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► **To cite this version:**

Sophie Clusel, Franck Guarnieri, Christophe Martin, Didier Lagarde. Reducing the Risks Faced by Small Businesses: The Lifecycle Concept. European Safety and Reliability Conference: Advances in Safety, Reliability and Risk Management, ESREL 2011, Sep 2011, Troyes, France. pp.1759-1767 - ISBN 9780415683791. hal-00660192

HAL Id: hal-00660192

<https://minesparis-psl.hal.science/hal-00660192>

Submitted on 20 Sep 2012

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Reducing the Risks Faced by Small Businesses: the Lifecycle Concept

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ABSTRACT: The deployment of a comprehensive risk management approach within an SME (Small or Medium-sized Enterprise) requires reconsideration of enduring preconceptions. However, it also calls for a description and explanation of their idiosyncrasies, in relation to their specific needs and expectations, which change over time. It is therefore appropriate to use the lifecycle concept to study the various phases of development of SMEs. The concept highlights the modifications and changes in configuration that this type of organization experiences during its development. This article aims to define and legitimize the use of the lifecycle concept as a basic component of a global risk management approach in an SME. It describes an operational approach to reducing vulnerability based on the level of organizational maturity.

In France, more than 99% of failed businesses are Small or Medium-sized Enterprises (SMEs) (Altares, 2010).

Failure is considered here as a state of insolvency, i.e. the company is unable to meet its liabilities from its available assets. This final and extreme demonstration of the difficulties that a company can experience is the result of deeper causes, which are for the most part predictable. One of the solutions classically put forward is global risk management. This allows analysis of the major risks faced by the business (loss of a significant debtor, significant increase in production costs, loss of a key worker etc.) using a methodical, systematic and iterative process. Although the idea is attractive, the implementation of such approaches within SMEs, and specifically within micro and small businesses (defined by EU regulation 2003/361/EC as having less than 10 or 50 employees respectively) is far from obvious. On the one hand business owners have little interest in implementing such procedures. To them, the time and complexity required for implementation far outweighs the relevance of the results for the strategic orientation of the organization. On the other hand, the available tools are inadequate, as they are really only 'lite' versions of systems deployed by large companies.

Our work endeavors to rethink current commercial approaches, which do not take into account the metamorphosis of the SME and its changing needs at different stages of its evolution.

This article therefore aims to define and legitimize the use of the lifecycle concept as a basic com-

ponent of a global risk management approach in an SME. It attempts to characterize the vulnerabilities of SMEs using a model which associates the hazards and consequences experienced during the various stages of company development. Finally, it discusses the organizational maturity of SMEs and presents an operational approach to reduce vulnerabilities.

1 RISK MANAGEMENT AND THE SME

This section outlines some initial observations on the limits of risk management approaches currently available to SMEs, and the contribution that the lifecycle concept can make in order to overcome these limits

1.1 *The determinants of risk management in SMEs*

Running a business involves managing risk and opportunities. The entrepreneur is therefore frequently an unwitting risk manager. The content of their "toolbox" depends on their level of training and experience, which they adapt according to their perception of events and environmental constraints. As they lack access to appropriate methods, the entrepreneur only partially manages risk. The lack of codified practices (such as those found in management standards) makes it only rarely possible to manage risks, which, should they occur, could jeopardize the sustainability of the organization's activities.

Why then is it that institutional actors find it so difficult to convince entrepreneurs of the well-

founded benefits of risk management approaches, even if only for specific risks such as Occupational Health and Safety? The erroneous and simplistic view of the entrepreneur as someone whose main objective is personal gain or improved social status is in no way representative of the majority of entrepreneurs. Performance goals are much broader than simply the financial aspects (profitability, growth etc.) of the business (Massey et al, 2005) and it is also necessary to integrate concepts related to customer service, quality of life and personal values etc.

The profile of the entrepreneur depends on their initial training, experience, personal and professional aspirations etc. and plays a key role in their approach to risk management. Lamm (2010) underlines this, and proposes a taxonomy of entrepreneurs based on their behavior in the area of occupational risk prevention. The taxonomy highlights six distinct entrepreneur profiles which are divided into two categories:

- Non-compliant behavior. The three profiles are: the employer who does not comply with regulations for economic reasons, the dissident employer and the incompetent employer.
- Compliant behavior. The three profiles comprise: the socially responsible employer, the conscientious employer and the professional employer.

The factors that motivate entrepreneurs vary (Gray, 1997). Therefore it is necessary to pay particular attention to the fact that (global) risk management is only a tool. However, this tool can support the achievement of a wide range of company objectives. The diversity of goals pursued by entrepreneurs raises the question of their perception and understanding of risk. Indeed, in considering the view of an entrepreneur as a systematic risk taker, it proves to be necessary to segment what is on the table in the matter of risk management and prevention (Antonsson, 1997) according to (among other factors) the configuration of the organization and the profile of the owner.

The external environment of the organization plays a pivotal role in terms of risk management (Walters, 2001). This is demonstrated by Martin & Guarnieri (2008) who describe the importance of social, regulatory and economic pressures in Occupational Health and Safety (OHS) risk prevention. In order to sustain OHS risk prevention measures in SMEs, they reaffirm the need to take into account the networks available to the owner, client relationships, legislation and the proximity of prevention bodies. Their observation is based on the general hypothesis of Favaro (1997), which states that “observed safety practices are, to a large extent, functions of a set of organizational and structural

determinants which are external to the health and safety domain”.

In this context, it is possible to determine that risk control procedures (or more generally, risk management) designed for SMEs must be structured taking into account the profile of the owner, the characteristics of the organization and its environment.

1.2 *Limits of the proposed approaches*

“Risk management is a central part of any organisation’s strategic management. It is the process whereby organisations methodically address the risks attaching to their activities with the goal of achieving sustained benefit within each activity and across the portfolio of all activities.” (FERMA, 2003)

There are many risk management standards (e.g. OHSAS 18001, ISO 14001, and ISO 31000). Despite some differences between them, they cover the basically the same activities, which are description of the context, risks assessment, treatment of risks, communication and consultation with all stakeholders in the company, and monitoring and periodic review of the risk control process.

Because they are developed by and for large companies, risk control approaches are based on a number of presuppositions that are incompatible with the organizational and functional reality of the SME.

Implementation of a risk control approach requires significant formalization of information systems through documentation of the system. In terms of standards, this is achieved through the preparation of communication/consultation plans and reports, policy, action plans, procedures, record keeping etc. However, it is well-known that the SME is characterized by a poorly organized internal information system (informal communication predominates) alongside a simple and operational external information system (Julien, 1997). It is then proposed to adapt the requirements of Risk Management to the Information System of the company (and not to create a formal one in a business which will not be able to support it).

Risk management systems also tend to encourage a preventive, rather than curative vision. This is at odds with the decision making process of SMEs, which is generally intuitive, often reactive (rather than proactive), and which responds mainly to constraints dictated by operational factors (which take precedence over managerial and strategic factors). This mode of operation puts the business into an almost constant state of self-adjustment. The occurrence or the evolution of factors, internal or external to the organization, implies that there is a lack (or

non-existence) of planning processes in non-operational, low-priority areas (Mintzberg, 1999).

However, this collection of factors appears to be insufficient to explain the diversity of SME risk management practices. This leads to the search for, and identification of, the various ‘states’ or ‘configurations’ of the organization, which in turn brings us to the concept of the lifecycle.

1.3 The lifecycle concept as an explanatory device for the development of risk management systems

The Zwetsloot (2000) model describes the evolution of safety management in terms of four distinct theoretical phases.

- The first phase corresponds to a posteriori event management (an ad-hoc response).
- The second corresponds to an informal management system. It is a stage of methodical organization. It embodies a state where the company makes a periodic risk assessment, identifies and prioritizes corrective actions and implements planned control measures.
- The third and fourth phases correspond respectively to a standardized system (a systems approach) and
- integrated (holistic) management.

In generalizing this OHS model to overall risk management, it appears that the approaches proposed by institutional actors are ‘standardized’. That is, as described earlier, they are in contradiction/opposition to the characteristics of some SMEs (particularly the smallest). However, some SMEs are certified and others have an integrated risk management system. It is clear that organizations that incorporate an organized operational architecture are much more structured than is generally accepted.

A more detailed examination of the Zwetsloot model reveals that evolution in safety management systems corresponds to evolution in the organization and function of the business in which it is deployed. This evolution of the various stages in the organization and function of the SME can modeled using the lifecycle concept.

Amongst the different approaches to developmental stages, a model that has received particular attention is that of Scott and Bruce (1987), which is based on (among others) the general model developed by Greiner (1972). They specify various evolutionary stages which correspond to the age and size of the business. Their model, which is in no way predictive, has two distinct aspects, which are:

- the lifecycle curve (a representation of the various evolutionary stages) and
- the associated characterization of the company using parameters.

The lifecycle curve is divided into five intervals (inception, survival, growth, expansion and maturity). Each interval is separated by a crisis, which brings about a transition to the next level.

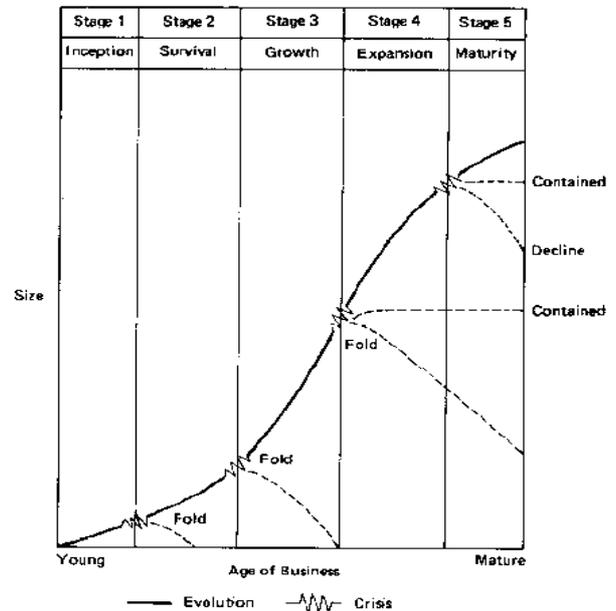


Figure 1. Base curve of the model (Scott & Bruce, 1987)

These five intervals correspond to a particular company configuration, and are defined by eleven parameters including cash generation, management style, control systems, the principal source of funding, and product research.

Analysis of the data makes it possible to determine that each stage of the business lifecycle corresponds to a state of organizational structure. The organizational structure itself conditions the risk management system. In fact, the questions arises, how would an organization that does not follow specific objectives and a coherent vision be able to define a risk control policy? The same question arises in terms of planning, organization (responsibilities, coordination, communication etc.) and control.

This observation (highlighted by Favaro, 1997) confirms that the evolution of risk perception coincides with the evolution of the business. It brings together diverse prevention needs that correspond to the lifecycle of the company. It also identifies three characteristic stages in the development of prevention activities, which are:

- control activities (information, regulation),
- instrumentation activities (tools, methods) and
- structuring activities (means, resources).

This first section has discussed risk management in SMEs. The following section aims to integrate the

concept of vulnerability. The objective is to round out the foundations of the management tool our work aims to develop.

2 MODELING THE VULNERABILITY OF SMES

The second section presents the foundations of a model of the vulnerabilities of SMEs which integrates the lifecycle concept.

2.1 From failure to vulnerabilities of SMEs

The precise reasons for the failure of a business are not always obvious (Megginson et al., 2003). It is usually the result of deeper causes, of which the most commonly cited are financial problems, management problems, demand problems and an internal crisis.

It is well-known that a third of the causes of business failure are accidental and that the remaining two-thirds are predictable (Deminski, 2002). While Deminski discusses financial difficulties (undercapitalization, poorly financed investment etc.) and mismanagement (lack of pricing knowledge, weak information systems etc.), he also highlights a third feature which he calls ‘critical phases’, of which development, transfer and creation (the first two years) phases are examples.

De la Bruslerie (2006) develops the idea that failure is a conjunction of events and vulnerabilities. This work is based on the definition of a vulnerable company as “that which exhibits a high risk of failure should certain events or an environmental change occur”. This idea raises the possibility that the aforementioned events are in fact commonly cited as causes and that the interesting question lies in the concept of vulnerability, defined by Turner et al. (2003) as “the degree to which a system, subsystem, or system component is likely to experience harm due to exposure to hazard, either a perturbation or stress/stressor”.

All small businesses face the same events (e.g. the loss of a key worker). However, they do not all fail in the same way. Work carried out in the area highlights two major types of failure. The first concerns the failure of the business from a legal point of view and takes the form of judicial liquidation and legal redress. The second is financial failure and highlights two distinctly different processes:

- a so-called ‘rapid’ process where failure is directly attributable to an inciting incident, and
- a ‘slow’ process in which failure is not directly attributable to a particular event but rather to its

consequences (e.g. the gradual erosion of margins).

If vulnerability is thought of in terms of the consequence of an event on one or more assets, it would seem appropriate to work at the level of the concept of consequences. This being the case, it is no longer a question of talking about the vulnerability of SMEs but rather vulnerabilities of the SME.

2.2 The transitory nature of vulnerabilities

The same threats confront all businesses. The emerging small business, the mature small business as well as big businesses can all, for example, face rising costs in raw materials. Why, then, in a large company, does this increase in costs lead to the search for a substitute product; while for the emerging small business, it could be considered fatalistically as the ‘dramatic rise’ in operating costs that is the origin of its failure? Moreover, why does this increase not lead to the failure of all similarly-sized SMEs in the same area of activity? This variability in consequences lies in the fact that the cause of failure is not (only) the rising cost of raw materials but rather the inability (or limited capacity) of the organization to anticipate and respond when faced with this problem.

Ooghe and De Prijcker (2006) stress that management shortcomings, which push an organization towards failure differ, according to the type of business. A young business with managerial and financial management shortcomings does not fail for the same reasons as an older company, which is unable to adapt to its environment. This is confirmed by Crutzen (2009) who highlights the link between the lifecycle and types of failing businesses. Types of failing business are defined as: the badly created business, businesses suffering from growth problems, (old) non-reactive businesses, businesses that serve other interests and businesses that suffer unexpected shock.

Table 1. Example of main explanatory failure patterns of small firms in the context of lifecycle theory (from Crutzen, 2009)

Badly created firms (creation)	Poor foundations
	Insufficient managerial experience
	Poor foundations + insufficient managerial experience
	Innovative firms that are insufficiently customer-oriented
Firms with growth-related problems (growth)	Youthful mistakes
	Overestimation of the future level of activity
Non-reactive firms (maturity-decline)	Lack of control
	Progressive misalignment with their environment

From this, it appears that the inability to anticipate and respond to events is not immutable. The severity of the consequences of an event varies according to the state of evolution of the organization. It is therefore likely that an emerging SME will be able to handle a certain range of risks which expands as the organization develops. It follows that the vulnerabilities of an SME in a growth phase differ from those of the same company as it matures. This is due to the fleshing out of various practices that emerge, formalize and finalize during the various phases of company development.

This sub-section has highlighted the relationships between the characteristics and vulnerability of a system as well as the importance of taking these links into account for the development of appropriate tools.

2.3 Towards a model of vulnerability

Now that the component elements for understanding the major risks faced by SMEs have been determined, it is necessary to investigate more precisely the functioning of the organization in order to understand and model its vulnerabilities.

To this end, the SME is studied in terms of its own characteristics (sector of activity, workforce etc.) and organization (management style, operation, structure etc.). The study would not be complete without taking into account interactions between the company and its environment. While analysis of the relationships a company has with its partners and employees is necessary, it appears that the environment also plays an important role in risk management.

Modeling the vulnerability of small business is based initially on the 'localization' of the effects on the SME when it is confronted with a harmful event, (e.g. flood, failure of an important supplier, or the death of the owner). The model describes the SME in functional terms. It provides a simplified view of the functioning and organization of the business, and identifies the function(s) affected by an event.

It is then necessary to characterize the consequences of these events. Consequences are classified using an insurance-type typology of damage that encompasses damage to property, the allocation of responsibility, injury to personnel and interruption of business operations. The characterization is supplemented by an assessment of the impact of the event on the company's business.

As was stated previously (section 2.2), the consequences of an event depend on the evolution of the business in which it occurs. This establishes that it is actually the business's ability to respond to an event

that determines the severity of the consequences. This in turn depends on the degree of organizational and functional development of the structure. Looking at the concept of vulnerability from a behaviorist viewpoint the severity of consequences can be seen as dependent upon on the lifecycle of the company.

Thus, in a small business whose human resource management process is limited to wages, hiring and firing (the state of human resource management practice that is consistent with an emergent business), the consequences of the departure of a key worker are likely to be more significant than in an SME which operates a more formalized system (e.g. the company which operates an HR policy for the recruitment and retention of managers; potentially the case for an SME in a growth phase). Company's practices as mentioned for a growing business configuration allow us to state/to infer that the entrepreneur identified the event "Loss of key worker", that he appreciated how disturbing this could be for its activity (even if it is only instinctively) and that he brought this issue a solution.

The last step in building the model is based on the identification of explanatory factors for the vulnerability of SMEs. For this it is necessary to investigate the criteria that influence the intensity and severity of damage for the business. Criteria are identified using the typology of damage previously established, the various elements related to the diagnosis of vulnerabilities, along with those related to the causes of failure in SMEs.

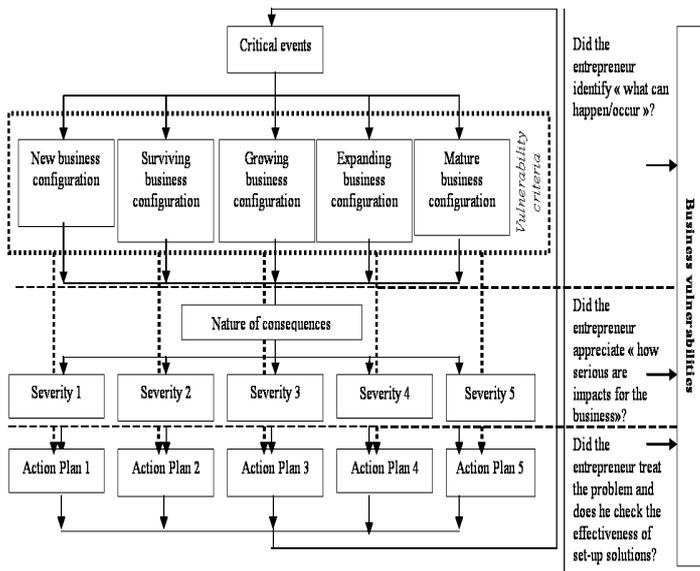
Table 2. Sample vulnerability criteria

C1	The economic and financial health of stakeholders (customers/suppliers/subcontractors etc.)
C2	The extent of the damage suffered by the company
C3	Accessibility of the land/buildings of the company (safety + ingress/egress)
C4	Workforce corresponds to business activities
C5	Company name/brand name/brand corresponds to business activities

Once these factors are identified, a structural analysis demonstrates the predominance (or not) of the role played by these criteria in characterizing the vulnerability of the business. Structural analysis is a tool that describes a system using a matrix which links the constituent components. Through the study of these relationships, the method identifies key variables in the evolution of the system (Godet, 2001).

This stage helps to organize the elements necessary to build a model of the vulnerability of SMEs. The proposed methodology, which aims to build a tool to reduce these linked vulnerabilities, rests upon this model.

Figure 2: Structural architecture of the model's interrelational organisation



3 DESIGN AND TESTING OF A DIAGNOSIS AND TARGETING METHOD FOR SMES

This final section outlines the stages that lead to the development and implementation of a diagnostic and targeting tool for risk management in SMEs.

3.1 The diagnostic design and the targeting tool

A structural analysis was used to analyze the vulnerability criteria. This is divided into two main stages. The first is the identification of existing relationships between variables, and the second is the construction of Influence/Dependence plans.

A Boolean matrix is used to show the existing relationship between variables. This is a square matrix (the same number of rows as columns). It centers on the predetermined vulnerability criteria that are compared on a one-to-one basis. If it is shown that the variable i has an influence on the variable j , a 1 is recorded in the corresponding box of the matrix A . Otherwise, a 0 is recorded. This step is completed by calculating the sum of each row and each column, in order to obtain for each criterion, its Cartesian coordinates.

The coordinate dataset is used for the preparation of Influence/Dependence plans. The x axis demonstrates the dependence and the y axis the influence of each criterion on the system. The resulting scatter plot allows the classification of variables using the following rules:

Table 3. Influence/Dependence plan (adapted from Godet, 2001)

	X is low	X is average	X is high
Y is low	Excluded variables	Pack variables	Result (output) variables
Y is average	Pack variables	Pack variables	Challenging variables
Y is high	Driving (input) variables		

Excluded variables are considered minor. These criteria have little or no importance for understanding the system (e.g. the entrepreneur gender, the nature of the soil where the company is built...).

Driving (input) variables characterize criteria which have a significant influence on the dynamics of the system (e.g. the financial/relational/technical support capability of associates / shareholders / financiers, the means available for technical development (equipment, collaboration), the reputation of the business...).

Result (output) variables demonstrate the criteria most dependent on others. Their state and evolution depends on that of the system (e.g. the competency/ability of people to accomplish their task/activity, their loyalty or propensity to serve interests of the company...).

Challenging variables reveal the dual nature of influence and dependency. These criteria are interesting because of their instability. It is through changing the state of these criteria that it is possible to affect the input and output variables for which they act as relays (e.g. the business profitability, the economic and financial health of stakeholders (customers, suppliers, subcontractors...), the level of regulatory compliance...).

Pack variables do not individually play a major role in the functioning of the system but must be incorporated because of the significance of their influence and/or dependency characteristics. From an operational perspective, pack variables are too numerous to consider an exhaustive integration. An additional/extra weighting has been carried out in order to identify the most influent and/or dependent ones. These "high pack" variables are thirty eight and include the level of activities standardization within the considered business, the quality of technological watch, the level of customers' satisfaction with regard to the product/service...

This first Influence/Dependence plan demonstrates the direct interactions that these variables maintain between themselves. Matrix A is then progressively raised to the power of 2, 3 and 4 with a dual purpose. The first is that it widens the graphical spread which allows greater differentiation between variables or sets of variables. The second gives rise to indirect interactions through comparison with other, associated Influence/Dependence plans.

3.2 Preparation of the diagnostic and targeting tool

The objective of the next stage is to develop a method whose main aim is to reduce the vulnerability of SMEs to their major risks.

The mode of operation is divided into two main parts, which are the diagnosis and treatment of identified problems.

The objective of the diagnosis is twofold. It must first identify and prioritize the vulnerabilities of the business in the context of its evolution. Secondly it must determine the extent to which risk management systems have been developed. With this diagnosis, the aim of the treatment stage is to supply and evaluate a range of possible solutions that take into account the capacities of the organization.

Three major sets of information are needed:

- The first group of data lies in the studied system's state characterization coming from a questioning that allows positioning the company on its lifecycle, to describe its vulnerabilities and to define its level of organizational maturity. This phase of the diagnosis can be connected with the context establishment stage.
- From this first group of data, the second body of information relates to the characterization of the company's level of mastery for critical events. The first aim of this stage is to verify the entrepreneur's consciousness about which difficulties its business could suffer but also to estimate his knowledge for potential and/or already experienced consequences. The second purpose is to specify if the organization's practices make it possible to absorb and to limit the impact of critical events.

This concludes the identification of the company's vulnerabilities.

- The last set of information aims to refine the plan of actions by assessing the appropriateness of the proposed treatment options to the opportunities available into the business (e.g. financial and time resources, available expertise).

Table 4. Relationship between diagnostic stages and use of information collected

Diagnosis stage	How the information is used
Knowledge of the business	To establish the context
Knowledge of business vulnerabilities	To specify the level of risks identification and assessment in the company
	To estimate the response capacity of the business
Treatment of business vulnerabilities	To adopt of proposed action plan

From an operational perspective, the purpose of the tool is to raise the awareness of the entrepreneur to their organizational vulnerabilities. Treatment plans can then be developed. The benefit of using this lifecycle approach lies in moving the 'center of risk observation' from a vast and complex environment to a known system. This enables the entrepreneur to be integrated into this process as they know the system best. Furthermore, founding the tool on the concept of maturity restricts the scope of the in-

vestigation and provides solutions of sustainable proportions for the business.

The method is implemented using the diagnostic tool which is composed of different questionnaires and charts organized according to the company's functions (Sales, Management, Administration...). This should allow to consider an easier results appropriation for the entrepreneur by increasing his major risks consciousness and knowledge.

For example, about the Management function, the questionnaire allows:

- To define the function internal context by considering the management team composition and the state of their relationships, the management style, the management team characteristics (age, education, training...).
- To define the external context by describing the Management relational environment. This is done through a questioning related to partners and advisers' competencies or loyalty (for example) but also related to the leader's personal/private life. Indeed, even if this last point appears to be very intrusive, it has been demonstrated that the dissociation between personal and professional life is not so obvious in very small businesses: *"if we are interested in economic transformation, we need to look at the owner as well as the firm – and the owner's life as well as the business lifecycle"* (Massey, 2007).
- To assess the entrepreneur's level of consciousness about critical events related to the management function through two distinct temporal spheres. The first aspect inheres in the business history therefore in the lived experience which influence and condition the information area used by the entrepreneur in order to take decisions. The second aspect is related to a projection into the future studying the entrepreneur's perception/intuition of potential critical events.
- To identify and to estimate the nature and gravity of consequences abiding the lived/foreseen dichotomy which condition the questioning level of details. Indeed, if we can expect precise information about known events, it appears to be more complicated to ask the entrepreneur for the same accuracy about potential impacts.
- To describe if the organization set up appropriated actions in relation with lived critical events and if it checks their efficiency.

Within this context, contributions of integrating the lifecycle concept are multiple.

As it helps to determine the state of the studied system, the questionnaire can be lighter. For example in a company under creation/inception, it appears to be useless to ask the question related to the fol-

lowing of its market shares as the business theoretically do not have formal marketing practices.

For vulnerabilities prioritization, the lifecycle notion helps weighting critical events with regard to the organization state. For example, it is possible to envisage the maximum severity for the "Management team dissension" event occurring in a new small business. This criticality decreases with decision power and responsibilities devolution inherent to organizational development.

At last for vulnerabilities treatment, the used lifecycle model gives information about "how to treat". The purpose is not only reducing vulnerabilities but also making explicit the concept of risk for the entrepreneur. With regard to the highlight on "where are major risks for the business", it is about constructing an available knowledge area in which the entrepreneur can consider to act. Chosen treatment options :

- Should be followed-up over time i.e. they should progressively become "normal/usual" business activities and
- Must not be counterproductive as in the case of a recommendation which would rigidify the organizational structure of a company centered on R&D activities.

3.3 Testing and validation of the method

The aim of testing is to validate the method. It checks consistency and relevance to the target user.

The target of the diagnosis is the entrepreneur as he represents the organization cornerstone for which

- he has/possesses a global knowledge and
- he is the one who makes the decisions for initiating and following risks management activities.

Although they may initially need support in the use of the diagnostic tool and the deployment of action plans, the tool is expected to evolve and could eventually be used for self-diagnosis. It is therefore essential to validate and adjust it, and to assess the extent to which it is 'owned' by the SME.

To limit the impact of contextual biases, tests will be carried out in the second half of 2011 in an area of France known as the *Ile de France*.

The first series of tests are related to the diagnostic tool and use the following procedure. First the entrepreneur is interviewed. This enables the advisor to provide necessary documentation, and to collect some initial information. At the end of this interview, the decision is taken to evaluate the business using the diagnosis (or self-diagnosis) tool. The diagnosis (or self-diagnosis) is carried out in pairs comprising, for example, the advisor and the entrepreneur or the entrepreneur and their resource man-

ager (e.g. production manager, personal advisor). The pairings cited are not exhaustive and other significant actors may be invited to participate in the exercise (e.g. accountant, legal adviser).

A questionnaire is used to assess the degree to which the SME takes ownership of the process. It focuses on the form of the instrument, its content, relevance and eventually, the appropriateness of the results. At this stage support would be probably be given to the company in the use and communication of its results.

Depending on interest, a collective discussion session may be arranged. The aim is both to make an assessment of the intervention, and to benchmark particular solutions which could be used as examples of good practice. At the end of this process, the information gathered is used to adjust the method and the procedure.

4 CONCLUSION

The majority of SMEs are not, and do not want to be high-growth. It is therefore important to reflect on the risk management procedures that are appropriate to them. The development and integration of a risk management system should be dictated by the level of organizational maturity, which impacts the operational needs of the company, amongst other things.

Practically, our results make it possible to reconsider various risk assessment methods (in banking, insurance etc.) designed for small businesses. They may also serve as a framework for those who create procedures and associated tools, designed for SMEs, who need to develop dynamic and evolving approaches to risk management.

5 REFERENCES

- Altare. 2010. Bilan 2009 défaillances et sauvegardes d'entreprises en France. Analyse annuelle du 19/01/2010. 37p.
- Antonsson A-B. 1997. Small companies. In D. Brune et al. (ed.) *The Workplace*, vol.2, part 5.3: 466-477
- Crutzen N. 2009. *Essays on the Prevention of Small Business Failure: Taxonomy and Validation of Five Explanatory Business Failure Patterns (EBFPs)*. Doctoral thesis. HEC-Ecole de gestion de l'Université de Liège
- Deminski P.H. 2002. Causes des faillites des entreprises suisses « En quête des causes profondes », Communiqué de presse du 13/08/2002, p.5.
- De La Bruslerie H. 2006. *Analyse financière - Information financière et diagnostic*. Paris: Dunod
- Favaro M. 1997. *La prévention dans les PME, enquête sur la prise en charge de la sécurité-représentation des risques*. Les notes scientifiques et techniques de l'INRS
- FERMA. 2003. *A Risk Management Standard*. AIRMIC, ALARM, IRM. p.16

- Godet M. 2001. Manuel de prospective stratégique. Vol. 2: l'art et la méthode. 2nd ed. Paris: Dunod
- Gray C. 1997. Managing entrepreneurial growth: a question of control? In D. Deakins, P. Jennings & C. Mason (ed.), Small firms: Entrepreneurship in the nineties (pp.18-28). London: Paul Chapman Publishing
- Greiner E L. 1972. Evolution and revolution as organizations grow. Harvard Business Review. Vol. 50: 37-46
- Julien PA. 1997. Les PME, bilan et perspectives. Paris Economica
- Lamm F. 2010. Comportement des employeurs et gestion de la prévention des risques professionnels. RSE n°5 Jul./Aug. 2010
- Martin C. & Guarnieri F. 2008. Pratiques de prévention des risques professionnels dans les PME-PMI. Collection Sciences du Risque et du Danger, Ed. Lavoisier
- Massey, C., Auld, T., Lewis, K., Perry, M., Walker, R., & Wariner, V. 2005. Micro by name, medium by nature? A report on an investigation into business excellence and New Zealand micro-enterprises, Wellington, New Zealand: NZ Centre for SME Research, Massey University
- Massey, C. 2007. Growing small and medium enterprises in New Zealand : He tangata, he tangata, he tangata. 2nd of August 2007 Inaugural Professorial Address. Wellington.
- Meggison L C, Byrd M J, Meggison W L. 2003. Small Business Management, An Entrepreneur's Guidebook. 4th Edition. New York: McGraw-Hill
- Mintzberg H. 1999. The entrepreneurial organization. In Mintzberg H., Quinn J B, Ghosshal S. (ed.) The strategy process. Prentice Hall: London
- Ooghe H. & De Prijcker S. 2006. Failure processes and causes of company bankruptcy: a typology. Working Paper series 2006/21
- Scott M. & Bruce R. 1987. Five Stages of Growth in Small Business. Long Range Planning. Vol. 20, N°3. pp. 45-52
- Turner B. L, Kasperson R. E., Matsone P. A., McCarthy J. J., Corell R. W., Christensen L., Eckleyg N., Kasperson J. X., Luerse A., Martellog M. L., Polsky C., Pulsipher A., Schiller A. 2003. A Framework for Vulnerability Analysis in Sustainability Science. PNAS. Vol.100, No14. pp. 8074-8079
- Walters D R. 2001. Health and Safety in Small Enterprises. European Management Strategies for Managing Improvement, P.I.E-Peter Lang S.A, Brussels
- Zwetsloot G. 2000. Developments and debates on OHSM system standardisation and certification. In Frick et al. 2000. Systematic OHS management. Perspectives on an international development. Pergamon: Elsevier Science. pp.391-412