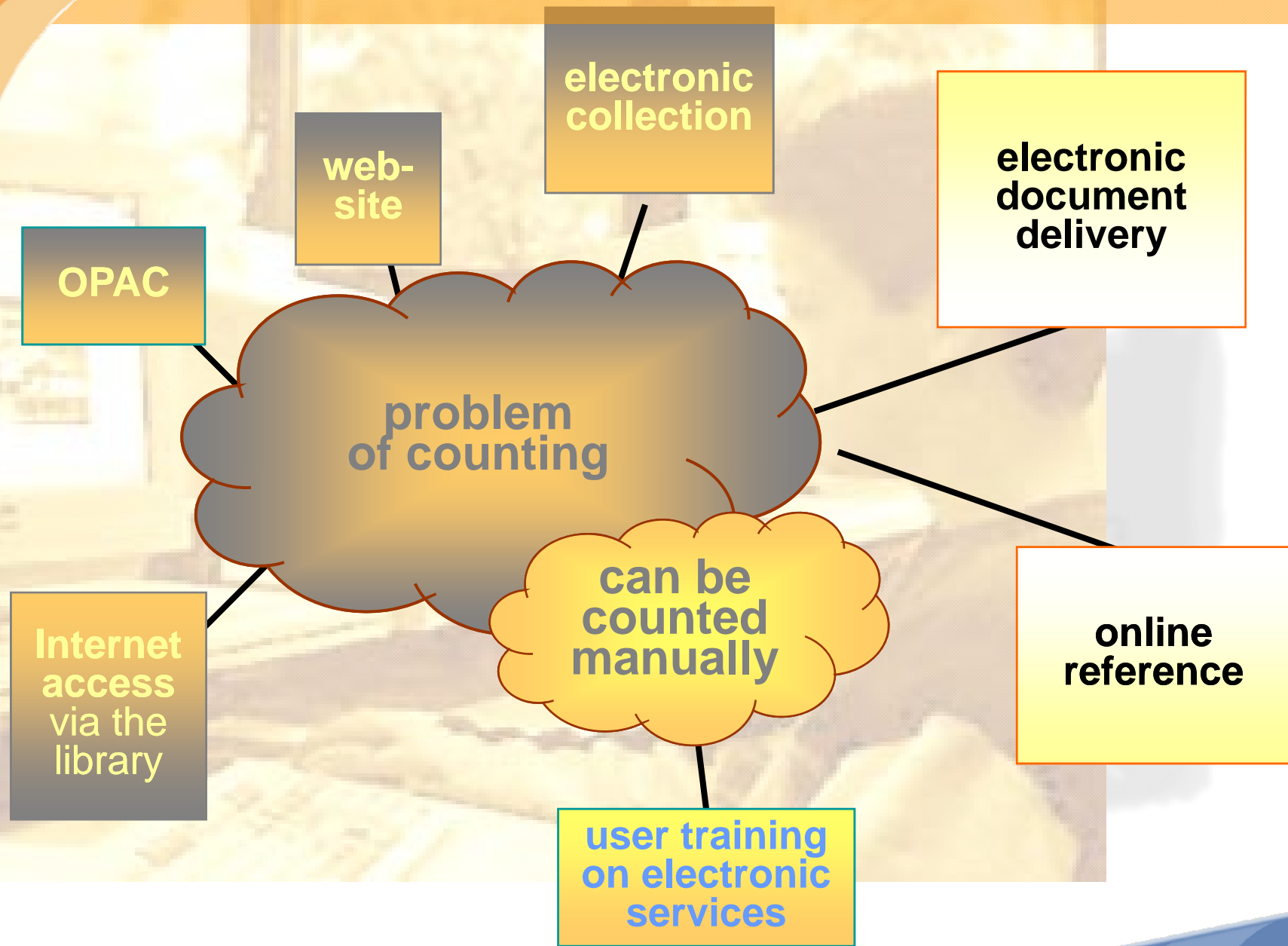
*Assessing  
quantity*

*(ISO 2789)*

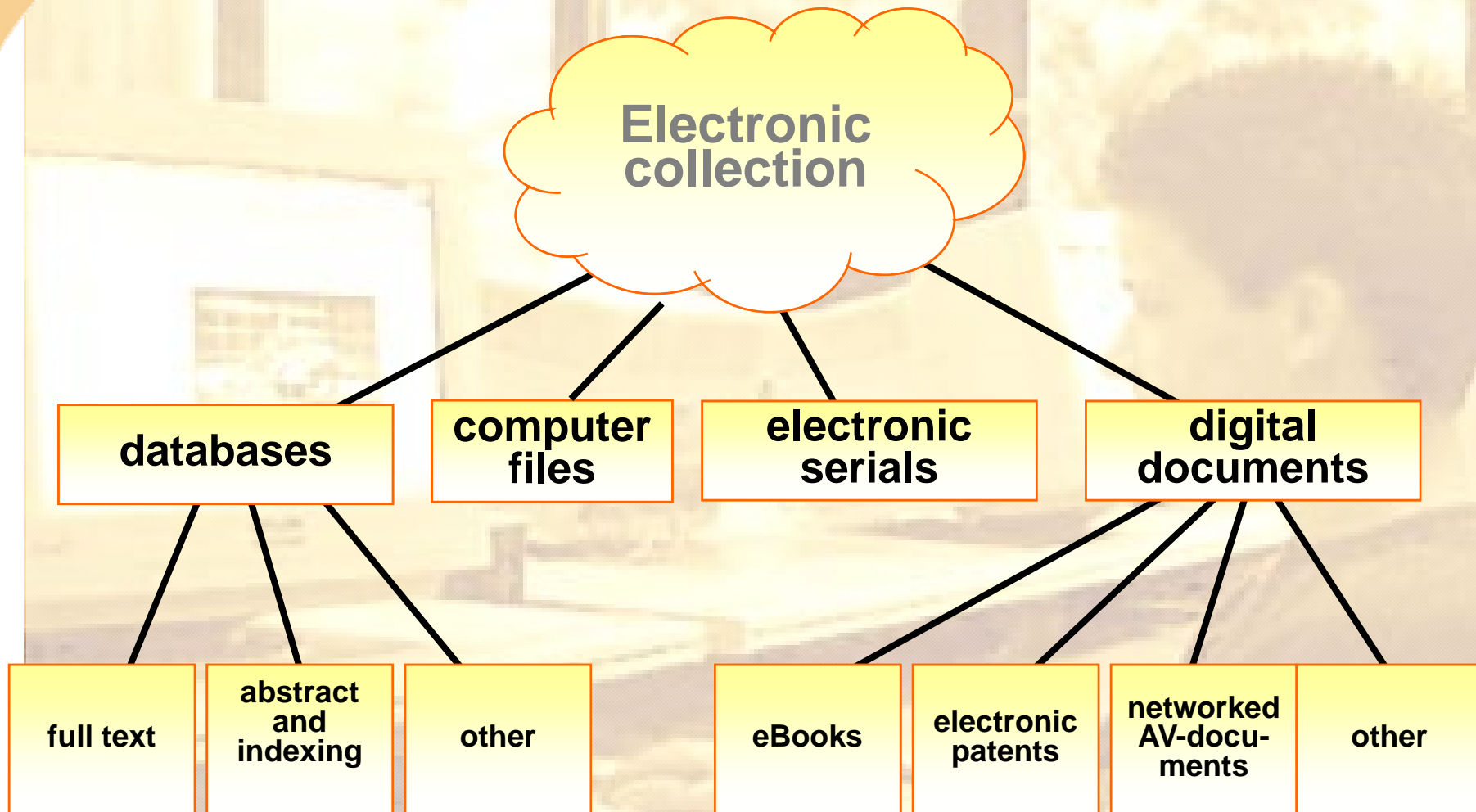
**In terms of**

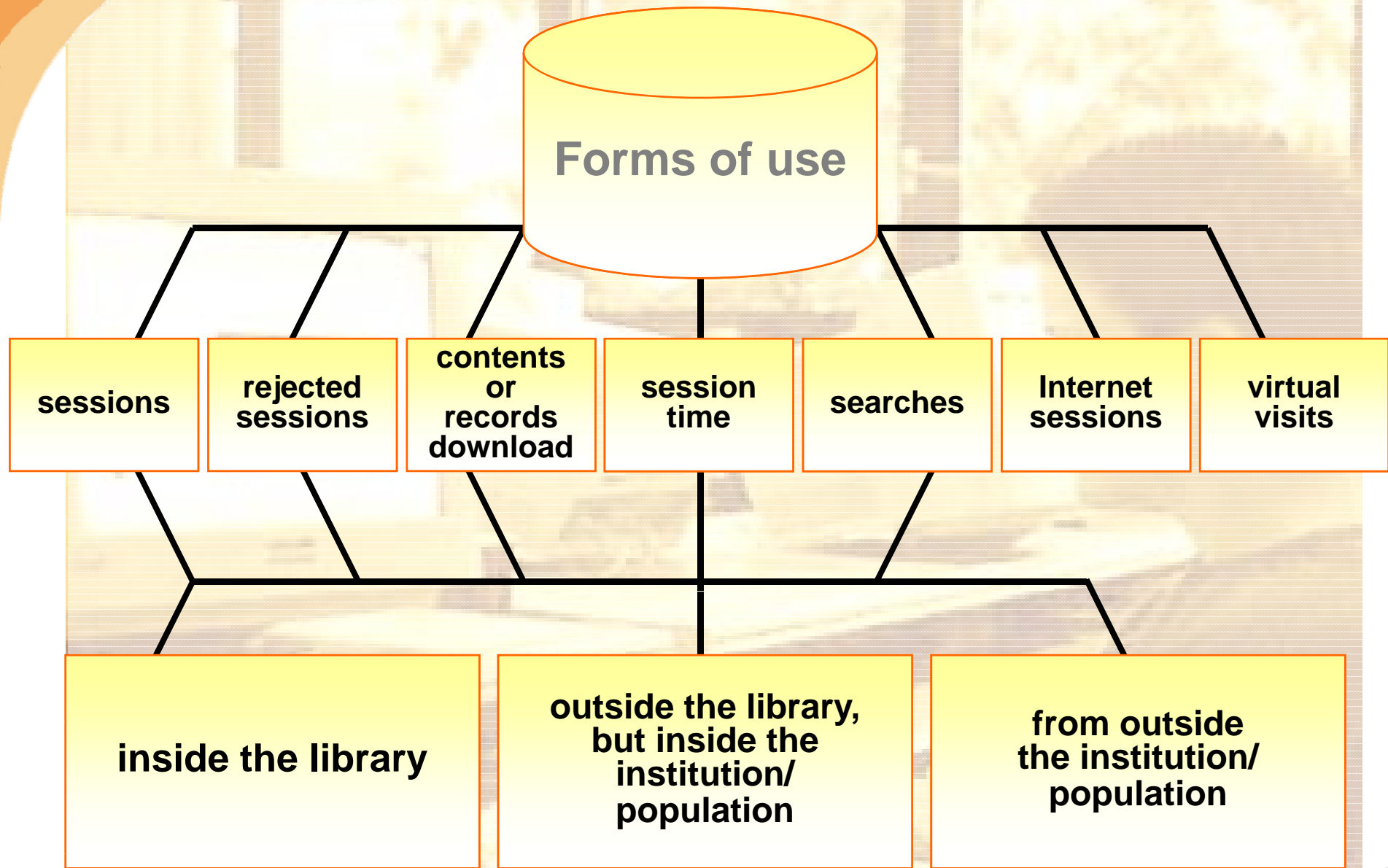
- **collection size**
  - **number and type of users**
  - **use of services**
  - **staff**
  - **space**
  - **equipment**
  - **training**
- 

## Electronic library services: counting use









## ISO 2789: definitions of use forms

### session time

*period between log-in and implicit or explicit log-off*

### search

*specific intellectual query*

### contents downloaded

*content unit being successfully requested*

### session

*successful request of a database or the online catalogue*

### records downloaded

*descriptive record being successfully requested*

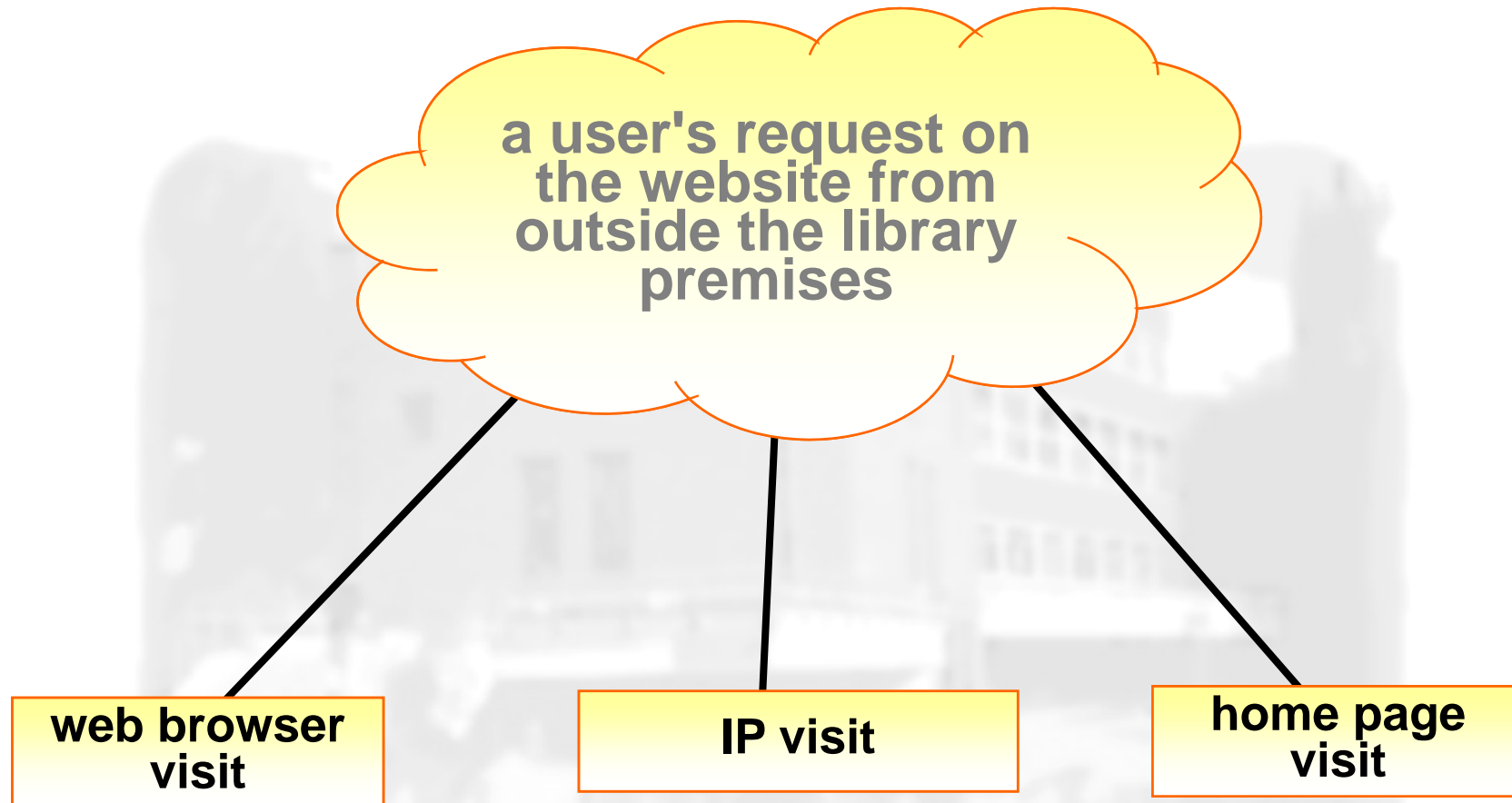
### rejected session

*unsuccessful request exceeding the simultaneous user limit*

### Internet sessions

*Internet access by a user from inside the library*

## ISO 2789: virtual visits



## ISO 2789: Open questions

- **Boundaries of electronic resources**  
"The physical boundaries, e.g. multiple files, do not correspond to the "conceptual boundaries". Multimedia resources do not stand alone as they are linked into a single resource."
- **Tracking usage of library linked free resources**  
Libraries until now in most cases do not assess, whether links have been followed. In ISO 2789 only optional.

**collecting data of electronic collections and services is not yet frequent in national statistics**





*Assessing  
quality*

*(ISO 11620)*





*Assessing  
quality*

*(ISO 11620)*

**In terms of**

- performance
  - features
  - reliability
  - conformance
  - durability
  - currency
  - serviceability
  - aesthetics
  - usability/accessability
  - competence
  - responsiveness
  - communication
  - speed
  - variety of services
  - **perceived quality**
- 

# ISO 11620: Library performance indicators

## New structure: Balanced scorecard

- **resources, access, infrastructure**
- **use**
- **efficiency**
- **potentials and development**



## Indicators for traditional services

resources,  
access,  
infrastructure

- shelving accuracy
- median time of document delivery from closed stacks

use

- collection turnover
- loans per capita
- in-library use per capita

efficiency

- cost per loan

potentials,  
development

---

## Indicators for "hybrid" services

resources,  
access,  
infrastructure

- percentage of required titles in the collection
- speed of interlibrary lending

use

- library visits per capita (including virtual visits)
- user attendances at training lessons per capita
- percentage of population reached
- user satisfaction

efficiency

- cost per library visit
- cost per user
- median time of document acquisition
- median time of document processing
- correct answer fill rate

potentials,  
development

- attendances at training lessons per staff member

## Indicators for electronic services

resources,  
access,  
infrastructure

- percentage of rejected sessions
- public access workstations per capita

use

- number of content units downloaded per capita
- percentage of information requests submitted electronically
- workstation use rate

efficiency

- cost per database session
- cost per content unit downloaded

potentials,  
development

- percentage of expenditure on information provision spent on the electronic collection
- percentage of library staff providing and developing electronic services

## New indicators: Topics

the library as meeting

**BIX-WB: library index for  
academic libraries**  
(<http://www.bix-bibliotheksindex.de>)

the external

external users

the importance of staff

- staff per capita
- employee productivity in media processing

financing the library

- ratio of acquisitions expenditure to staff costs
- percentage of library means received by special grants or income generation
- percentage of institutional means allocated to the library

## ISO 11620: problems

Combining traditional and electronic services in one indicator

- reasons for
    - to give
    - to make
- but:
- a website visit is no walk-in visit
  - a download is no loan
- personal service

No indicators as yet for:

- website quality
- the library's link collections

## Possible performance indicators for website quality

|  |   |
|--|---|
| Percentage of successful searches                          | online survey, interview after search, tests, observation |
| Number of clicks necessary to find a specified information | tests, cognitive walk-through, proxy users                |
| Percentage of important issues accessible via the homepage | cognitive walk-through                                    |
| Number of pages not visited during a specified time        | log analysis  |

what ISO 11620 has so far:

|   |              |
|---|--------------|
| Number of website visits per capita <i>(data in: library visits per capita)</i> | log analysis |
|---|--------------|



## Possible performance indicator for links on the library' website

- **number of times links are followed**
- 



*Assessing  
impact/outcome*





Assessing  
impact/outcome

**In terms of**

- *knowledge*
- *information literacy*
- *academic or professional skills*
- *individual well-being*

**changes in skills, competences, attitudes, behaviour**

# Methods for assessing impact

1

## Use statistics as measures of impact

- **electronic media**

- frequency of use

Users are familiar with the use of electronic resources and services (searches, downloads) (online delivery) services

- change in use

- number of new users

- that had not used the library
- that had not used the same service in traditional form

- percentage of the primary user group using E-services

# Methods for assessing impact

## 2 Qualitative measures

- **Asking users** (print or online surveys, focus groups, interviews)
  - What knowledge have they of library services?
  - How do they use (what are the reasons for use)?
  - Did they find the services useful?
  - Had they problems?
  - Did they find training sessions useful?
  - Have they improved their skills by using library services? (self-assessment)

Exit surveys  
most useful

# Methods for assessing impact

## 2 Qualitative measures

### ● Asking academic teachers

- Do library services support teaching and research?
- Do they encourage new services?
- For what purpose do you use library services?

anecdotal evidence

### ● Asking library staff

- Change of user skills after training on specified services?
- What help do users need for what service?

## Methods for assessing impact

3

### Quantitative measures: tests, observation, data mining...

- **tests:** can assess user skills before and after training on a service
- **performance monitoring / data mining:** can document changes in searching
- **"mystery shoppers":** can report on failures or success and on improvements they perceived in their skills
- **analysis of documents and bibliographies compiled by users:** Is there a change in
  - resources used
  - accuracy of citations
  - number of E-resources cited?

# Indicators for impact/outcome

## Information literacy

- Skills /competences improved after training
- Correlation of library teaching attendances to student retention rate

Surveys  
Tests

Survey

## Importance of the local library

- Estimation of the importance
- Percentage of citations in publications in the local library collection

Survey

Manual counts / survey

## Academic or professional success

- Correlation of library services use to success
- Correlation of library services use to number/ citation of publications

Use counts / Success data

Use counts / Citation index

# Indicators for impact/outcome

## Social inclusion

- **Skills /competences acquired via library services**
- **Percentage of potential users in a group using library services after promotion activities**  
(groups specified as to ethnic origin, age, employment status...)

Surveys  
Tests

User structure data  
Surveys

## Financial value of library services

- **Estimation of time saved**
- **Willingness-to-pay**

Surveys

Surveys

## Standardization of impact measures?

- projects still on the way
- IFLA Section Statistics and Evaluation has instituted a working group
- Bibliography of projects and literature:

<http://www.ulb.uni-muenster.de/outcome>



***Standardized measures  
for the changing  
information environment  
can show***

- **the impact of the changing environment on the library**
  - changes in types of information resources used
  - changes in the structure of information users
  - changes in information seeking ways
- **the importance of the library in the changing environment for**
  - social inclusion
  - information literacy
  - propagation of new information resources
  - direct, effective, and time-saving access to information

## *The changing information environment* *The most incisive change that ever happened?*

### changes 1950 to 1980

- **impossible:** the opening of the stacks
  - free access
  - self-service borrowing and returning
- **dangerous for books and readers:** the copying machines
  - taking notes becomes outdated

open, user-friendly, efficient, more resources available:  
we are going the same way now

- **fatal for the holy catalogue:** copy cataloguing
  - minimizing effort
  - sharing experience

**No matter  
how much  
the world  
changes,  
cats will  
never lay  
eggs.**



Bambara Proverb