Implementing an University Risk Management approach at the University of Liège : the lessons from one year experiment

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Abstract

In the vision of educational organisations as loosely coupled systems already depicted by Weick in 1976, the need for a global and integrated management system allowing to optimise dynamically the use of scarce resources in an environment characterized by an increasing pressure to comply to the multiple requirements imposed by the numerous internal and external stakeholders of (Public) Universities is growing. In this context, this study relies on an analysis of the recent literature about risk management in complex organizations and on the first lessons drawn from a first one-year experiment in the implementation of an ERM approach in a Public University context to discuss the interest of developing an effective University Risk Management methodology and protocol in a University and to identify the benefits of ERM for universities.

Introduction

In the vision of educational organisations as loosely coupled systems already depicted by Weick in 1976, the current literature about Higher Education Institutions (HEIs) management agrees largely (for example, Clyde-Smith, 2014) about the need for a global and integrated management system allowing to optimise dynamically the use of scarce resources in an

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environment characterized by an increasing pressure to comply to the multiple requirements, notably in terms of sustainability (Lozano e.a., 2015) (Ceulemans e.a., 2014), imposed by the numerous internal and external stakeholders of HEIs. Traditionally, this management system combines a governance system, an information system and a control system (Milgrom, Roberts, 1992), each of these three systems being composed by a large and diversified set of rules, procedures, mechanisms, tools and structures based on recommended behaviors (Robbins, 1990).

In this study, we rely on an analysis of the recent literature about risk management in complex organizations and on the first lessons drawn from a first one-year experiment in the implementation of an ERM approach in a Public University context to discuss the interest of developing an effective University Risk Management methodology in a University and to identify the benefits of ERM for universities.

To reach these two objectives, we first consider conceptually the following question : in the current context, for which reasons should an university implement an ERM approach in order to support globally and transversally its value creation process ? Then we question which ERM protocol would be meaningful to facilitate the support of the value creation process in an University considered globally in the vision supported by Weick (1976), considering both the specificity and the constraints of this typical organisation, notably the requirements imposed by the respect of the unavoidable academic and research autonomy combined with the need for an efficient use of the limited scarce financial resources allocated to the University by the Public Authorities ?

In the last part of this study, we illustrate the implementation of such an URM protocol in the case of the University of Liège, a Belgian Public University that has progressively implemented the first steps of this protocol during one year, and we analyse the first lessons drawn from this implementation.

Conceptual approach

At the crossroads of safety science (Aven, 2014) and management science, Enterprise Risk Management (ERM) is largely presented (COSO, 2004) as a solution for filling the many gaps that are present in the management of risks by traditional homogeneous silos (technical risk, legal risk, financial risk, environmental risk, …) when dealing with high inter-dependencies between risks (Chapman, 2011).

This "philosophy" of enterprise risk management is originally defined by the Committee of the Sponsoring Organizations of the Treadway Commission (COSO, 2004), considered as the founder of this approach, as "a process affected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives" (COSO, 2004, p.2). So, unlike a traditional silo approach, ERM is an integrated approach for managing enterprise-wide risks, including risk inter-dependencies, aggregations, and a risk-adjusted return performance (COSO, 2004).

In complex and hybrid organizations such as multinational diversified companies, high-reliability organizations/activities or Universities, it has progressively emerged as the most appropriate approach for managing in an integrated way the portfolio of highly diverse risks that these organizations face. Recent studies (Hall et al., 2012; Mikes, 2009; 2011 ; Woods, 2009) have however shown that the practical implementations of ERM diverge largely both in their configurations and in the roles they allocate to field actors in different organizational contexts, notably in the US, Australian and British Universities in which partial implementations of ERM approaches were identified (Clyde-Smith, 2014).

The specific literature dedicated to (organisational) management control in HEIs and Universities (Ceulemans e.a., 2014) has largely highlighted that these organisations operate in an ever-increasing competitive, complex and risky environment. In order to meet their

increasing financing needs, they frequently extend the range of their activities away of their initial core business: academic teaching and fundamental researching. The development of extremely applied researches, which became over the last two decades an important source of additional funding for a majority of public or partially public universities, induces them to engage in risky business activities, ranging from the simple provision of legal services to the outsourcing of major industrial projects.

Therefore universities compete directly with private companies but in addition, they are exposed to a wide range of various and interactive operational, environmental and legal risks that were not initially considered and integrated into their dominating risk management practices. By extending their business, they extend de facto their compliance requirements and the variety, complexity and extent of risks they have to tackle with (which may vary from simple incidents in a classroom to radiation risks or multiple and complex industrial hazards). Due to this variety, university can be considered as a portfolio of projects exposed to various and interactive risks that need a rigorous approach of risk management that goes beyond the simple compliance actions to which they are accustomed. To do this, the adoption of an "optimized" (Willson, Negoi and Bathnagar, 2010) ERM approach through improving their "core" risk management practices appears as essential.

As shown in Figure 1, this ERM approach (that we call then "University Risk Management" approach or URM) is needed, in the logic of the COSO framework (in its 2014 revision especially) to:

- Manage global risk more effectively in an integrated manner to address the many risk compliance requirements and eliminate all threats impacting the achievement of university' objectives;

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- Reduce the costs of risk management practices and insurance by acting on the synergy between the various activities of effective risk management practices and by insuring only residual risk;

- Improve the decision making process inside the university by a systematic analysis of emerging and strategic risks and opportunities prior to any decision making, allowing then to prevent risky situations more than acting ex-post on the consequences of accidents or unexpected events.

Figure 1: The reasons for an University Risk Management approach
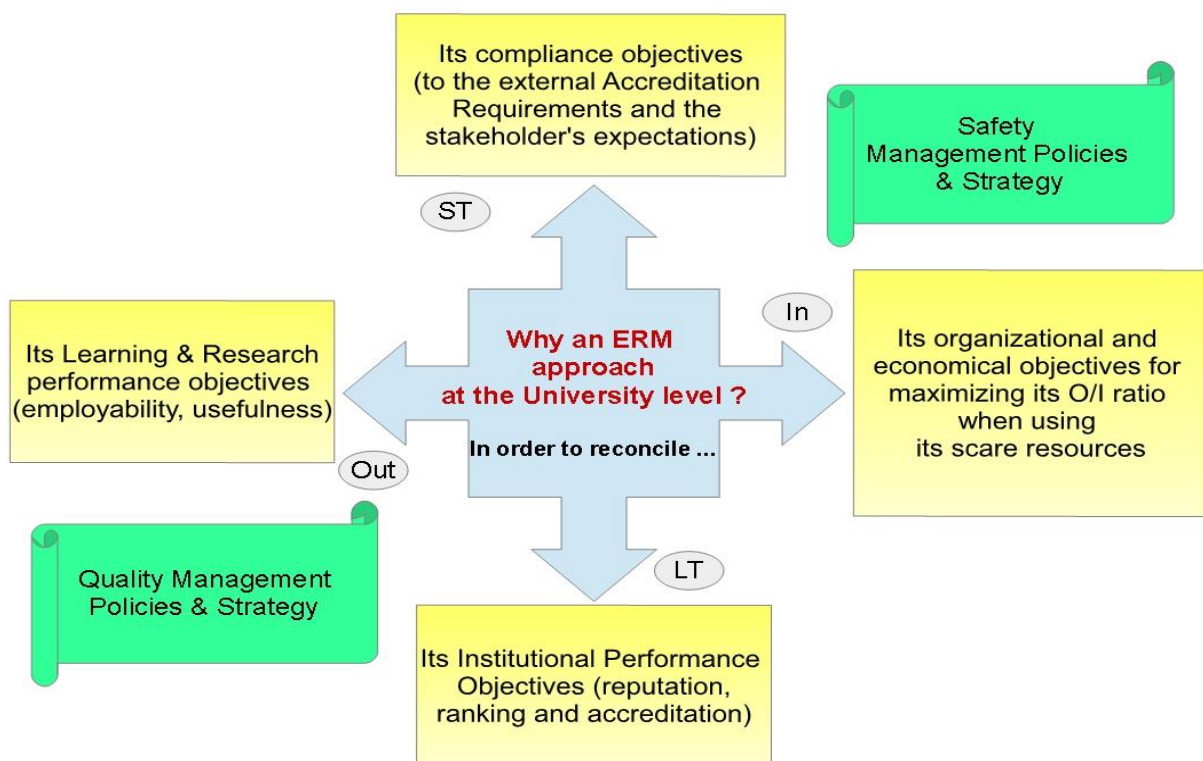
In an organizational management control and behavioral perspective (Merchant, Van der Stede, 2011) and in a resource-based view of the organization (Barney, Wernerfeld, 1991), Universities can be considered as complex organizations whose the main resource is intellectual capital and in which the basic production process is dominated by professionals with considerable autonomy (Abernethy and Stoelwinder, 1995). The complexity of universities is reinforced by the multiplicity of organizational entities that are traditionally

present in any University structure, with different organizational characteristics that are only partially common and with strong cultural differentiation factors (Faculties & Departments, Laboratories, Research Centers, Research Units; support functions ...). Simultaneously, University creates essentially a non-financial and social value for its stakeholders : among internal stakeholders, there are multiple and complementary (mainly professional) actors (teachers, researchers, managers, technicians, students) with frequently conflicting expectations, while outside stakeholders, especially in Public Universities, pursue essentially societal goals and are expecting public benefits (employability of students, quality of research and potential for innovation and future economic development, … under a strict constraint on the respect of budget allocation).

So, as shown in Figure 1, the main goal of an URM approach is to reconcile the numerous different objectives that are allocated to the University and to reach this major objective in a balanced way (in the "balanced" logic promoted by Kaplan and Norton in 1996 when considering the dynamic monitoring of complex organisations in a management control perspective) by capitalizing on 2 complementary management systems : a Quality Management System in order to balance the Institutional Performance Objectives with the Learning and Research Objectives imposed by the public nature of the University and a Safety and Security Management System in order to balance the organizational and economic objectives imposed by the Management Board of the University and the Compliance Objectives and Requirements imposed by the external stakeholders of the University.

Translating the URM philosophy into practice : the design of an URM protocol

Based on the considerations developed in the previous section, we develop now the design of an URM protocol that would be suitable for translating this URM philosophy into practice.

To support this design and wishing to respect the most fundamental cultural and organizational characteristics of Public Universities (i.e. a very large diversity of experts with

a large decision autonomy and simultaneously strong budgetary and compliance constraints), we choose for the elaboration of an "holistic ERM", such as described by Mikes (2009).

This protocol is fundamentally based on the development of a very strong culture of risk and on the search for a progressive adaptation of human behaviors and capabilities to adequate safety behaviors rather than on sophisticated numerical techniques allowing to reduce the potential consequences of adverse risks.

So, based on Like, Wilson, Negoi and Bathnagar (2010), we define URM as "A strategic process supported by the governance structure of the University and its management, administration and faculty functions, which is designed to:

- Help to identify globally the local and transversal risks that could affect the institution

- Manage the risks that are identified by focusing on their causal factors and by acting primarily on the most impacting ones

- Provide reasonable assurance as to the University's ability to achieve its objectives with respect to the constraints imposed by its internal and external stakeholders".

The 3 steps of a typical URM protocol

VLT

LT

ST

VST

Progressive implementation of this protocol inside transversal and shared «risk pockets » linking several organizational units inside the University
(Teaching & Learning Units, Research Units, Departments, Faculties, Laboratories, Support & Services Activities, Spin-offs)

3° Getting globally the University under control :
Implementation of a global and transversal FeedBack Committee with a large financial and decisional autonomy in a staff position for the Management Board of the University

2° Understanding the local realities and constraints :
Identification of the local risks and realization of cause/effects analysis to produce local risk typologies
(Aims : on which causal elements do we have to concentrate and how to act on them by multiplying the impact of our action ?)

1° Understanding the local contexts :
Based on an adapted questionaire measuring the level of safety & security culture in the different units and subunits inside the University in order to clearly identify dominant risk cultures and subcultures
(Aims : what is the current situation inside the University in terms of risk culture and which are the drivers available for an efficient action ?)
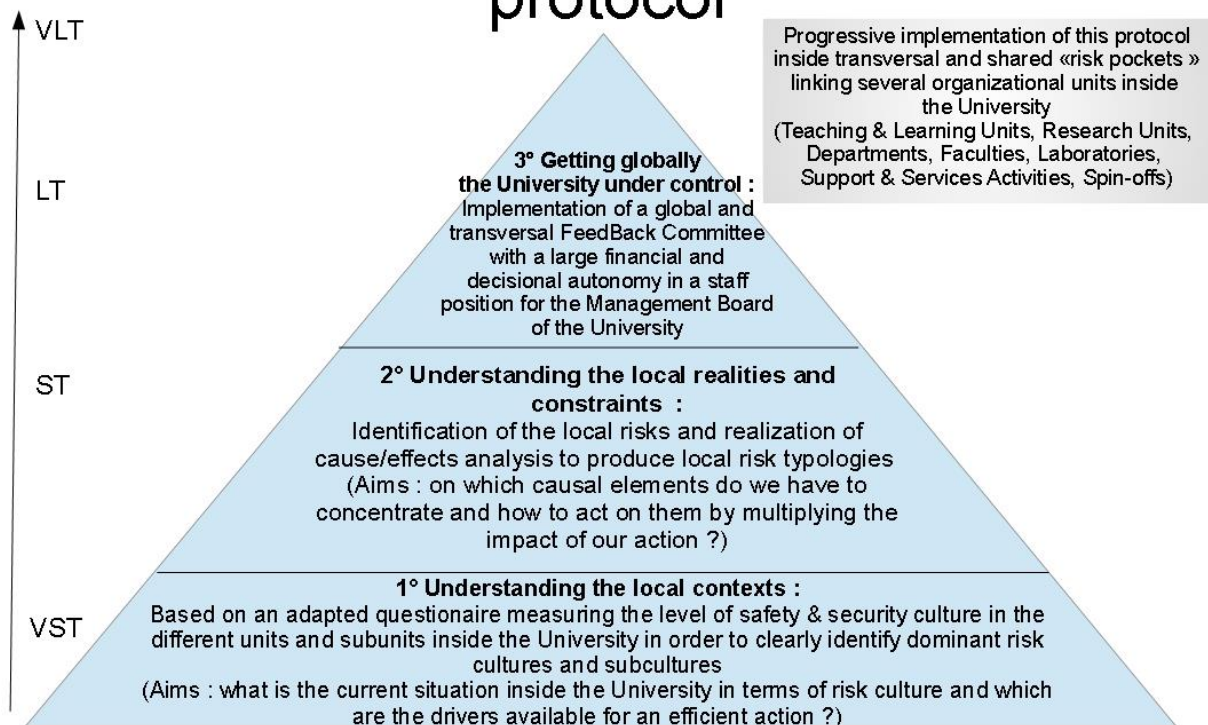
Figure 2: The 3 steps of a typical URM protocol.

The protocol, which is depicted in Figure 2, is based on the guiding principles of the EFQM model (EFQM, 2014). It emphasizes the importance of local risk culture and the involvement of senior management (academics, professional managers and senior researchers) torough a strong leadership to set the tone and share the culture of risk within their impact zone. It also emphasizes the importance of partnerships and transversal collaboration, the critical role of human resources in the risk management system (in strong interaction with the physical and technical resources incorporated in this risk management system) and the importance of a clear definition of roles and responsibilities in terms of risk management, presented and discussed as a moral and normal obligation for any people with social responsibilities in a logic of "Fair Culture". Finally, due to the diversity of risks we describe above, it emphasizes the importance of "risk ownership" practices and act essentially at the local level, so that risks are controlled in specialized areas of the university applying this protocol. In that context, the

University Risk Management unit that monitors and impulses globally the protocol in a transversal perspective, under the leadership of the University General Manager and the Supervisory Board of the University, is essentially needed to stimulate action and ensure effective and coherent transversal action through process monitoring, reports and meetings.

This protocol is structured in three layers, each of them being associated to a specific horizon time :

- The first layer is focused on the very short term and implies a clear and sound understanding of the local contexts that are present in the University : it is based on the use of an adequate questionaire measuring the level of safety culture in the different (sub)units of the University (focusing the attitudes and behaviors of people towards risk, uncertainty and supervision, in the logic of Cooper (2000)). Its objective is to answer the question : what is the current situation inside the University in terms of risk and safety culture and which are the drivers that available, globally and/or locally, for an efficient action on the level of the current safety culture ?

- The second layer is focused on the short term and implies a clear understanding of the local realities and constraints in order to identify global and/or local risk pockets. Based on causes/effects analysis of recent accidents, incidents or undesired events, its objective is to answer the question : on which causal organisational elements or critical resources, either local or global, do we have to concentrate our action to prevent undesired events and how is it possible to act on them by leveraging our actions ?

- The third layer is finally focused on the long term and the very long term and implies the willingness of getting globally the University under reasonable control in terms of risk culture and safety. It is based on the implementation on a permanent Feedback Committee (the University Risk Management unit), depending on the Supervisory

Board of the University and managed daily under the supervision of the General Manager of the University, to which regular reports, requests and suggestions are made in order to facilitate and to leverage local actions conducted by local risk and safety managers. The daily work of this URM unit is facilitated by a researcher specialised in risk management and is supported by a research centre specialised in organisational management control.

The lessons from one year experiment at the University of Liège

The context

This protocol is implemented since mid-2015 by the University Risk Management unit (URM unit) of the University of Liège, where it was approved by the Supervisory Board of the University in June, 2015.

The University of Liège is one of the two Belgian purely public universities : with more than 20 000 students (and a strong growth since 10 years), this University is a complete university structured in 11 Faculties and Schools covering all the scientific areas of research in Human Science, Health Science and Applied Science.

Belgian Public Authorities provide more than 80 % of its funding, either directly or indirectly, while the remaining part of this funding comes from European and non-European research and teaching projects, from service and consulting activities for private firms and public partners and, marginally, from grants and gifts.

Due to 5 meaningful integrations of other independent University structures during the last 20 years, its configuration (historically largely focused around the City of Liège) has drastically changed and the University is now active in more than 10 different distant sites, combining systematically their own human, technical and environmental specificities and developing a deeply rooted local culture.

Under the pressure of external and internal stakeholders and confrontated to the requirement to demonstrate that risks and threats are dealt daily formally in a transversal perspective, the Supervisory Board of the University decided to conceive, to design and to progressively implement an URM protocol allowing to manage in a coherent way such a diversified and complex global portfolio of extemely diverse risks (i.e. physical, technical, environmental, human, legal, financial, reputational risks).

The projects conducted during the first year experiment

In order to translate as rapidly as possible the key elements of this protocol into observable and tangible results, the URM unit of the University of Liège decided to focus initially its attention on five key transversal risk pockets, with joint and clear risk drivers on which it was possible to act rapidly, and to associate one specific projetc to each of them.

The choice of these five projects was preceded by an initial in-depth analysis of the determinants of the dominant risk management practices developed inside the University considered as a whole.

The following key elements emerged from this analysis :

− The initial risk management practices were initially globally focused on the management of recurring risks, especially those submitted to external controls associated with a strong requirement for a strict compliance to external norms. Simultaneously, unexpected or unusual events were managed ex-post, with a strong attention paid to their causes.

− An unsatisfactory implication of the risk owners (the people or the organisational unit that would be impacted if a risk would materialized). This is notably explained by :

▪ A risk culture globally too emerging and unsufficiently mature and globalized at the institutional level.

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- A too limited, incomplete and occasional communication around the different actions and measures taken at the institutional level to confront risks and about the philosophy and the logic explaining and justifying these measures.

- A lack of clarification between the expected respective roles and missions of the specific risk owners (such as defined above), risk managers (the people that are responsible for the approval and the supervision of the actions implemented to confront risks) and risk actionees (the people that are responsible for the implementation of actions necessary to confront risks) (in the logic of Chapman, 2011).

- An unsufficient follow-up, both top-down and bottom-up, of the different decisions effectively taken in order to deal with the different risks or to prevent them.

– A strong time pressure on (Accident) Prevention Advisors, especially when external audits and new legal or regulatory frameworks and requirements combine in the same period of time, inducing then an unavoidable focus on reaction and compliance.

– An unsufficient consciousness from the people involved in teaching and research activities (conducted largely at a local level) about the constraints and requirements imposed at the institutional level by external stakeholders, especially those responsible for the funding of the University and those responsible for security and corporate social responsibility (CSR). This lack of consciousness induces insidiously internal organisational tensions between those responsible for teaching and research activities (the dominating Value Chain of an University, in the sense of Porter (1986)) and those responsible for support activities (the Support Activities of the Porter's model), creating then unconstructive tensions between risk owners, risk attendees and risk managers.

As an answer to these observations, the Supervisory Board of the University decided to develop a true risk culture adapted to the specificities and the diversity of the institution in terms of mission, values and organisational structure, facilitating then the move towards an effective ERM philosophy at the University level.

To translate rapidly, with a time horizon of one year, the key elements of the URM protocol validated by the Supervisory Board into tangible (even if partial) results, the URM unit decided to focus its action on the five projects linked to the five risk pockets considered as a priority by the Supervisory Board.

These five projects can be classified into three differents categories :

- The urgent projects with an impact limited to one Faculty or one type of similar laboratories with similar technical and environmental constraints (3 projects).

- One project strongly linked to frequent similar events with high level of risks that are present in all the different Faculties : this typically fundamentally transversal project was focused on the management of the so-called « risks of university mission abroad », risks associated to expertise and service missions for external partners being considered in a further year.

- One project linked to a pattern of events which is present in many Faculties or Laboratories, with minor local specificities : this project was then developed in a specific context during this first year and the tools, the procedures and the lessons earned from this first experience will be generalized, after minor transposition, to similar situations in other Faculties. This project is focused on the management of risks linked to the flow of patients in a Clinical Unit inserted as a small part of the global University infrastructure.

From an organisational point of view, each project is conducted by a specific Feedback Committee (FC) composed by members (between 10 and 15) of the University implied in the management of the underlying pocket risk as a risk manager, a risk attendee or a risk owner.

These people are present on a voluntary basis and combine different but complementary backgrounds, experience and specializations.

The mission of each FC is first to identify and to review the different tools and practices implemented in the different organisational units that are present in the FC, then to realize an a priori analysis of the common risks already identified in their risk pocket and ultimately to implement in their risk area a continuous organisational learning process based on a causal analysis of recent undesired events, based on experience sharing between the members of each FC and based ultimately on the diffusion of the lessons learnt from their respective experience in the university community.

Meetings are held regularly, every four to six weeks, with a clear focus on a limited number of problems or risks for each session. Sessions are monitored by the group, out of the presence of the top management if not a member of the FC. Requests and suggestions coming from the FC are then gathered and compiled, being sent then to the RMU of the University for effective decisions and (new) allocations of technical, human and/or financial resources.

During the first weeks of experimentation, it appeared clearly that such an organisation implies a strong adhesion of all the internal stakeholders involved in each project, including a strong conviction of « non-punishment » in case of identification of disruptive practices or misbehaviors. To support this adhesion, the URM unit decided rapidly to validate an Incentive Statement promoting the filing of undesired events and a specific non-disclosure agreement : these documents specify clearly and without any ambiguity that the URM strategy is an institutional approach based on a positive management of risks and errors based on a non-punishment philosophy for all the facts and events that were not realized intentionally.

Due to their high level of transversality and their close proximity with the pure requirements of an ERM approach, we focus now our attention on the lessons learnt from the two most transversal projects.

The lessons learnt from the two most transversal projects

The University Missions Abroad project

The so-called « University Missions Abroad » (UMA) project was chosen due to its global impact on the University as a whole (all the Faculties are impacted by the project and all the internal stakeholders – students, teachers and researchers – are involved) and to the extremely large diversity of risks linked to a mission abroad (health risk, security risk, administrative risk, legal risk, behavioral risk, reputational risk notably).

The main objective assigned to the Feedback Committee allocated to the project was to provide a reasonable confidence in the fact that the future missions abroad realized by local students, teachers and researchers are realized under the most secure conditions reasonably possible in the current turbulent international context.

This FC involves about 18 members, coming equally from the different Faculties and from the supporting institutional departments involved by the international dimension of each mission.

Rapidly, it appeared necessary to consider each mission as a process, structured in 3 successive phases with their own specificities and their own risks : the preparation of fhe mission, the realisation of the mission abroad and the follow-up once the mission is finished.

The successive meetings of this FC have then demonstrated that :

- Most, if not all, the procedures, the information and the recommendations necessary to organise a safe and secure mission are already present in the current information and control system implemented in the University, but in a too few structured and coordinated way : so, the main and first decision that emerged from this FC was to coordinate intensively the existing tools and to communicate more intensively around these different tools.

- External coordination with existing information systems out of the University (Ministry of Foreign Affairs, Embassies, …) was unsufficient and too limited : an institutional effort was decided to reinforce this coordination and to concentrate the efforts of the University around elements on which supporting departments can effectively act (for example, information about the specific risks in some countries or some sub-areas in risky countries is now coming directly and dynamically from external sources).

- Formalisation of the process and especially the nature of the three phases of this process was not clearly apparent : it was then decided to .incorporate it clearly into the different administrative procedures implemented to manage and to control missions abroad, simplifying then globally the administrative process of such a mission.

After one year, the main results emerging from this project are clearly an increased coordination between Faculties and supporting departments, an increase in the quality and in the accuracy of the external information linked to the welcoming country and its potential danger and a simplification of the administrative procedures linked to such a mission. However, it is clearly too early to quantify precisely these results and to realise a precise cost-benefit analysis of this project.

The Clinical Activities project

This project is focused on the transversal and global management of risks linked to the responsibility of the University during the take over of patients (human or animals) by university laboratories or departments conducting clinical activities in the infrastructure owned by the University.

This project is characterized by a constant and complex continuous interaction between internal stakeholders (teachers, researchers, students) and external stakeholders that are

present then inside the infrastructure of the university (independent professionals, patients and their family or their owner notably).

In order to manage preventively a maximum of risks linked to these interactions (health risks, safety risks, legal risks, technical risks, environmental risks and reputational risks essentially), the URM unit proposed to set up a Feedback Committee focusing on an in-depth analysis of these risks all along the patient cycle and to limit its action, for the first year, to a specific clinical activity conducted in the Faculty of Psychology with young patients, this Faculty being located at the heart of three different buildings used by three different Faculties (then, risks linked to the treatment of young patients and risks linked to an imperfect location of the activities are reinforcing each other).

In this specific context, the FC of the project decided first that the methodology used to analyse the potential consequences of a dangerous situation (a risky situation) on the safety of the patient and/or on the responsibilities of the University would be the FMEA Method (Failure Modes and Effects Analysis)., that appeared as more adapted to the context and to the requirements generally imposed to such clinical activities.

Then, the FC implemented the following process :

- First, obtaining a clear understanding of the real context by decomposing the patient flow trough the global operating process of the clinic and by identifying clear sub-processes, their activities and tasks and the different people (internal or external) involved in these activities and tasks. A clear cartography of the global operating process was then produced.

- Then, identifying the different risks linked to the potential possible failures linked to each activity, their causes, their consequences and their interactions. A precise cartography of potential risks was then produced.

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- Third, a typology of the main failure sources was realised, by using the French CADYA methodology traditionally used in hospital contexts.

During the different steps of this process, conducted by a motivated group of people from different horizons (both internal and external), a focus was made on a clear identification of the different risks owners, risks attendees and risks managers impacted by each activity.

At the end of this process, the analysis allowed to identify ten categories of risks, ordered on their critical level :

- Risk of diffusing confidential data to unauthorized people

- Legal and deontological risks

- Risks of physical damages for the patient reacting in an unexpected manner

- Risks on the quality of the take over or on the evaluation of the patient.

- Risks of financial or material consequences for the patient

- Risks of disruption during the take over or the evaluation of the patient

- …

An in-depth analysis of the causes and the consequences of these risks highlighted then a strong interdependency between most of them and induced an adaptation of some processes, such as the monitoring of independent professionals when practicing in the clinic or a revised communication, both verbal and non verbal, with the patient and its family.

Clearly, the transversal vision of risks imposed by the implementation of a methodology based on an ERM philosophy allowed to increase the management of risks that were considered previously in a silo-approach.

Conclusion

The University, considered as a complex and hybrid organization that confronts a large and diversified range of risks and which is characterized by the permanent confrontation between experts (academics and researchers) and managers and by a strong decision autonomy, appears to gain many benefits from developing a specific and adapted risk management philosophy in order to gain a reasonable confidence that its objectives can be reached by respecting the strong financial, social and environmental constraints imposed by its internal and external environments.

In that context, a protocol based on an ERM approach appears as being particularly suitable, due to its ability to integrate both the complexity of the organizational structure of a typical University and the very autonomous nature of the people involved into its management practices. By focusing the attention and the action on the human and organizational behaviors that underlays risky attitudes and behaviors, this protocol allows to act rapidly on the true causes of potential incidents and so allows to reduce the global level of risk that the University confronts.

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