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A glocalization lens to integrated risk management: the actor as key factor

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Abstract: Changes in the environment have enacted salient parallel changes in business management methods, including those related to risk management. Indeed, the latter, which was so far based on risk splitting, is currently called into question. Hence, the concept of integrated risk management bulges out. This concept is actually an outgrowth of the "traditional" approach which used to deal with risk management from a functional perspective. Obviously, succeeding integrated risk management is predicated on organizational factors, such as communication, learning, and coordination whereby the risk is perceived as transversal and transcending the local functional level to a more global and strategic arena of interaction. But it is equally true that neither risk management nor integrated risk management can exist if actors in the companies do not perceive the risk to communicate about in first place. In this paper, we defend the idea that the actor is the most important key in the process of risk management and integrated risk management. Then we propose a new dimensioning of risk through a glocalized approach and including the actor as central to that process.

Keywords: Integrated risk management; glocalization; systemic approach; actor; measurement.

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1. Introduction

Companies are constantly evolving in a universe of risks, which is often complex, dynamic and hostile. To deal with this, a large number of tools for assessing risks and facilitating their coverage have been developed.

Companies are faced with a universe of highly diversified risks to such an extent that Barthélémy (2002) describes it as a "risk machine". "Whatever its size, its age, its sector, its competitive situation, this leads it to integrate, to varying degrees, risk management in its strategic, organizational or operational reflection, or even to build its reflections around this last" . According to him, it is therefore essential that it conducts a systematic approach to the diagnosis and a comprehensive and coherent treatment of its risks.

Indeed, faced with complexity, uncertainty, dynamism and turbulence, risk management must move towards approaches that allow it to integrate the principles of transversality, flexibility and collective knowledge. Kessler (2001) thus emphasizes the importance of the notion of change in risk management. According to this author, the change in the universe of risks also implies a change in the way of managing them.

Changes in the environment have given rise to changes in business management methods, including those relating to risk management. Indeed, the latter, which was based on risk splitting, was called into question in favor of a new concept. This is how the concept of integrated risk management developed. This is the result of the evolution of the "traditional" approach which deals with risk management in its functional aspect. It should be noted, however, that these two approaches are not contradictory, but rather complementary. In the sense that risk management in its functional aspect is an essential element for integrated risk management. This for its part must be based on the results of the first mode which remains dependent on it.

However, the keys to success a transversal approach are, among other things, coordination and communication. Therefore, in this work we defend the idea that the glocalization of risk management is at the center of integrated risk management. It plays in aligning risk management with strategy to implement a transversal approach. This urges a reflection on the resizing of risk. Of course, the two dimensions recognized by the literature of risk, namely the probability of occurrence and the severity, are sine qua non for its measurement. However, risk detection is the responsibility of the actor. Thus, before moving on to quantitative risk measurement, it is important to consider the actor who detected the risk, where it was detected, and when it was detected. This is actually the purpose behind this article. In that regard, we will first define the concepts of risk and risk management. Then, we will argue for the need for integrated risk management and we will explain how glocalization of risk management can develop integrated risk management. Finally, we will highlight the importance of the articulation between local and global in risk management. The main factor to success this articulation is the actor. Afterwards, we should proceed into redimensionning the concept of risk.

1. Risk management: a functional approach

Risk management is an activity which is practiced every day by the Company and its actors (François Beaume, 2021). It can be a set of banal or sophisticated activities. Sometimes, risk management is carried out instinctively (for example when we put pictograms as a smoking ban). The most imposing question is how to define it. For that purpose, we have to define the concept of risk in the first place.

Barthélemy (2002) defines risk as "a situation (i,e., a set of simultaneous or consecutive events) whose occurrence is uncertain and whose achievement affects the objectives of the company which is subjected to it". The risk is represented in function of the probability (chance, possibility) that an unfavorable or unintended event occurs; and of the severity or magnitude of the consequences of that event. Demeestère and Lorino (2000) defines “risk” as a failure to achieve a goal, and its cause as a factor that can influence the failure to achieve a goal.

J. Pignault and J. Magne (2014) for its part considers that a risk consists of a feared situation (danger), a hoped-for situation (wish), a target (whose situation will be impacted, improved or degraded, a trigger (or cause), which would launch the dynamic of change or evolution, as well as the interactive elements that lead to, favor or prevent the evolution of the initial situation towards one of the two alternatives: being feared or hoped for".

However, according to Marchesnay and Rudel (1985), "there is obviously not a 'risk' but risks, whatever the size of the company and the nature of the activity, especially when they are analyzed. According to major Fayolian functions, but notwithstanding, there is only one fundamental risk: the death of the company".

To B. C. Stahl et al (2003), the risk is not absolute but local and particular. In other words, each risk is specific to the context in which it was raised. It is defined by the situation itself and accepted by the stakeholders of that situation. In this sense F. Cordel (2013) explains this divergence by citing the example of the construction of a dam, "For the worker working on the construction of a dam, the risk is above all a question of physical integrity (we will then speak more of security than risk). For the financier who has invested in this same dam, the risk is above all expressed in terms of profitability and volatility. For the engineers who designed the latter, the risk will be synonymous with (calculation) error. "

We would like to note that there is a tendency to define risk as a social construct. In this regard, we draw on the work of R. Kmiec and C. Roland-Lévy (2014). Risk as a social construct is based on the concept of perception, an essential concept in our opinion for the very detection of risk. Indeed, this tends to position the individual and the risk in a social framework in which a group of people intervene and where social and cultural forms as well as the value system plays an important role. "The idea is that individuals can never be arbitrarily separated from their social and cultural environment."

We retain from all of these definitions that the risk has, on one hand, a double connotation: a negative connotation which raises the probable loss in the event of the risk occurring and a positive connotation which confers on the risk, if it is optimally managed, the opportunity to benefit from it. On the other hand, there is the role of the individual in risk detection. A risk that is not detected by the actor will therefore not be subject to management.

The concept of risk management was coined in the United States after the Second World War. In the ~~first~~ inaugural work on this subject, Mehr and Hedges (1963) confused risk management with insurance, which resulted in the consideration of "pure risks" only. "The distinction between pure risk and speculative risks leads to the view that only pure risks, that is to say of loss (downside risks), exogenous and for which stable frequencies were accepted by all (formerly "insurable" risks) came under risk management".

Risk management in this case was presented as: "the management of risks to which it is possible to apply the organization, principles and techniques of insurance management".

According to Barthélemy (2002), "managing your risks means conducting a process in three successive stages: Identifying the risks, economically reducing the risks (quantifying the risks) and financing the residual seriousness of the risks".

Risk management, as defined above, is based on a division of all the risks run and incurred by the company according to the function, activity and where the task to which they are linked; something that has been criticized in the literature. By relying on a Cartesian mode treating each risk in isolation, the traditional approach, which consists in making partial choices in a non-integrated series, has failed and the authors testify to this failure by relying on the ENRON case, the Internet "bubble", the ERIKA disaster, etc...

On the one hand, this approach appears as a defensive strategy which consists in the treatment of each risk in a functional way as well as the reduction of risks, by transferring them to insurers and consulting firms, to process them. Such an approach can be, according to Barthélemy (2002), dangerous and costly for the company.

It can be dangerous in the sense that certain risks escape the field of insurance. These are only a compensation for a measurable financial loss which only aims to replace the company in the situation it was in before the disaster, and neglects the dynamic nature of the company.

1. Integrated risk management: A transversal approach

According to the literature, risk management in its functional aspect has proved insufficient, hence the need for transversal management that exploits the existing synergies between risks, which were neglected by the first management mode. The goal of integrated risk management is to create harmony between risks. G. J. G. Lawrie, D. C. Kalff and H. V. Anderson (2003) argues that the big problem with risk management is to answer the question of how to measure a whole set of risks in terms of probability; of gravity; their correlations as well as their perceptions. Risk management must go beyond the quantitative aspect alone, because on its own it can be ineffective.

The common argument in favor of integrated business risk management is that related to the potential that such management has to create value.

For Müller (1999), the main argument in favor of such an approach is the criterion of effectiveness or cost-effectiveness. Indeed, risk management usually requires offsets, which sometimes involve comparing the costs of reducing a particular risk with the benefits it brings. By linking risk management to value creation, Lawrie et al (2003), for their part, gives it an important role in managing the performance of the company.

Managers must therefore manage risks simultaneously, identify the correlations and interactions between them, eliminate risks; the elimination of which is the least expensive and which consequently allows them to seize a positive value in their activity. But, when the cost of this elimination is high, managers have to assess whether the benefit of elimination justifies its costs.

Such an analysis requires managers to estimate and understand the relationships that may exist between risks and their impacts on the value of the company, hence a transversal approach. This approach

supports the idea that the whole is more than the sum of the parts, and therefore a systems approach to risk management is paramount. The sum of everything in the enterprise is at the strategic level. Integrated risk management must ensure that risks are not confined in their management to the service in which they were detected, hence the need to combine the local and the global.

Integrated risk management is supposed to transcend the traditional form of analysis based on the separability of functions towards a transversal approach, in order to be able to remedy the various criticisms that have been addressed to it.

Indeed, Kloman (2003) describes risks as the keys of a piano between which there is a correlation that requires harmonization, hence the need for a transition to integrated management of these risks. The transversality of this new risk management method is based on a systemic approach.

The systemic vision is based on the idea that "the whole is more than the sum of the parts"; which means, as Morin (1995) demonstrates, that there are emerging qualities that arise from the organization of a whole, which can be retroactive. He adds that the whole can also be less than the sum of the parts because the parts can have qualities that are inhibited by the organization of the whole.

Integrated risk management, based on this approach, seems to remedy the shortcomings that a functional approach may present. Indeed, according to Kervern (1995), "a systemic approach to safety issues should be implemented. An accident is generally not due to a single cause but to a combination of factors, among which are also the competence operators that the quality of the organization charts, and even the health of the company, competition, the choice of patents, compliance with regulations ".

Thus, according to proponents of the systems approach to risk management, the functional approach has proven to be reductive because the correlations and interrelationships between risks are neglected. Managing each risk in isolation is a risk in itself, as any correlations and offsets that may exist between them will be omitted. If two risks, for example, cancel each other out or reduce their impacts on each other, given the existence of an inverse linear dependence, it could be advantageous to assume them, hence the interest of a global management or even integrated management of the risk.

Recommending the same vision of risk management, Geiben and Nasset (1998) argue that: “it is by starting from this approach, thanks to a 'systemic' representation of the danger, that they tried to define a method allowing to 'integrate all the risk factors included in safety and security and determine, according to each item, their levels of vulnerability in relation to the organization studied”.

The systemic approach according to C. Chauvin (2003) consists in showing how the “functional objectives” of the socio-technical system are integrated and translated by the operators during decision-making. It also helps to detect unforeseen risks, i.e. risks created by another risk and which cannot be detected during a functional approach and to understand how the different components and actions exert an influence on the whole system.

2. The glocalization of risk management : articulation between local et global

The transversal approach of integrated risk management needs an articulation between the local and the global in risk management. Such glocalization stands for the articulation of strategic management and operational risk management, or in other words, aligning risk management with strategy.

Derrouch (1984) and Paturel and Derrouch (1987) already insisted on the need for a synthetic approach to risks in the company, and on the identification of its global risk, which had to be managed at the strategic level. Diskinson (2001) speaks about enterprise risk management. Of course, the latter stipulates the need for a systemic approach taking into account several risks at the same time. But this approach only addresses insurable risks and financial risks.

According to G. Dionne (2013), the process of identifying, evaluating and managing risks is part of the strategic development of the company and must be designed and planned at the highest level.

The practice of global risk management allows a local-global articulation of risks within ~~in~~ a strategic vision. The fundamental idea is, according to Moreau (2002), "to consider risks as a central variable in strategic and operational thinking and action". Indeed, "the state of the art seems to be at the hinge of practices whose objective is to ensure the protection of business continuity and those which aim to integrate risk management into strategic and operational management " (Barthélemy, 2002).

Haimes (2004), for his part, insists that risk assessment and management must be an integral part of the overall decision-making process, which requires a systemic and holistic approach.

Other writers have worked along the same lines. These include Jay and Powers (2002) who advanced the term global risk management, to which they assign two meanings: risk management within the framework of a multinational company, and risk management within the framework of a coherent program, within the company itself. In both cases, an articulation of the local and the global is recommended. Kelly (1999) suggests practical solutions for managing risk in an integrated manner by underpinning the firm's determination of what he calls "enterprise risk" or "global risk".

Integrated risk management should not be confined at the operational level, in exclusive reference to the financial or commercial function, for example. Rather, it should be integrated into a global vision of the company. Moreover, in order to be able to raise the interactions between risks, they must be managed simultaneously. It would be insufficient if an integration perspective has not been taken into consideration in the strategic management of the company. Indeed, according to B. Munier (2002), the recent succession of tragic events such as the sinking of the ERIKA or the accident at the Toulouse chemical center, as well as the economic setbacks such as the bursting of the Internet bubble or the Enron business and Worldcom has actually made this classic approach to risk management obsolete. Risk management is no longer restricted to choices in series of partial decisions, but has become a policy that is fully integrated into the strategy of the company. Meulbroek (2002), for his part, argues that integrated risk management is strategic by nature rather than tactical.

Thus, from the point of view of its overall implementation, a risk management policy must be aligned at the highest level of the organization in order to be comprehensive and legitimate. Indeed, the global approaches which aim to identify the risks at the company, to financially measure all the risks, to take

into account this measurement of the risk in the assessment of the performances of the activities, and to put in place risk monitoring processes which are integrated into the management of operations go hand in hand with the integration of risk management into the operational and strategic management of the company. Aligning risk management with strategy requires, on the other hand, a coupling of the technical and the social, as well as taking into account of "the long term", that is to say to have a global vision. However, according to Munier (2003), the main difficulty encountered in the decision-making process at the level of the company is that of coordination:

- At the level of the company's production system, insofar as the risks depend on the decisions of engineers and technicians but also of organizers as designers of work stations and their interrelationships;
- At the overall level insofar as the risks depend on the decisions of top management or strategists, engineers and organizers, but also financiers or risk managers.

Hence, the need for coordination at the management level, which is of prime importance because risk is often the result of an ignored danger. The development of an integrated strategy, thus, involves coordinating the activities of the various institutional entities that exist within the organization. Linking the local to the global in risk management requires the involvement of all stakeholders in the organization. Indeed, according to Hassid (2005), in advancing the concept of risk governance, it is necessary to take into account the multitude of stakeholders involved in risk management and their weight in this management, forcing them to collaborate and coordinate their actions. According to this author, to talk about risk governance is to question the structure of interactions between the different risk actors and its impact on risk management.

The local / global articulation, therefore, requires specific coordination mechanisms that take into account the limited rationality of the agents in decision-making, as well as the dimensions of the environment (uncertainty, complexity, etc.). Pucci (2002) speaks of "convention" to explain these coordination mechanisms; he appeals to the theory of conventions obviously. This theory seeks to understand how individuals who are confronted with situations that are marked by uncertainty decide on the behaviors which they are going to adopt, and how, from these multiple individual decisions, emerges a certain convergence and a certain adjustment of behaviors.

The founders of this theory suggest a model of social relations in response to the problem of the coordination of individual actions, in order to understand how collective action is constituted. For Plane (2003), the term "convention" is derived from the verbal form "to agree". As this word indicates, it is about making it possible to coordinate the interests of contradictory actors, coming from the logics of opposing actions, but who need to be together to meet their specific needs. The convention does not exist as such; it manifests itself during the implementation of the action by individuals who are part of the company, of a group, of a community or more generally of an organization.

Indeed, risk management is based on sociological and psycho-sociological bases. It is primarilyl a perception and an acceptance of risk at the individual level, which must subsequently be transformed

into a possibility of communication on this subject with all the actors concerned. Conventions and coordination mechanisms must be put in place to enable an overview, and therefore, an integrated risk management.

3. Glocalization needs a redimensioning of risk

Integrated risk management introduces new logics of interactions and exchanges that are based on several concepts such as trust, translation and joint action. The latter is based on learning and on values that go beyond the mere logic of the situation or the position of the actor that is acquired in a given system. The values and codes of beliefs, inherited from past experiences, continue to bear witness to the social journeys of the actors who go beyond the interaction situation.

At this level, the theory of action can teach us some lessons. Indeed, this allows us to show that the perception of risk depends on the structure of the institution in which the risks arise. Reference to the situation is necessary in the analysis of acceptability and risk management because actions in this context are always built around variable situations. The issue of risk is transversal to the interests and positioning of the players.

Risk management can be understood as a system of interactions whose common references must be built around the acceptability of risk in situations of varying configurations depending on the various technical constraints. Concomitantly, the important role of the actor in risk modeling is justified. Indeed, the hard core of the theory of joint action lies in the importance given to codes of interpretation put in place by actors to deal with uncertainty. Thus, this theory has the merit of integrating values and trust into risk management. Indeed, the risks, by their improvisational and unpredictable nature, can affect all elements, all of the ties of the company, without taking into account their positions within the structure. Withal, the reactions of individuals will be oriented towards shared values and interpretations.

However, we have noticed that the definitions of risk only raise its severity and likelihood of occurrence to the surface, while they discard the fact that the very person who detects it is a determining factor.

This becomes clearer when moving from a local management level to a global management level, or in other words, when moving from fractional risk management to integrated risk management. This implies a new sizing that differs from the traditional sizing that is formulated in terms of severity and probability of occurrence.

By calling on the work of G. Y. Kervern (1995) on the science of danger, we believe that a three-dimensioning model of the concept of risk is possible, and even necessary. Thus, we distinguish three dimensions of risk:

- **Actor (s) dimension**: the actor plays a decisive role in detecting risk. Risk is first of all a perception that depends on the individual facing the situation. So, the risk depends on who is supposed to detect it or who detected it. The actor in question can be one person or several persons. It depends on the context, the expertise and the experience of this actor, the information system on which it is based, on the risk analysis and on the dissemination of information to the whole company. This brings us particularly back to the postulate of risk as a social construct, insofar as a risk, even if it is detected by a single person, is

influenced by the whole group. Risk as a psychometric model depends only on the actor or the individual himself, yet we have seen that risk is more of a social construction. All actors must be taken into account, especially since integrated risk management, in its traditional approach, requires taking into account all the actors concerned. We note here that this is the transition from an actor to a network of actors / interveners ("social map" in P. Lagadec's nomenclature).

- **Time dimension**: the notion of time constitutes a determining element in the notion of risk. This is when the probability of an event occurrence is detected. This is a critical element as any early detection of risk leaves enough time for its actor to manage it. Any late detection of the risk, on the other hand, constitutes the distinction between the risk and its transformation into a crisis. The notion of time through the transmission of information from one actor to another, from one function to another and from one hierarchical level to another makes it possible to explain the passage from one level to another, as was underlined in the literature review on integrated risk management.

- **Space dimension**: evoking the following concerns: At what level is the risk identified? Is it a local level or a global level?

⇒ **Local level**: this is the precise level of the detection of a risk, for example, at the level of the product, at the level of sales, at the level of loans granted by the bank, at the level of customer solvency and the like.

⇒ **Global level**: is the level of the company as a whole. This will allow us to see whether the impact of taking this risk is positive or negative, and this risk will have an impact on other risks (compensation, aggravation ...). Detection can be local, and then there is the flow of information to the global corporate world. However, it should be noted here that we may be facing the opposite situation, where the risk can be detected at a global level to go back to the source of the problem.

On the other hand, we assume a strong link between the moment of detection of risk and the fact of generalizing it throughout the company, in parallel with other risks.

These three dimensions can be summarized in the following diagram:

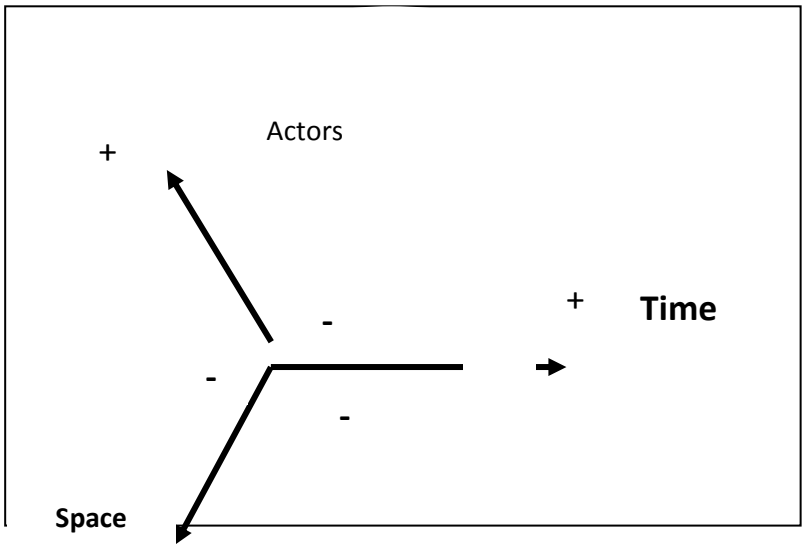

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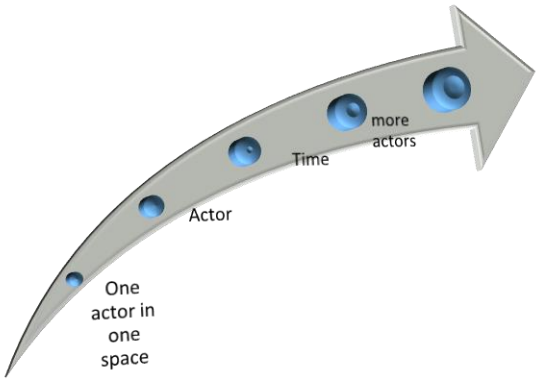
Figure 3: Tri-dimensionnality of the concept of Risk

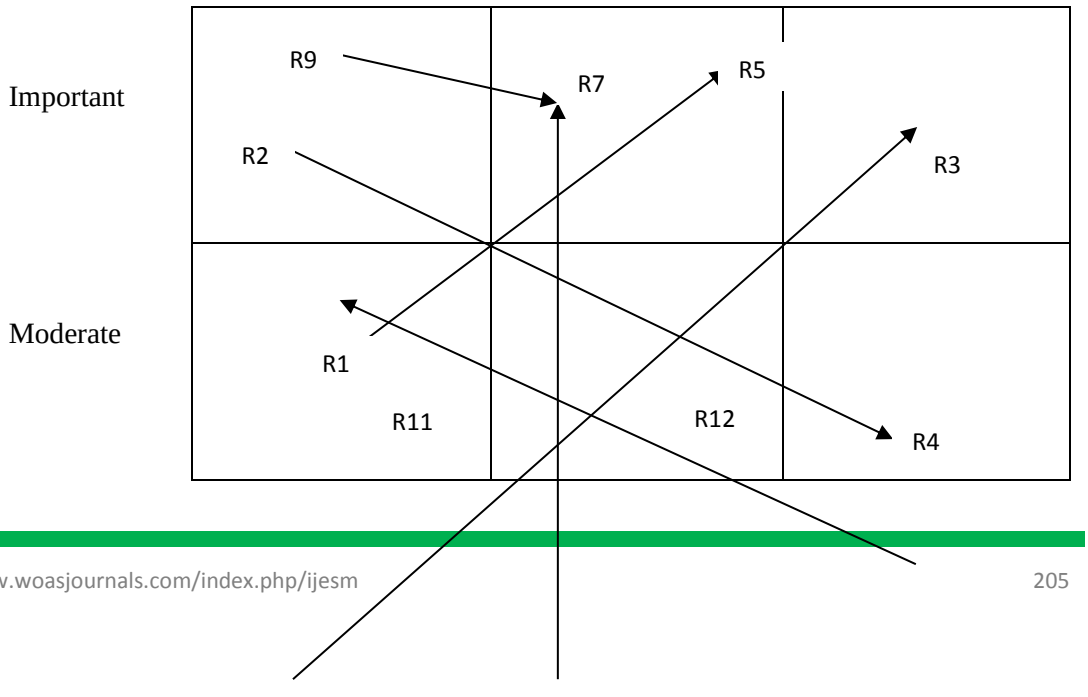


The diagram is to be read as follows: the risk is detected by a person at a given time and in a given space, which constitutes the point of intersection of the three vectors representing each dimension of the risk. As we have already underlined, there is a strong link between the three dimensions insofar as the transmission of a message from one actor to another can lead to the passage from one level to another, and generate a difference in time because between detection and transmission, a certain time elapses, whatever speed of this process is.

Limits and perspectives

What we blame this thinking for is that, despite everything, it only takes into account a single risk. The question that arises is the following : how to analyze all the risks of the company at the same time by integrating the human factor, i,e., the actor? We suppose that one has to think in the direction of a matrix as the idea has been raised in some of the practical cases of integrated risk management that we have studied earlier. It is this approach that led us to develop the following diagram, allowing the visualization of all the risks and therefore highlighting the interactions between them :

Severity



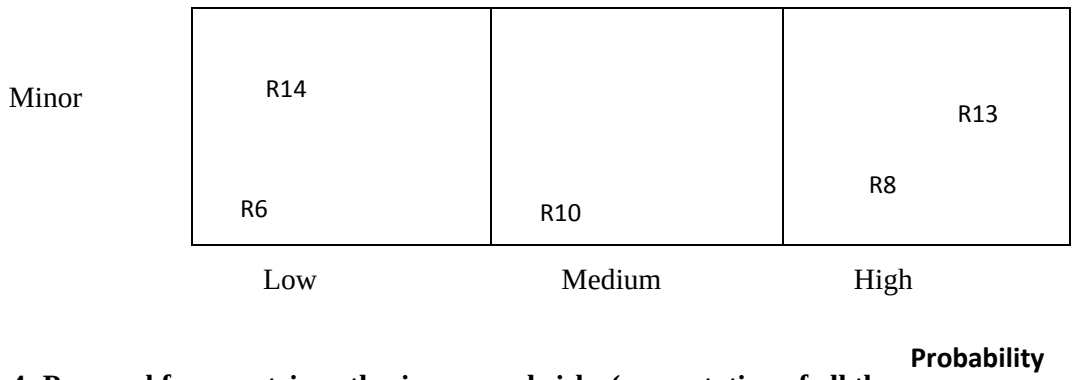


Figure 4: Proposal for a matrix gathering several risks (presentation of all the risks of the company at the same time)

The arrows represent the existence of an interaction between the risks, whether it is about compensations, degradations, aggravations or the creation of a new risk ... The diagram is read as follows: the risk 1 which has moderate severity and low probability of occurrence is influenced by risk 8 which has high probability of occurrence but minor severity. At this point, we deem the integration of the actor in this matrix to be a new prospective avenue of research, to which we must associate the concept of risk perception, as undertaken by the said actor, as well as his level of aversion.

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