Comparing the risk management approaches and practices in two European academic libraries

Nuria Balagué[1] and Jarmo Saarti[2]

[1] Deputy Director, Library Service, Universitat Autònoma de Barcelona, 08193 Bellaterra, BARCELONA, SPAIN. E-mail: nuria.balague@uab.cat
[2] Library Director, PhD, University of Eastern Finland Library, P.O. Box 1627, FI-70211 KUOPIO, FINLAND. E-mail: jarmo.saarti@uef.fi

Abstract: The globalization and digitalization of the service provision in libraries has meant that risk management has become a crucial part of the work and management of the library. At the same time, the libraries are increasingly accessing outsourced services in the digital world with technology that develops so fast to be provided to users that seem to demand more than maybe ever before in human history. These all set high standards for the risk management and prevention. The adoption of a quality management system is a strategic decision for an organization that can help it to improve its overall performance and provide a sound basis for sustainable development initiatives. Our paper compares two different risk analysis approaches, the first implemented in the Universitat Autonoma Barcelona and the other in the University of Eastern Finland.

Keywords: academic libraries, risk management, quality management, risk assessment, benchmarking

1. Risk management and libraries

The globalization and digitalization of the service provision has also meant that the risk management has become a crucial part of the library's work and management (Andersen & Schrøder 2010, xvii). In addition, there is also a need for institutions to communicate about the risks as well as their management to users, staff and to the network organizations (Borghesi & Gaudenzi 2013). At the same time, the libraries are increasingly utilizing outsourced services in a digital world with technology that develops very quickly as well as users that are ever more demanding. These all set high standards for both risk management and risk prevention (Chapman 2011, 9-10).

Risk management is also a part of each organization's strategic management. Frigo and Anderson (2011, 61) define six principles in the strategic risk management:

1. It is a process for identifying, assessing, and managing both internal and external events and risks that could hamper the achievement of strategy and strategic objectives.
2. The ultimate goal is to create and protect shareholder and stakeholder value.
3. It is a primary component and makes up the necessary foundation of the organization's overall enterprise risk management process.
4. As a component of ERM (Environmental Resources Management), it is implemented by boards of directors, management, and others.
5. It requires a strategic view of risk and consideration of how external and internal events or scenarios will affect the ability of the organization to achieve its objectives.
6. It is a continual process that should be embedded in strategy setting, strategy execution, and strategy management.

Risk is defined in the ISO 31000:2018 *Risk management — Guidelines* as the "effect of uncertainty on objectives" and risk management is defined as the "coordinated activities to direct and control an organization with regard to risk" (ISO 3100: 2018). Thus, risk management is a formal process where the library identifies and assesses its risks and plans how it will manage any potential risks, aiming to reduce or neutralize these risks as well as avoiding the emergence of new vulnerability signs. Risk managing is also an ongoing process because the risks are usually random events and sometimes difficult to foresee in a rapidly evolving operational environment.

There are books and articles devoted to the prevention and management of disasters (floods, earthquakes, fires etc.) (e.g. Muir & Shenton 2002) and as soon as IT began to change many aspects of the library activities, it was made clear that information and communication technologies exert both a crucial impact and have consequences for the library and digital services (Joint, 2007). Subsequently, the number of references on technological risks began to increase (especially access and loss of data, legal and reputational risks) (Corda et al. 2017).

Another risk mentioned in the literature, that exists in between the technology and management related aspects, are the newly evolving library functions - repositories, open access and open data, e-learning, academic publications - which involve some degree of collaboration, that is not always easily managed, with other university services (Baltos and Alpigiano 2018).

More recently, texts that refer to "everyday risks" have been published. An important part of the *traditional* work of libraries has consisted of sequences of procedures and processes, many of which, although potentially complex and difficult, can be described as low-risk operational tasks (Joint, 2007). Nevertheless, there are risks affecting the processes that surround the activities of the library and these are linked to their objectives and how they are

implemented (Baltos & Alpigiano, 2018) i.e., should the risk become a reality, it will have consequences that will impact on some process or some project, in short, on the success of the library service.

The adoption of a quality management system is a strategic decision for an organization that can help to improve its overall performance and provide a sound basis for sustainable development initiatives (see also Balagué & Saarti 2009). The ISO 9001:2015 based quality management also includes a risk-based philosophy, which is crucial if an institution is going to adopt an effective quality management system. The concept of risk-based thinking has been implicit in this standard e.g., carrying out preventive actions to eliminate potential nonconformities, analysing any nonconformity that occurs, and acting to prevent a recurrence of that nonconformity.

Our presentation compares two risk analysis approaches; one in the Universitat Autònoma Barcelona and the other in the University of Eastern Finland. The UAB uses a more library process-oriented model, whereas the UEF is utilizing the University's top-level approach for managing and analysing risks. In the UAB, the libraries have long been involved in the risk management at the general level. In addition, based on the ISO standards, the Library Service has performed a risk assessment focusing on the library's processes. The UEF has been utilizing the university's risk assessment tools and procedures for managing and analysing the library's own risks. Here we compare these two ways of undertaking risk assessment in libraries in order to identify the best practices for the academic library i.e. so that the risk assessment best fulfils the needs of a modern risk management approach.

2. Libraries involved in the research and methods used

2.1. Short description of the libraries
The Universitat Autònoma de Barcelona (https://www.uab.cat/) has its main campus in Bellaterra, located 20 km outside the city of Barcelona, Spain. The university community consists of 40,000 students, 4,400 teachers and researchers and 2,500 administrative and service staff. The UAB Library Service has eight libraries on the Bellaterra campus as well as four libraries located in the University's extension areas. There are 166 full time equivalent people working in the university libraries. The first systematic approach to risk management took place at the end of the nineties when the ISO 9001 quality management system was introduced.

The University of Eastern Finland (http://www.uef.fi/en/etusivu) was established in 2010 as a result of the merger of the University of Joensuu with the University of Kuopio. With approximately 15,000 students and 2,800

members of staff, the University of Eastern Finland is one of the largest universities in Finland. The university's campuses are in Joensuu and Kuopio, about 100 km distant from each other. The library has three campus libraries and a joint library with the university hospital. It has 62 staff members. The risk management system is a part of the library's and university's quality management system.

2.2 Methods

This paper is based on the comparative analysis on how risks are managed in two European academic libraries. The main risk areas where the comparison is conducted are:

- People
- Buildings and equipment
- Technologies & communications
- Services

We have not devoted a specific field to economic resources as it is a cross-sectional risk that appears in different ways and with different intensities in each one of the major fields that we have established for the purpose of this comparative case study. Nonetheless, for any library, it is necessary to analyse the economic risks especially in conjunction with the parent organization. This is because economic risks, especially those connected with the copyright, have become major issues in all the academic libraries during the past few years.

3. Risk management and its implementation in the selected libraries

3.1 Risk management at the UAB Libraries

The UAB libraries focus on risk management at two levels. In some general issues, they are under the umbrella of the university's general protection plans and, specifically those focussed on the library, i.e. the risks are managed within the library's quality management system.

University level

The UAB libraries are integrated with all the general protection and maintenance plans of the university. Three main technical services are involved:

The UAB Prevention and Assistance Service is especially concerned with the physical, psychological and social well-being of all the people that make up the university community. It is responsible for the assessment of occupational risk-prevention, the health care service and the emergency action plans.

The UAB Infrastructure and Maintenance Service establishes the maintenance policies for buildings, equipment and facilities and is responsible for the control and monitoring of maintenance concessionary companies

The UAB Information and Communication Technologies Service ensures the reliability and integrity of data, systems and communications.

In short, the university takes care of the security and integrity of people, buildings and infrastructure, data and computer systems and communications.

Library level

During the past 20 years, the UAB libraries' quality management system has evolved at the same time as the ISO 9001 standard. The concept of preventive action has existed since the first editions of the standard, so that preventive activities were already well rooted in the culture of the libraries. It must be said, however, that often the origin of preventive actions had a starting point in a reaction to nonconformities where the appropriate measures were taken to prevent recurrences.

The release of the current edition of the standard, at the end of 2015, has led to a rethinking of the concept of prevention since it now requires focusing on risk-based thinking related to the organization's context and objectives.

Risk is the effect of an uncertainty and, since any uncertainty can have positive or negative effects, ISO 9001: 2015 goes further and proposes that not only risks should be analyzed but also opportunities since both constitute a basis for increasing the efficiency of the quality management system, and a means of achieving improved results. This entailed the need to adapt existing preventive activities to a risk-based thinking approach. The transition from "traditional" preventive actions to the new approach has been addressed in two phases.

2017-2018. During the first phase, a review was performed examining the possible risks of each of the 11 Library Service macro processes. These processes are: strategic planning, quality, human team and knowledge management, communication and external alliances, information, loans, training, publishing, collections, infrastructure and budgets, and technologies. Firstly, each process owner conducted an evaluation and proposed actions to be carried out and developed indicators for monitoring the detected risks. Subsequently, findings were shared between all process owners, so that they were able to detect common risks in more than one process.

2018-2019 A new impetus is being given to risk management. On one hand, we have complemented the current approach with methodological guidance provided by the ISO 31000: 2018 standard and on the other hand, we take

advantage of a recent SWOT analysis performed during the preparation of the Strategic Plan of the Library Service 2019-2022. This exercise was a reflection on the library's strategic context which helped us to identify risks and opportunities throughout an array of themes (legal, technological, cultural, social and economic issues)

As the quality management system is based on processes, once the relationship between threats and opportunities has been obtained from the general DAFO ((Declaración asimilado fuera de ordenación), the results have been linked to those processes where these detected threats and opportunities have a greater impact.

This has made it possible to expand the risks analysis by adopting an open-minded approach and new risks and opportunities have been identified for each process, and now we are implementing a new tool for helping us to categorize the findings in relation to their significance to the library and their probability of occurrence. We also hope that this will help us to analyse them, to make proposals for their resolution, to help in the establishment of both integrated risk reduction actions and monitoring indicators, and above all, to prioritize the actions that need to be undertaken. Not all the processes carried out by the libraries have the same weight, nor do the risks that they present have the same level of severity or consequences. We hope that this risk management approach will allow us to keep on a track of continuous improvement.

3.1.1 Risk management-tools used and risk management goals at the UAB Libraries

Risk management is included as one element of the library management and different management tools led to the guarantee of the continuity and security of the library services.

Risk for People

The Occupational Risk Prevention Plan is the management tool that integrates the prevention of occupational hazards in the UAB's general management system. It is the basic reference document for collating all the preventive actions necessary to guarantee the welfare of the university community.

The library's staff regularly attend occupational health and safety courses and they participate actively in the protection activities launched by the university, such as the periodic evacuation drills that are carried out in library buildings to guarantee the security of personnel and visitors.

Risk for buildings and equipment

The maintenance of library buildings, equipment and facilities is managed by the UAB Infrastructure and Maintenance Service.

Additionally, the libraries have a specific database for monitoring all maintenance planned under contract and, at the same time, to inform of other necessary actions to ensure the appropriate operation of the spaces and library equipment. This includes the control of the environmental conditions necessary for the maintenance of the collection and the library's anti-theft systems.

Information and communications technology

The library's technological dependence is broader than some other university departments; so, in addition to the general services provided by the university ICT Service, there is a Service Level Agreement between that unit and the Library Service where these services are defined; these include maintenance, response time, problem solving and security measures for data protection. The agreement is reviewed and adapted to new circumstances on an annual basis.

Some of the core library services are provided and monitored by CSUC, our library consortium (the library catalogue, the user interface).

The university also has institutional policies on data protection, open access, and preservation of the contents of the institutional repository managed by the library.

Additionally, libraries have a complementary management tool: a database for monitoring technological problems.

We must also mention a recurrent risk: the obsolescence of hardware, which is associated with the need for economic resources to ensure the replacement of obsolete hardware.

Services

Services provided by libraries are the output of a process, more often, the output of different connected processes with at least one activity necessarily performed between the library and its user. Process management coupled with PDCA methodology (plan–do–check–act) in conjunction with risk-based thinking help to optimize the activities carried out in the library, and consequently, improve the services provided.

Finally, the annual review of the quality management system also includes several elements in the detection of risks: achievement of objectives, audit reports, quality improvement activities, evaluation of suppliers, user claims and suggestions and their level of satisfaction with the library, opportunities for improvement, and a reflection on how best risks can be followed up and the validity of the actions taken.

3. 2 Risk management at the UEF Library

In the UEF library, the major part of the risk management is also tightly connected the University's risk management. This is because the risk management procedures and tasks are legally defined in Finland as obligations of the employer. In addition, the Finnish legislation states that a major part of the risk management and analysis must be done in co-operation with the employees or their representatives.

University level

The University has defined the roles and responsibilities at all the levels in its rules and regulations. The University Board oversees the risk analysis such that it is an ongoing process throughout the University. These processes are combined with the basic planning and auditing tasks and other procedures: e.g. budgeting and monitoring the budget – the latter happens quarter-annually.

In addition, the University conducts and analyses risk assessments and monitors the staff's job satisfaction tri-annually via surveys. The results of these are implemented into practice together with the department, occupational health care and University's personnel administration.

The University also has rules and regulations for special areas, e.g. managing dangerous situations, managing special material hazards, managing copyright and managing privacy protection, data protection.

Library level

The main task in risk management at the level of UEF's library is to ensure that the management implements and monitors the tasks defined by the University and/or national legislation. As already mentioned, this is done together with the employees or their representatives.

The library conducts and analyses the risks related to the library with a risk assessment tool similar to that applied by all the departments in the university. The risks are analysed in the following categories:

- physical risks
- physical burden
- management and procedures
- chemical risks
- psycho-social risks
- risk for accidents

These are then categorized according to the type, probability, effect and size of the risk. There is also a corrective plan where responsibilities and a timeline are set. The execution of the plan is monitored at the University level together with occupational health care experts and when needed, with other subject specialists.

The library has established a working group to promote the co-operation between the staff and library management that meets on a monthly basis. The main tasks for this group are to:
- plan and execute the implementation of risk assessment procedures in the library
- evaluate the risk assessments and other related assessments and/or surveys
- create a plan and execute it for the implementation of corrective measures
- plan the user education and informing the library staff about risk related issues emphasizing a preventive approach

This working group has existed now for two years and it has already proved to be a good way to increase the awareness of all staff members about risk related issues.

The risk management issues have also been integrated into a part of the orientation period of the new employees and as a part of each individual's staff training schedule.

3.2.1 Risk management-tools used and risk management goals at the UEF Library

The library director is responsible for the risk management at the University level. This responsibility is divided into the higher-level (national level risks), University level and department, i.e. library level responsibilities.

The University's top management collaborates at the first two levels. These are very unlikely risks but if they happen, their effects are usually severe, for example, the proclamation of a state of emergency when the normal functions of the University are discontinued, at least for some time. The Library level actions were described in the previous chapter.

Risk for People

The risk analysis is the basis for managing the risk to which people might be exposed. This is divided into two main categories: library staff and library users. The former is part of the University's routines for the staff's wellbeing and safety at work which the library implements through its own routines and daily

work. Here, the responsibilities of all the members of the library are defined and discussed together with staff members.

The risks to library users are also analysed and the preventive measures are taken and planned according to the risk analysis procedures. Here too, the library and University have a plan for different types of legal and behavioural risks, e.g. data and privacy protection, criminal behaviour and even for disaster preparedness.

Risk for buildings and equipment

The University manages all the buildings and most of the equipment. There are negotiation procedures between the University actors in this field and the library. The library and its staff undertake continuous monitoring of the buildings, premises and equipment and the university and the outsourced service providers have a feedback system with a monitoring arrangement for this purpose. The library also collects and evaluates this feedback in order to estimate the frequencies of these types of anomalies.

Information and communications technology

Information and communication technology have become one of the main risk areas during the past couple of decades. The University has a policy for computers and connected equipment as well as for its networks. Here, the aim is to guarantee 24/7 functionalities. In order to achieve this goal, the Finnish Universities and Ministry of Education and Culture have made national level decisions and investments.

The sufficiency of wall sockets and reliability of the electric current represent an important part of this area's risk management. These are managed mainly at the University level.

The software issues are also mainly managed at the University level. Here also national level decisions have been implemented in Finland in order to ensure the functionality and reliability of the digital working environment.

Services

Service risk management can be divided into two main categories: library services and outsourced services. The library service risk assessment and evaluation are part of the library's quality management system that collects feedback from its users, from the operational environment of the library and from the digital environment where the library services are provided.

The risk management of the outsourced services are managed in a similar way after their implementation within the library. However, the acquisition and

purchasing are done together with experts either at the national or at the University level. Here the library especially needs legal and procurement expertise in order to avoid legal and functionality risks.

The Finnish university libraries' network also has good partnership experience in this kind of risk management. We can utilize our joint knowledge and expertise both when analysing local minor risks and especially when planning the nationwide level of services.

4.   Concluding remarks – best practices in the risk management

The totality of the risk management landscape can be depicted as shown in Figure 1. One can note that most of the regulations, procedures and actions for the risk management are set above the library level: the main task for the library is to implement a good and sound system for risk management where the emphasis must be placed on the risk preventive actions.

This does not mean that the library must be passive at the levels outside the library: it must be active in influencing and building networks both outside the University and within the University.
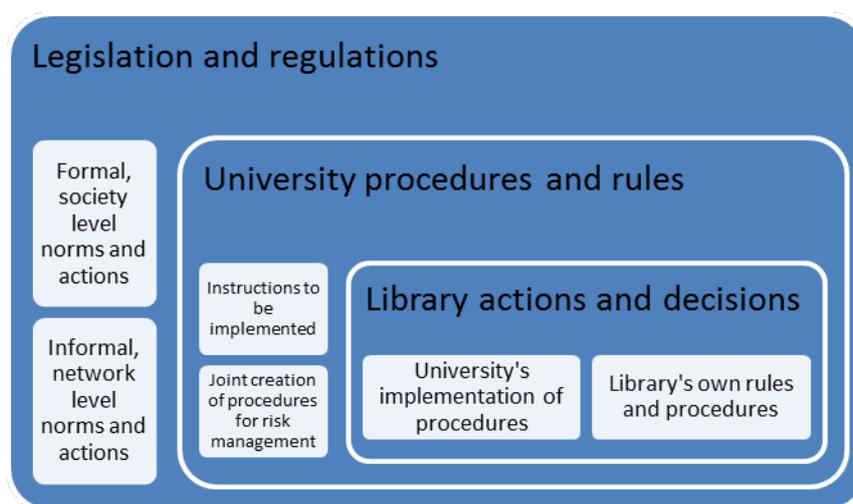

Fig. 1. The risk management landscape

It is also important that the risk management is an inherent part of the library's management system. Based on our experiences, it is evident that its inclusion within the quality management system seems to be fruitful. The risk management is always a part of the concern level management. Thus, it is

important that the library should consider whether it should build its own risk management system or utilize the parent organization's already existing structure.

Risk management is first and foremost trying to prevent risks by analysing, simulating, preparing and rehearsing against the possible risks. The education and training of both staff and users are vital in this respect, especially for those kinds of risks that are hard to predict or that seem to be unlikely. Here the risk management system helps to increase the awareness and ability to react correctly in real life situations.

The cyclical activity of the detection and treatment of risks must be incorporated into the organizational culture at all of its levels. This because in the present environment, delaying the implementation of changes may involve a greater risk in the future.

The risk analysis must also be part of all the planning processes in the library. All of the improvement processes will generate changes, small or large; and with the change, large or small risks may appear / disappear. Especially in the digital operational environment, new types of risks have appeared. For example, in today's open Internet environment, some of the risks are still hard or even impossible to envisage. It is evident that the digital environment can be home to extremely severe risks - to the service production, users and the economy of the library as well as the parent organization. The management of these kinds of risks demands good co-operation, even at the international level.

Although the library may utilize its parent organization's risk management system and procedures, it is important to notice that some of the potential risks are library related. In these cases, one needs to review the measures for the detection and prevention of general risks implemented by the university and determine if there is a gap in relation to the needs of the library and to implement the required extra precautions in the library.

The risk management is never only the responsibility for the management; it needs to be undertaken by everyone that works and uses the library. In this respect, one must provide the staff with training and information on preventative matters, on all aspects related to security that may affect the library and its personnel. A good way to achieve this goal is to establish a working group on risk detection.

- **decide which type of risk management system you need**

- **analyse the main categories of risk areas**

- **analyse the legal and other juridical obligations**

- **implement a system for the risk analysis and risk prevention to be part**

of daily management

- **educate and inform both the staff and users**

- **create networks: at the international/national level, with decision makers, colleagues etc.**

- **allocate resources for risk prevention and management**

- **include the library staff in risk management**

- **keep the focus on preventing risks**

- **have clear rules and regulations for the management of serious risks and situations**

Table 1. List of actions to be included in the library's risk management

One must also incorporate the library's users into the risk management system. Here user education, analysing risks together e.g. with the students is a good tool. Since library is a part of the University, the library can also view this as a part of the curriculum i.e. educating citizens and workers that they will need these risk management skills in their daily routines and working life.

One must also have clear rules and regulations for managing a situation when something very serious actually does occur. These types of situation are usually emergencies and situations when the outside rescue and possibly police services are involved. These are fortunately most unlikely, but it is important also to prepare for these kinds of situations in order to avoid them and if that is not possible, to act appropriately to minimize casualties. However, risk management is not only about these major incidents; a system for the risk analysis at the library can help also to prevent some little unresolved detail that could affect the library's reputation or functions. Risk analysis can also be used a tool for developing better and more functional services. It is also about creating a social coherency with all the people interested and working in the library.

Table 1 provides a checklist of best practices. By utilizing these points, a library can build a secure system for risk management. One cannot stress too much the fact that risk management is a tool for preventing risks and this must be its focus also in the University library.

Acknowledgements

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