



ISO quality as a driver of continuous improvement

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Abstract

Purpose – The purpose of this paper is to describe some of the benefits received from a four-year implementation of a Quality Management System in a small Italian Academic Library.

Design/methodology/approach – The Library of the Department of Statistics at University of Bologna, is one of the few Italian academic libraries currently with a Quality Management System accredited to the International UNI EN ISO 9001:2000 standard. This paper examines six knowledge-based tools developed as part of the QMS, including the student and junior researchers' customer satisfaction survey, the stakeholder Focus Group, and the statistical indicators.

Findings – The paper finds that ISO Quality Management System has proved to be a powerful instrument for improving performance and increasing user satisfaction. By describing in documented procedures how the Library's services should be run, each member of staff effectively shares their personal knowledge with their fellows, and with the staff of the future.

Research limitations/implications – The Library's statistical environment enabled it to create and develop more sophisticated performance measurement tools and metrics than would have been the case in a different cultural environment.

Practical implications – This paper provides a useful overview of the implementation of a Quality Management System in an academic context and its positive side effects on human resources development, user satisfaction, and continual service improvement. Other Academic Libraries could gain considerable benefits through adopting a similar quality standard approach.

Originality/value – This paper provides a new outlook on using an international quality standard as a process to improve knowledge and awareness of an existing library system, enabling targeted service improvements. As such it is a valuable innovative tool for academic librarians.

Keywords Academic libraries, Customer services quality, Assessment, Knowledge management, Italy, ISO 9000 series

Paper type Research paper

Established in 1982 the Library of the Department of Statistics at the Bologna University is manned by 7.9 full time equivalent staff and has a stock of 31,200 books and statistical sources which occupy 1,984 linear meters of open shelves. Fully renovated in 2000, its main users are the researchers and professors of the Department of Statistics, the students from the Faculties of Statistics and Economics and other Social Science libraries.

The Quality Management System based on UNI EN ISO 9001:2000 was implemented in 2004 and is accredited by Det Norske Veritas. Since the key to the system is continuous improvement, the accredited certification process consists of two stages: attaining the primary certification, and then maintenance of the certification.

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Det Norske Veritas has a highly effective approach to the audit, the so-called Risk Based Certification®, which helps the Library to understand where to focus improvement efforts. That is critical to being in control of those risk elements that can threaten the Library's success and thus minimize the risk to failing to meet customer expectations.

We are a member of a mutual support group, BIC (Biblioteche Italiane Certificate – Italian Quality Certified Libraries) whose other founding members were the Biblioteca Assemla Legislativa Regione Emilia Romagna and Biblioteca Nazionale Centrale Firenze[1]. So far, we are one of the few Italian academic libraries to be ISO certified among this small group of libraries from different institutional backgrounds.

Why has ISO 9001 seemed so unappealing in the past? I have heard many Italian colleagues say that instead of improving the library's services the quality procedures make them rigid and unbending. That performance indicators should always be comparable with, and capable of benchmarking with other libraries. Lastly (and worst) many librarians think that the certification process is only worthwhile if the Institution you belong imposes it from above. From my personal experience I can say that the ISO quality system draws out the knowledge embedded in the library staff, builds it into an explicit and tangible form and enables and encourages improvement (see Figure 1).

Our QMS consists of six knowledge-based tools:

- (1) The Quality policy and quality objectives.
- (2) A set of statistical indicators for monitoring the Library's services.
- (3) Non-conformity correction.
- (4) The documented procedures and specifications that state the service requirements.
- (5) The customer satisfaction annual survey.
- (6) The annual focus group.

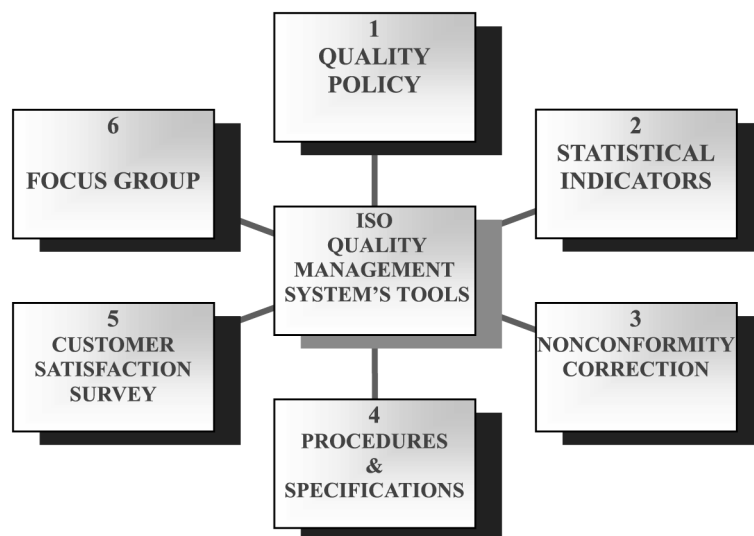


Figure 1.
The Quality Management System's tools

The Quality Policy is core to the whole quality system. Developed by our staff members, it is a living document, and although always under review it is formally reviewed and agreed at least once a year during the Quality Annual Assessment Meeting. The policy statement is the outcome of a combination of our personal opinions, professional attitudes and institutional policy and ethos, and is, in effect, a knowledge-based tool in its own right. Its main commitments are: to ensure coherent growth of the Library's collection; to enable open access to statistical sources; to preserve and maintain the historical Italian Statistical Sources collection; to improve the Library staff's skills and abilities; and, to encourage and stimulate a proactive environment where all pertinent information may be freely interchanged. The annual targets that we set every year are natural by-products of this Quality Policy. By working to these objectives, we aim to translate the policy into practical solutions: for example, we have planned to create a new help desk where part-time students and librarians may work together to improve the reference service.

We have a set of 22 statistical indicators. Six of them monitor back-office procedures such as:

- (1) Time taken to process new material.
- (2) Number of reminders for overdue loans against the loan's total[2].
- (3) Correct loan procedure[3].
- (4) Speed of document delivery requested by the user.
- (5) Speed of document delivery achieved.
- (6) Performance of the Library's suppliers in delivering purchased books.

Three others measure our users' abilities and recurrent behaviours, such as:

- (1) The students' proficiency in using the online catalogue.
- (2) The average usage of the physical journals and review section.
- (3) The average usage of electronic journals.

The remaining indicators are taken from the Customer Satisfaction Survey. They tell us a lot about the end-user's behaviour, their expectations, and the level of satisfaction regarding such critical aspects as: the relevancy and topicality of the library collection, the adequacy of the facilities to meet the user's requirements, and the quality of the library's human interface.

As you may have noticed, speed and timeliness are seen as fundamental elements of a good service: for us the purpose of the quality management system is not just to ensure effective delivery of the required services, but to do so quickly, thus "saving the time of the user". These performance indicators provide us with heightened visibility of those time elements that we, as librarians, often give less prominence than we should.

All of these indicators have been tailored to meet the Library's requirements: to monitor internal performances throughout the year, rather than designed to permit benchmarking of the outcomes with other libraries. On the other hand, the University Library System is responsible for quantitative indicators – with data mostly extracted from the online University databases – whose specific aim is comparability. These indicators represent the point of view of the University System, while ours attempt to assume the user's point of view.

Let us consider the indicator “time taken to process new material”. This records the interval – in days – between the receipt of a purchased document and its visibility in the Library’s catalogue. In the last three years we have improved our performance from an average 8.1 days (2004) to 4.9 days (2006). Surprisingly, the process phases themselves (ordering, cataloguing, classifying, preparing for the open shelf) largely remained the same throughout this period, while we also suffered a significant turnover of personnel. So what actually led to this improvement? My hypothesis is that the improved visibility of the current performance has made the library staff much more aware of the vital role each plays in the process phases. The lesson they have learned is that speed is a service element that our end-user cares for, just as much as accuracy.

Each service failure is treated as a “nonconformity” in our QMS. Rather than just record and ignore, the trick is to treat each failure as an opportunity to gain a deeper understanding of the Library system and the user’s needs. It is important to learn from our mistakes and from the customers’ comments and complaints. Each nonconformity should be managed and solved – once again – as quickly as possible. In other words, quality in this context does not mean being perfect, but striving towards perfection.

The treatment of nonconformities consists of two steps: monitoring and solving recurrent or minor nonconformities; discovering, analyzing and solving unpredictable or major ones. This problem solving approach extends to all the organizational, behavioural and tangible elements (i.e. facilities) of the library. We have started by classifying all those recurrent and minor nonconformities, which occur in day-to-day library operation, and have prepared countermeasures for each that we have identified. When a major problem occurs – for example, when a customer complains about a Wi Fi area anomaly – the person in charge of the quality system prepares a written analysis of the causes, develops and implements a solution, and checks up later if the solution has been fully applied and has proved effective.

We have defined eight documented procedures and 36 specifications or desk instructions. The large number of these specifications is due to the large proportion of students working part-time for the Library and their rapid turnover. Writing each procedure relies on the full cooperation of the participants, which is essential since it establishes responsibilities, tasks, inputs and outputs. In defining and recording each specific process the librarian records and shares their own knowledge with their colleagues for the benefit of continuity and transferability of the service provided, and the library system as a whole. Such an open sharing of knowledge could be seen as a personal risk, as the librarian ceases to have total control of their process any more, and such concerns need to be handled carefully.

Take the procedure “Training and skills development for library staff” as an example. The initial input is a self-assessment of training needed to reach new objectives or to provide new services. This leads directly to the development of an Annual Training Plan which requires the Library director’s approval. The agreed training takes place, and where appropriate its main outcomes and any lessons learnt are formally shared within the other library staff. All staff training is registered and recorded in the final phase, and the individual concerned formally records what they learned, and any potential improvement opportunities or new applications they have learnt are discussed with the Library director.

The Customer Satisfaction Annual Survey is another powerful instrument to find out what the users know (or perhaps more importantly do not know) about the Library, in terms of relevance, usage and satisfaction. The Survey is carried out as a series of ten to 15 minute interviews with students and junior researchers over a 30-day period. The Questionnaire is divided in nine sections, the Satisfaction section being the most detailed consisting of 33 separate questions. Our location in Department of Statistics makes the interview, data entry and data processing a lot easier than for other libraries.

In 2005 we interviewed 137 from an active user population of 409, with some sets of questions being targeted at specific user groups: for example, only junior researchers were asked for their opinions on the Italian Statistical Sources and the online databases, because we already know from the past surveys that the other students do not need to use these resources.

In this matrix of relevance, importance is related with satisfaction (see Figure 2).

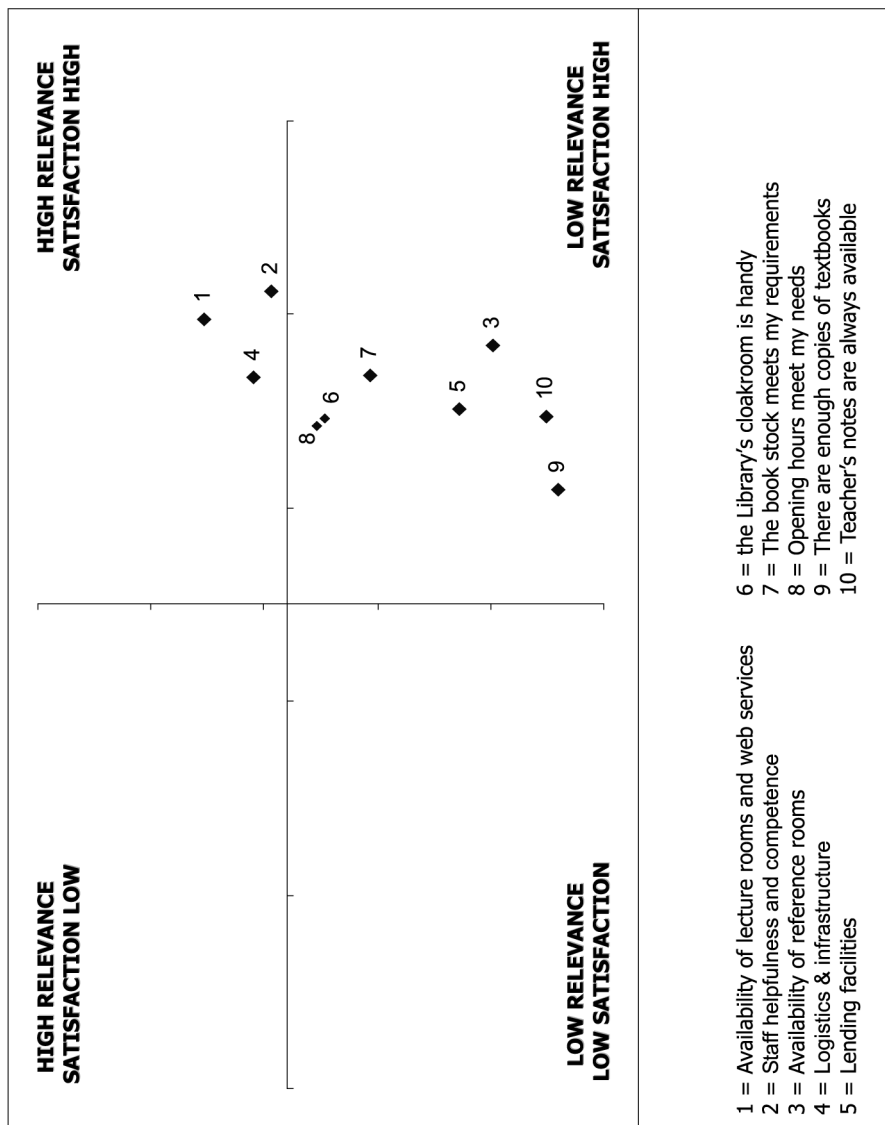
The Library's assets that scored the highest with the students were the communication skills of the Library staff, the reading rooms, and the electronic facilities. Seen by our users as our key resources, they are therefore the ones, which receive the bulk of our attention and investment. The services located in the lower right square – opening hours, the cloakroom, the collection's scientific relevance, the lending service, the reference rooms containing statistical sources, the quantity of textbooks available, the availability of lecture notes – are seen as having less relevance, and therefore deserve a lower priority with regard to improvement efforts and investment (see Figure 3).

Over the three years we have been analysing the results we have seen really significant improvements in the satisfaction levels recorded for electronic journals (6), our web site (11), our photocopying facilities (13) and our lending services. The only significant fall in satisfaction, the availability of lesson drafts and notes (1) was offset by a considerable decrease in demand over the last two years, as they can now be downloaded from a web site.

The "Don't know" response is also very meaningful. Not surprisingly the Students gave a higher percentage of "Don't knows" than the junior researchers, but the responses to questions 7, 8 and 9 indicate that around 25 percent of the respondents have no idea at all about what they might find in the basement floor of the building, where the statistical sources and journal collections are located. The implication is that one student in four has never browsed a statistical journal or bothered to consult any Official Italian statistical source (at least in the traditional paper format). This gave us considerable cause for concern, and we have now taken steps to remedy the situation. In collaboration with the Faculty of Statistics, the Library is now offering a 30-hour workshop to Students in the Faculty of Statistics, with training on the use of statistical sources and how to download data from the University online resources. As an incentive, the workshop is worth five credit points (see Figure 4).

We have also investigated what our users would want from an ideal (unidentified) library. People were asked to allocate ten marks between the following definitions of a library:

- A place where I can study;
- A place where I can borrow books and other stuff;
- A place to make photocopies;



- 1 = Availability of lecture rooms and web services
- 2 = Staff helpfulness and competence
- 3 = Availability of reference rooms
- 4 = Logistics & infrastructure
- 5 = Lending facilities
- 6 = The Library's cloakroom is handy
- 7 = The book stock meets my requirements
- 8 = Opening hours meet my needs
- 9 = There are enough copies of textbooks
- 10 = Teacher's notes are always available

Figure 2.
Matrix of Relevance for
Students, 2005

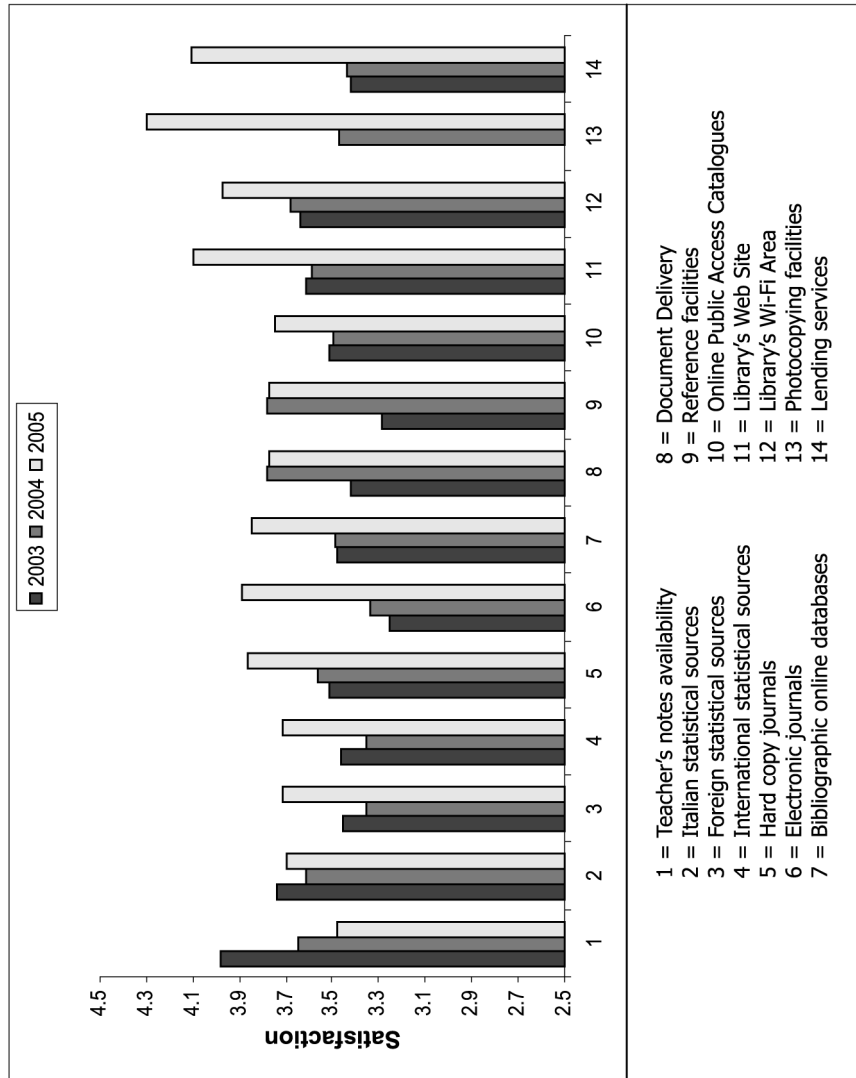


Figure 3.
Trends in user
satisfaction, 2003-2005

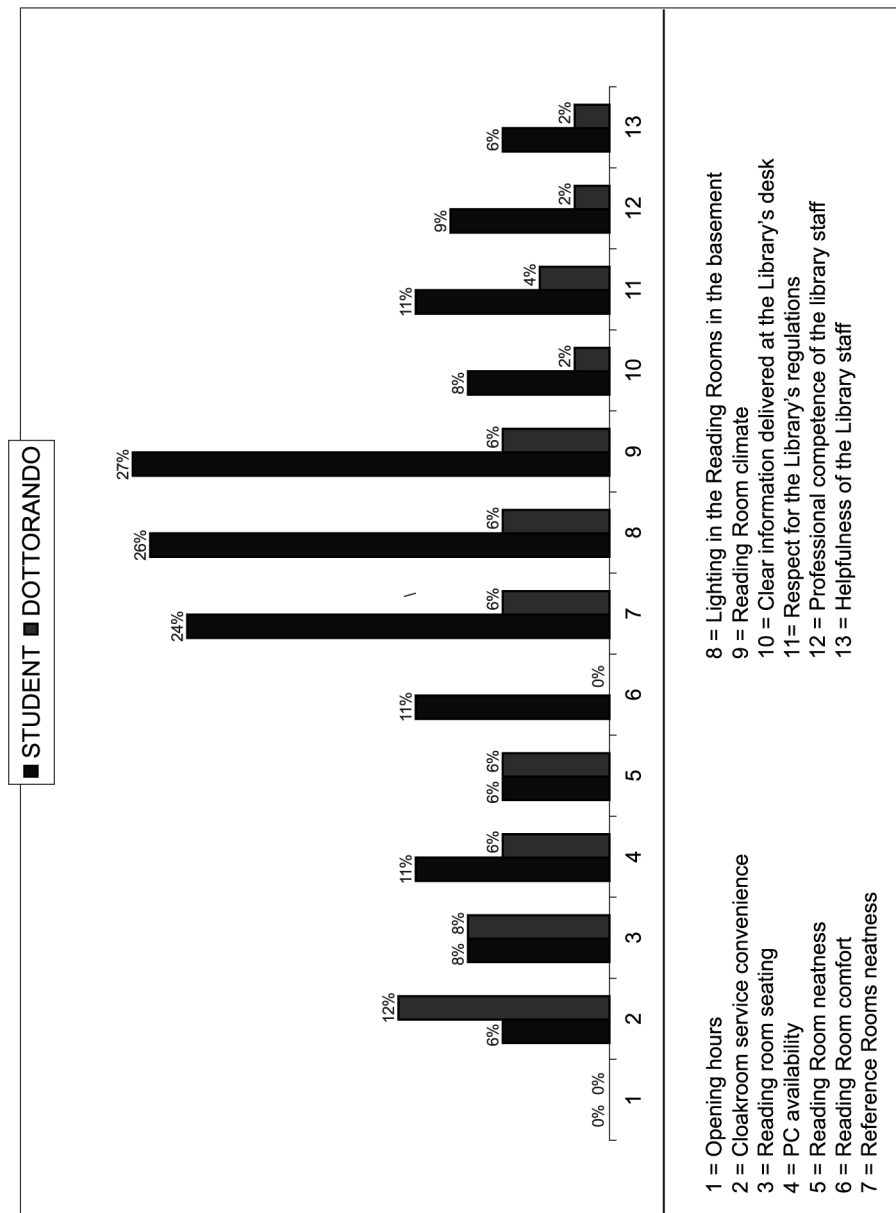


Figure 4.
 “Don’t know” responses
 from students and young
 researchers (Dottorando),
 2005

- A place with PCs and internet facilities; and
- A meeting place.

The results from the students of the Faculty of Statistics describe the library as a place “where I can borrow books or other materials“ (median 4). Students from other Faculties attend a Library “because it’s a place where I can study” (median 3), but, also, “where I can borrow a book or work on PCs”.

From the questionnaire’s outcomes it is possible to describe the Library’s average customer and their most appreciated services: she is female 25.3 year old. She is in the second year of a three-year course at the Faculty of Statistics, and is not a native of Bologna. She rates our lending facility as the most important service, the Reading Room as the most used part of the library, and librarian’s helpfulness and professional competence as our most valuable assets.

The Library’s overall satisfaction figure has remained stable over the last three years reaching 5.5 in 2006 on a scale of 1-7. The users’ assessment of our quality gives us a score of 5.3, which can be translated as “slightly above my expectations”. Our interpretation of the results so far are that overall quality is not improving as dramatically as we would like, and that we will still have to work hard to achieve our targets of excellence. But we are buoyed up by customer appreciation of what they consider to be effective services, skilled personnel, good facilities, and a well-appreciated collection.

The Customer Satisfaction questionnaire was initially tested and validated by the Focus Group, and has now been adopted as an annual qualitative social science survey sampling the expectations, needs and requirements of our main stakeholder group, the Professors and researchers in the Department of Statistics.

We have found that for it to work most effectively the Focus Group needs to be governed by a Moderator. We use a Librarian unknown to the invited participants, together with two observers, one covering behavioural aspects and the other taking notes of any specific observations and recommendations arising from the session. In addition, each session is fully audio recorded. In 2004 the Group was asked for ideas on how best to evaluate our current journal collections, since journals represent the largest single element of the Library’s budget. As a consequence of their input we made the decision to benchmark our collection, which we now do with our partners, the University Libraries of Padua, Florence and Rome. For us the Focus Group has proved to be a valuable management tool, and is especially effective when applied to single strategic topics.

In conclusion, the ISO Quality Management System allows us to manage the effectiveness, reliability and accountability of the library, and has introduced continuous, incremental and tangible improvements. In addition to the six tools described above, the QMS has been instrumental in improving many of our other processes, such as facility management, public relations and supplier evaluation, which have not been discussed in this paper.

Adopting the ISO standard has provided us with a 360 degree management system – with a lot of added value – and a host of operational tools tailored specifically to the library’s profile and which would benefit similar academic libraries. Significant among these tools are: the Library’s Statement for Quality; the “working by objectives” strategy, the comprehensive set of statistical indicators, non-conformities

management, and the user satisfaction assessment. We use them daily, to share, deepen and explore the territory of our knowledge.

Notes

1. The other members currently are: the Public Library Berio Genua, the Public Library Fucini Empoli, the University Library System in Trento and the Public Library of Fiorenzuola D'Arda.
2. For example: on 28 February 2007 there were 307 active loans. For 56 of them the time of loan was expired so we had to send a remainder to those readers. The metric is 18 percent of our loans are overdue and need to be reminded.
3. When we issue an item we put a bookmarker on the shelf in its place. The performance indicator is: "how many book-markers are in their correct positions on the shelves compared with the total of active loans." On 6 March 2007 the metrics were: 318 items on loan, 307 book-markers in their proper position, 11 incorrectly placed, and 15 which should not have been there at all! This represents 91.5 percent of correct loan procedure being correctly followed by our staff.

Further reading

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