Proactive Crisis Project Management: How to Stay Vigilant in Turbulent-Unstable Environments ¹

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Abstract

Today's unstable and turbulent business environment requires continuous crisis management. Nowadays, project managers need to deal proactively with potential crisis both effectively and efficiently. This papers outlines crisis management and project management as a necessity for an organization's continuity and an integral part of contingency planning. It presents crisis project management as a set of approaches, measures and methods used in situations where orthodox project management models are non-applicable nor sufficient. The purpose of this paper is to propose a Proactive Crisis Project Management (PCPM) model that is adopted by organization to either avert or overcome an unwanted crisis and facilitate business continuity and speed up actions.

Key Words: Crisis Management; Crisis Management Approaches; Business Contingency

1. Introduction

We live in an unstable world where crisis management has become an important factor to be taken into account for managers and organizations (Loosemore & Hughes, 2001). More than ever, socio-economic high dynamics, political turmoil, etc. are influenced by the impact of globalization and climate change is getting more and more fierce and its results have ever lasting derivatives. Hence, in this environment, a crisis can be considered as more or less permanent (Kouzmin, 2008; Mikušová & Horváthová, 2019). Being aware of such facts managers will need to implement appropriate control measures and prospective scenarios – in order to avert the potential disruption of an organization's balance and stability (Schoemaker, 1993; Loosemore & Hughes, 2001). Crisis management can be understood as a process that directs an organization's activity for the purpose of sensing, identifying, getting, and evaluation the warning signals of a

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potential crisis (Mitroff & Pearson, 1993; Mitroff & Alpaslan, 2003; Paraskevas, 2006; Sahin et *al.*, 2015).

Managers in general and project managers in particular need to strive for a proactive project approach in order to create their entities from a future crisis (Kouzmin, 2008). This is usually done by a thorough analysis of potential crisis and knowledge sharing which leads to subsequent organizational learning and lessons deductions (Robert & Lajtha, 2002; King, 2002; Wagner, 2005). Hence, project managers have to deal with many changes and ensure an efficient course of problem handling – in the sense of dealing with the crisis with the lowest possible losses (Paraskevas, 2006; Pollard & Hotho, 2006). We understand, that an organization's preparedness for a crisis is becoming both an integral and a strategic management issue (Loosemore & Hughes, 2001).

The purpose of this paper is to provide an outline of both the theoretical and empirical representations / features as well as approaches and models of project crisis management. The existing literature will allow an interpretation of existing knowledge will linking several conceptual notions (Knopf, 2006; Saunders, Lewis & Thornhill, 2012; Vašíčková, 2020). Second, based on the analysis of the literature a new a Proactive Crisis Project Management (PCPM) model will be proposed and detailed with the aim of helping organizations to either avert (contingency) or overcome an unwanted crisis and facilitate business continuity.

2. Conceptual Clarifications

2.1. Contextualization of Crisis Management

Crisis management can be explained as a process and management model applied in nonorthodox and extra-ordinary situations (Sahin et *al.*, 2015). Crisis management includes very specific activities such as detecting crisis signals, preventing its effects, surviving with minimum loss, applying preparation activities for recovering, etc.

The aims of crisis management can be viewed as follows (Loosemore, 1997; Antušák, 2009; Mikušová & Horváthová, 2019):

- Monitoring any changes in a status quo implying an unstable outcomes and unwanted results.
- Informing about the level of the crisis.
- Giving the appropriate time to managers to define and evaluate the crisis.
- Providing the appropriate methods and processes to improve plans to overcome the crisis.
- Initiating crisis management abilities.

• Being always alarmed to counter possible crises.

We understand that crisis management works to both prevent future crises and minimize their results in case of their occurrences by initiating and executing quick and calculated / planned responses.

There are many characteristics that frame any crisis management process and model – these include (Fink, 1986; Augustine, 1995; Kouzmin, 2008; Antušák, 2013):

- Estimating crises and distinguishing them by their type, take preventive measures, learn lessons, recover, etc.
- Setting alarm signals and signals to identify the threat of crises.
- Managing crises according to their types as each one has its own particular signals, process, and treatments.
- Agendas and policies must be flexible, creative, objective, agile, decisive, etc. and ready against uncertain events in unexpected and uncontrollable conditions.
- Coordinating many actions and processes (e.g. communication, audit, business culture, planning, etc.).
- Etc.

2.2. From Project Risk Management to Project Crisis Management

Project risk management has been in development on many levels in the past few decades and is currently an integral part of an organization's project management system. However, when we review crisis-related projects, we see that project risk approaches are not always effective when it comes to preventing major failures (Kouzmin, 2008).

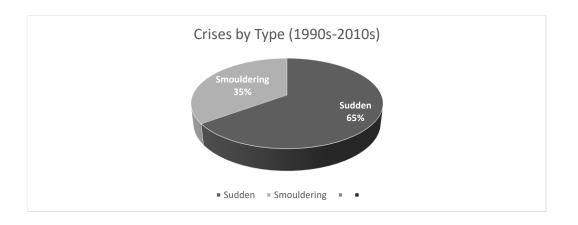
Indeed, studies show that the increased occurrences of crises, urgencies, etc. of all kind (e.g. natural disasters, wars, etc.) on one hand, and the development of megaprojects has led to the amplification of incidents of massive project failures. There is a failure to cope with the increasing project complexity (specially technical difficulties), instabilities (e.g. geopolitical, social, etc.) as well as ever demanding time / cost pressure (Kaklauskas et *al.*, 2011). The causes behind such failures are due to a deficient planning, lack of understanding of project interfaces, bad schedules and cost-estimations, poor risk analysis, etc. (Fink, 1986). On another note, studies show that projects in unstable environments and crisis-related interventions tend to deviate from the baseline or fail (Loosemore, 1997). In other words, crisis projects are nonlinear, and there are significant interdependencies between project risk factors. The occurrence of one risk (turning into an incident) will often escalates into another failure, leading the whole project into a critical situation.

It is therefore of crucial importance for entities working on crisis-related projects to identify the various deriving scenarios and understand their potential causes and consequences to give early warning, which will in turn allow actions (and counter-measures) to be taken before it is too late (Schoemaker, 1993; Mikušová & Horváthová, 2019).

2.3. Integration

A crisis can be defined as an event, allegation or a set of circumstances which destabilizes a status quo and transforms a current situation into an wanted / unprepared for /and unsought for situation which threatens the integrity, the reputation, or the survival of an individual or an organization (Hammer & Champy, 1993; Frýbert, 1995). A crisis will the challenge the public's sense of safety, values, and appropriateness. That said, the actual (or potential) damage to an organization (once a crisis has emerged) is considerable and usually of great proportions – and the entity cannot, on its own, put an immediate end to it (Loosemore & Hughes, 2001; Jaques, 2010).

Figure 01. Crises by type throughout the 1990s-2020s (according to the Institute of Crisis Management)



Statistics show that organizations need to face crises that are not necessarily related to an event (or smoldering crises) (check Figure 01.) and they originate mostly with proper project management inaction and / or neglect. There is a growing recognition among organizations that crisis project management must be incorporated in all strategies relating to their projects and activities and that all key business function must address crisis prevention and management formally as part of business planning (Khodarahmi, 2009; Kaklauskas et *al.*, 2011). In today's world, organizations must adopt a holistic view and establish solid business contingency plans

(BCP), of which crisis project management is but one element (Fink, 1986). In order to be effective, crisis management must be embedded into the organization's management system as is (Loosemore & Hughes, 2001).

In an increasingly unpredictable, unstable and volatile business environment, organizations need to both prepare for crises and expect them as an entity's ability to business continuity is measure not only by its capacity to detect crises and effectively respond to and recover from them.

Any organization needs to have a crisis project management framework that sets the foundation which enables escalation, communication and coordination of measures intended to respond or counter a crisis. The framework will also provide the structure through which to train and exercise the different implicated stakeholders with crisis management responsibilities (Loosemore, 1998; Coombs, 2007).

Of course, many organizations have existing crisis management plans and projects in place and have matured in their own overall crisis response capability (Mikušová & Horváthová, 2019). Hence, the objective of any good organization is to further enhance this capability and to be better prepared to respond to new and unimagined risks (before they turn into incidents) as well as to manage the ever-growing number and diversity of stakeholders (Register, 1989; Kouzmin, 2008).

Business contingency planning (check Figure 02.) gained great momentum in the 1990s with the proliferation of world wars and natural disasters. The question is : *how does a crisis project management fit into a Business Continuity Plan (BCP)* ?

Usually, when the risk management process addresses issues and is integrated with the specificities of the managerial process of organizations wanting to act / work in unstable conditions or react / act upon an unwanted event, the crisis prevention capability is noticeably enhanced (Khodarahmi, 2009; Kaklauskas et *al.*, 2011). Identifying and evaluating risks and issues is the first step, however it is the management of the risks and issues which is critical and most challenging for entities that want to deal with intangible issues.

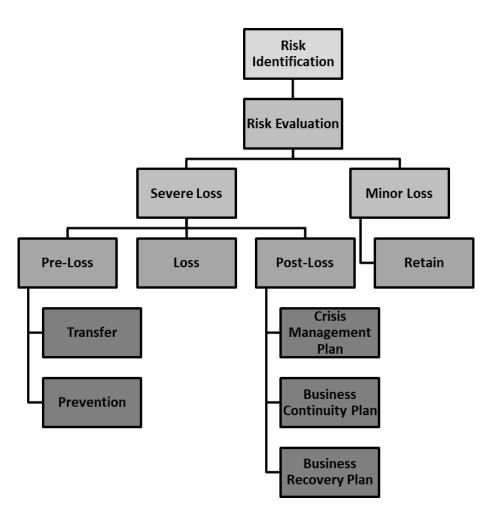


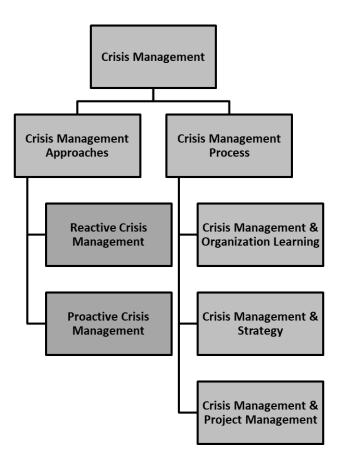
Figure 02. Business Contingency Planning

Indeed, not all crises are preventable – however, having effective risk and crisis project management plans and processes in place will help organizations foresee, plan scenarios, be more proactive and decide how to terminate the risk (Schoemaker, 1993; Kouzmin, 2008). Crisis project management is about being prepared to handle adversity and minimize impact most effectively and effectively as well as facilitating activities during chaos (Loosemore, 1997).

2.4. Existing Literature

One of the purposes of this paper is present that summarization of the existing and accepted knowledge by academics and field experts. Through this exercise, we aim to present the various features of mentioned crisis approaches and models. This will also serve as the grounds for future research and theory (Knopf, 2006; Saunders, Lewis and Thornhill, 2012; Vašíčková, 2020).

The existing literature highlights the many concepts and notions of "crisis management", "crisis management approaches", "Crisis management frames" (Pearson & Mitroff, 1993; Pearson & Clair, 1998). When digging deeper, we found out that further notions were highlighted by experts that refined our own research such as "proactive management", "reactive crisis management" and "crisis management process", etc. The following diagram was elaborated based on the highlighted notions in the literature.





The literary sources that were studied helped us understand the various issues being explored by the researchers in crisis management project approaches. More literary sources were found through cross-references.

In all, the current literature highlights many ideas and notions such as:

• **Crisis Management as a Cyclical Construct**: crisis management relational model exploring crisis management activities (e.g. cluster or related and integrated activities occurring simultaneously (Knopf, 2006; Jaques, 2010).

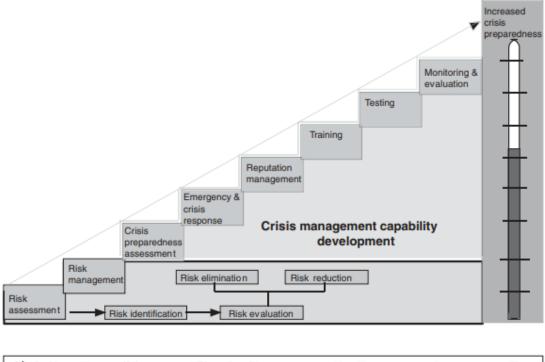
- Algorithm for Crisis solutions: It emphasizes strategy revitalization (Frybert, 1995).
- *System Approach to Crisis Management*: It deals with using a process model which identifies phases that are necessary for an effective crisis management (Mitroff et *al.*, 1988).
- **Descriptive Model**: It deals with crisis management processes and multidisciplinary approaches to crisis management (Pearson & Clair, 1998).
- **Activities Description**: It highlights the importance of warning signals and detection (Sahin et *al.*, 2015).
- *Crisis Management Framework*: It is a process leading to organizations' crisis preparedness (Pearson & Mitroff, 1993; Knopf, 2006).
- **Crisis Management Strategic Position**: It reviews the various crisis management approaches with scenario planning process to provide a mechanism to both incubate and manage future crisis (Fink, 1986; Schoemaker, 1993; Pollard & Hotho, 2006; Crandall et *al.*, 2013).
- **Crisis Management Team**: It highlights the role of the team when it comes to the strategies and activities related to crisis management (Shrivastava & Mitroff, 1987).
- **Conceptual Framework**: It helps understand the crisis theoretical understanding (Shrivastava et al., 1998; King, 2007; Valackienne, 2011).
- **Strategic Development for Decision Making**: It deals with the strategies that need to be developed in order for proper decisions to be taken within a crisis and for a crisis (Spilan, 2000; Knopf, 2006).

3. Crisis Project Model Approaches

3.1. Best Practice

Nowadays, an integrated and holistic approach is being adopted by international entities within the context of their crisis-intervention plan across various industries (Register, 1989; Kouzmin, 2008). Usually, a specific project officer is appointed with the task to assess, plan and implement a comprehensive and detailed crisis response system, bringing together key business functions including operations, human resources, legal, MIS, safety, communications, etc. (Kaklauskas et *al.*, 2011)

An interventionist entity who wishes to review their crisis management plan must begin with an in-depth assessment of their risk with an in-depth assessment of its risk and process management, emergency and crisis response plans and procedures, facilities, and aptitudes / competencies and skills (Knopf, 2006). An action plan with very specific completion targets must be formulated to revise, expand and integrate processes, train project team, and test the project actions (King, 2007).







Monitoring, control, evaluation and feedback provision are critical to the success of the process of crisis project management (Register, 1989). Indeed, a number of tasks must be completed within the process of crisis management (Knopf, 2006). This means that the concerned entity must develop the processes, facilities, resources, competencies and tools in place to prevent a crisis wherever possible and manage one effectively (Kaklauskas et *al.*, 2011).

In order to organize and set an appropriate response structure to a crisis, an entity must adopt a tiered approach (Loosemore, 1997; Kouzmin, 2008). This enables the concerned entity to activate its response mechanism quickly – without necessarily overreacting or over-deploying.

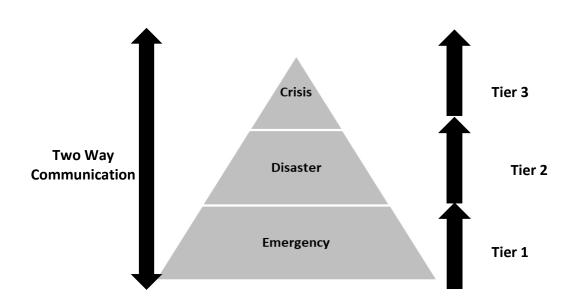


Figure 05. Linking Emergency Response to Crisis Management

The three-tier model empowers staff at key levels to tackle any extraordinary incident with the potential to both escalate and bring it up to more senior echelons without necessary delays according to defined criteria. This is an effective model for entities which have various simultaneous operations across different geographic zones.

3.2. The Description of Crisis Management Approaches

3.2.1. Context

Crisis management can be explained, interpreted and characterized in several approaches and models. The existing literature highlights various models, where crisis management can characterized by five basic approaches (Shahin et *al.*, 2015; Vašíčková, 2020): escaping approach, solution approach, proactive approach, reactive approach and interactive approach.

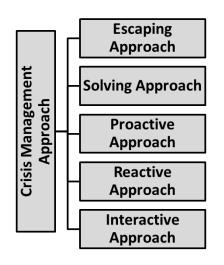


Figure 06. Crisis Management Approaches (according to Sahin et al., 2015)

3.2.2. Reactive Approach

The reactive approach to crisis management is generally understood as a set of procedure and principles that are formulated to help bring the affected entities / communities / businesses out of the unexpected crisis and stabilize it (Shrivastava, 1988; Mitroff & Pearson, 1993; Zuzak & Königova, 2009; Zapletalova, 2012; Sahin et *al.*, 2015; Mikušová & Horváthová, 2019) :

- **Step 01 Crisis Identification**: everything begins with awareness of the crisis and its identification.
- Step 02 Crisis Analysis: The causes of the crisis are analyzed.
- **Step 03 Crisis Management:** the objective is to stop the crisis by implementing corrective actions.
- Step 04 Organizational Learning, Monitoring & Feedback: during this phase, the objective is learning from the crisis which provides the entity in charge of implementing the corrective actions with important information for further / future crisis measure and management.

3.2.3. Proactive Approach

A proactive approach aims to dynamize an entity's perception of a crisis by implementing the necessity of anticipating and analyzing a crisis during a period of stability (Fink, 1986; Shrivastava and Mitroff, 1987; Mitroff, Pauchant and Shrivastava 1988; Mitroff and Pearson, 1993; Shrivastava, 1994; Augustine, 1995; Frýbert, 1995). The proactive approach can be reviewed according to the following dynamic (Fink, 1986; Preble, 1997; Pearson and Clair, 1998; Boin and Lagadec, 2000; King, 2007; Khodarahmi, 2009; Sahin et *al.*, 2015):

- **Step 01 Data & Information Management**: this includes providing adequate information and credible-measurable data.
- Step 02 Risk Identification: determining risks and planning risk-countering measures.
- **Step 03 Establishing Warning Systems**: This includes many operational as well as both internal and external warning systems (systematic implementation of the warning signals that enable early detection of a potential crisis and the creation of system for early identification of potential crisis).
- Step 04 Prevention Plan: Establishing a risk prevention plan.
- **Step 05 Team Formation:** Forming crisis prevention team that is in charge of executing and implementing the plan.

3.2.4. Solving Approach

The solving approach will be based on the prediction of conditions before a crisis takes place and on a timely move in order to counter the problem and resolved it as soon as possible. In this context, during a crisis, the status quo and current conditions must be perceived and clearly identified. Within the context of a crisis-solving approach – there are many efforts that should be undertaken such as (Milburn et *al.*, 1983; Kaklauskas et *al.*, 2011):

- **Step 01 Data & Information Management**: The systematic compilation of information for effective decisions.
- **Step 02 Identify Opportunities**: A crisis can also bring opportunities for an entity in terms of operations, planning, staff, financial management, etc.
- Step 03 Strategic Planning should be Established and determined accordingly: this includes the reduction of the time pressure, identification of sources of crisis, analyzing strengths, weaknesses, opportunities, and threats, etc.
- Step 04 Implement Strategies: Executing the plan.

3.2.5. Interactive Approach

The integrated / interactive approach aims as integrating a crisis management culture / process within the dynamic of an entity that is concerned in working in an unstable / crisis – related environment. The general dynamic of this approach can characterized as such dynamic (Sahin et *al.*, 2015):

- **Step 01 Data & Information Management**: this includes evaluating the crisis process before, during, and after the crisis.
- **Step 02 Feedback & Development:** Due to the information obtained in the crisis process, it includes the continuous improvement of the entity's learning and development as well as the self-control mechanism in such uncertain situations.

• Step 03 – Information Sharing & Continuous Communication Flow: The idea is to have a permanent data sharing flow between all implicated stakeholders in order to concretize an appropriate crisis management policy.

3.2.6. Escaping Approach

The escaping approach implies a constant monitoring of the internal and external environment and improving prediction methods about the future environment before a crisis. The escaping approach has the following dynamic (Milburn et *al.*, 1983; Knopf, 2006; Kaklauskas et *al.*, 2011; Sahin et *al.*, 2015):

- Step 01 Determining the Needs of the Organizations: this includes determining the needs and objectives of the entity that is about to embark on a crisis related task / mission.
- Step 02 Determining the Needs of the concerned community / environment: this includes determining both needs and values of the concerned environment, identify its problems, etc.
- **Step 03 Finding Solutions**: the idea is to find salable solutions and the application of actions.
- **Step 04 Structuring the Organization**: this includes establishing a flexible, dynamic, and agile structure for easy practices.
- Step 05 Initiating an Alarm System: this includes catching early signals that indicate a change in macro environment or any dramatic variations of the status quo.

3.3. Crisis Management Process

3.3.1. The Model's Flow

A number of experts have worked to develop a basic process model of crisis management that describes the different steps and phases that have significant impact on the flow of crisis management as a whole (Mitroff et *al.,* 1988; Knopf, 2006; Mikušová & Horváthová, 2019). How to comprehend / follow the model's flow:

- The process of the proposed model begins with the activity of *"Detecting"* possible / potential / probable crisis.
- There is an important and thorough analysis of both the internal and external environment in which signals of an impending crisis should be analyzed.
- Activities are directed to a preventive function to ensure the preparedness of the organization for the "Undetected" crisis. It should be noted that even though considerable planning and preventive procedures are put into place a crisis can still

occur. Hence, "*Detection*" and "*Prevention*" are of great importance in the process of continuous evaluation of crisis management projects – as they set the best ways to adverse unwanted situations in the most effective way.

- "*Remediation*" activities are engineered to test and implement the proper mechanisms that enable organizations:
 - To properly work in an environment or a context after a crisis had occurred (whether it is in the short or long term);
 - To work in order to restore the pre-crisis status quo (or as close as possible to a normal state).
- The *"Evaluation"* step is considered a crucial part of the all-in-all crisis management process as the concerned / implicated entity has the task of evaluating the implemented process and procedures as well as the review of the activities. This will lead to updating its contingency plans based on learning.

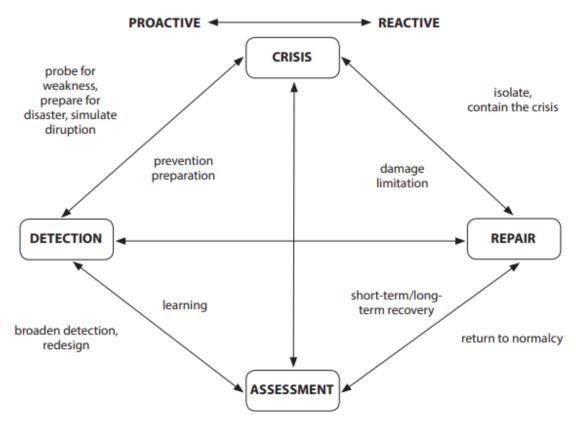


Figure 07. Crisis Management Process (according to Mitroff et al., 1988)

3.3.2. Reactive Model VS. Proactive Model

Many experts have highlighted the necessity for "*Proactive*" action when it comes to cris management planning and project design (specially in unstable – uncontrollable environments) (Knopf, 2006). The "*Reactive*" approach usually focuses on the identification and termination of the crisis. However, experiences have shown that a crisis (any crisis) cannot be averted despite thorough and meticulous planning as well as timely prediction (in some cases) (Loosemore, 1997). Even so, a thorough and meticulous analysis of the environment (internal / external), proper scenario building & prospective processes, the creation of accurate crisis signaling systems, as well as an technically and operationally possible response procedures, etc. should allow an organization to intervene in the shortest possible time (Schoemaker, 1993). On another note, the more an entity is exposed to crises, the more it can better intervene in potential – future ones. Hence, it is undoubtably necessary to consider the stage of "*Learning*" from previous experiences in the area of "*Proactive*" project response management.

There are other differences that can be highlighted between the *"Reactive"* and the *"Proactive"* styles in the different phases of crisis management (Fink, 1986; Mitroff et *al.*, 1988; Schoemaker, 1993; Spillan, 2000; Sahin et *al.* 2005; Knopf, 2006; Kouzmin, 2008; Khodarahmi, 2009):

- The "*Reactive*" style:
 - All activities must be engineered to focus on addressing and terminating the consequences of the crisis.
 - There are no specific warning signals.
 - Each crisis is particular in nature as well as in its consequences hence, an organization reacts to it and tailor-makes a crisis plan accordingly.
- The "Proactive" style:
 - Work must be done to prevent the crisis and / or to limit its consequences to the very minimum should it occur.
 - The organization must identify the manner of a potential / probable crisis on time
 which can be revealed through a thorough analysis of both the entity's vulnerability, the environmental threats, as well as early warning signals.
 - Emergency crisis project management plans are developed and drawn to enable the implicated entity to avoid a crisis based on such studies.
 - There is always the possibility of crisis averting due to continuous crisis project planning and creation of crisis scenarios, which are based on the analysis of warning signals (of the set system).
 - In the post-project / contingency plans implementation phase the crisis plans are reviewed and analyzed - along with the feedback of experts (which turns into

a new vulnerability analysis and consequently into a new crisis scenario) and further prevention planning is set.

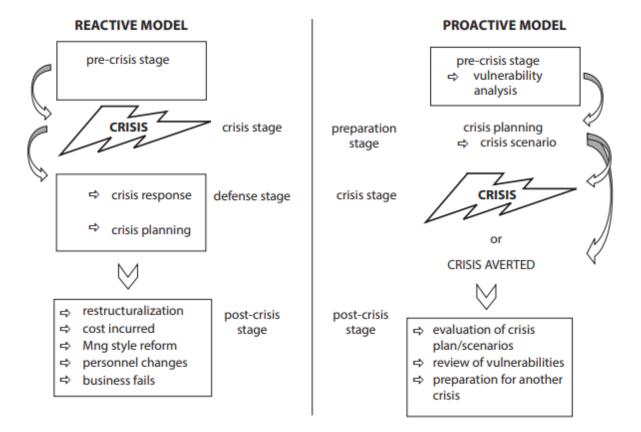


Figure 08. Reactive Model VS. Proactive Model (according to Spillan, 2000)

The available and accepted literature also highlights very similar characteristics that were highlighted in a model developed by Jaques (2010). The model highlights both crisis preparedness by an organization as well as the pre-crisis prevention phases. According to the author, such phases can help an organization to both better prepare and respond adequately to a potential / probable crisis (Khodarahmi, 2009; Vašíčková, 2020). When reviewing both approaches (*"Crisis Management Process"* and *"Pre-Crisis Management"*) we notice that they both include common elements (e.g. planning of crisis management projects, employees training, making manuals and documents available to implicated parties, identifying warning signals, risk management exercises, preparation for emergency actions and plans, etc.). According to the author, *Pre-Crisis Management*.

Figure 08. Crisis Management Process & Pre-Crisis Management (according Jaques, 2010)

	Crisis Manageme	nt		Pre-crisis Management		
		Evaluation, Planning Modification Process				
		Post-crisis Issue Impact	post-crisis Mgmt	crisis preparedness	Systems, Manuals	
	Recovery, Business Resumption	post-crisis Mgmt	EFFECTIVE		crisis preparedness	Trainning, Simulations
	Crisis Management	crisis event Mgmt	MANAG	EMENT	crisis prevention	Early Warning
		System Activation/ Response	crisis event Mgmt	crisis prevention	lssue and Risk Management	
			Crisis Recognition	Emergency Response		

Another author worked on explaining the position of crisis management at specific stages of the crisis and provides a very generalized approach on how the organization can intervene in a crisis-affected environment. According to Frýbert (1995), crisis management steps are divided into individual phases:

- **Stage 01 Prevention**: The first phase deals with prevention where a preliminary analysis of both the environment and intervening organization is conduct in search for vulnerabilities as well as possible crisis scenarios and how to properly respond to them.
- Stage 02 Identification: If a crisis is occurs the work is set on identifying it and its sources.
- **Stage 03 Resuscitation**: The organization is now in its crisis management phase where it seeks to stabilize the crisis and restore the pre-crisis status quo.
- Stage 04 Diagnostic Stage: During this phase, a diagnostic is conduct to determine the impact of the crisis on the concerned environment and community. Also, at this stage, the decision-making process leading to project continuation or termination (based on the current impact of the crisis) is determined.
- Stage 05 Consolidation & Stabilization: Should the organization choose to continue its operations in the impacted area, the concept of revitalization is established and follow-up measures are taken. Such measures are subject to detailed analysis and lead to further strategic planning decision from project managers.

Stage 06 – Strategy & Solution: In this stage, it is necessary to assess the current set-up of the strategy and take appropriate measures to continuously update it. A proactive approach is necessary when it comes to strategic planning (within a contingency plan). Hence, continuous crisis management updating is required based on the findings and feedback.

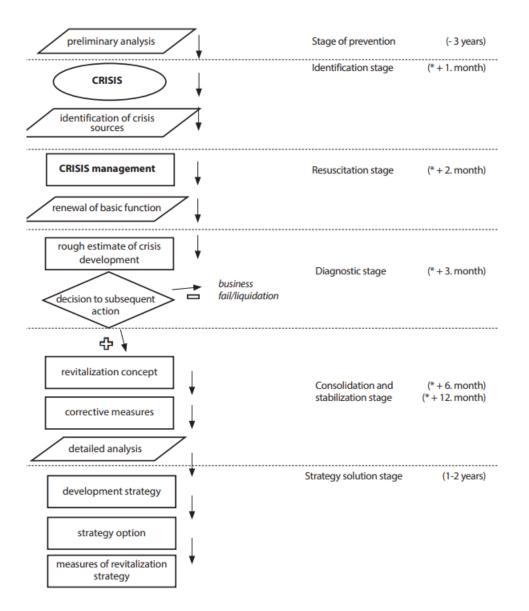


Figure 09. Algorithm for crisis solution (according to Frýbert, 1995)

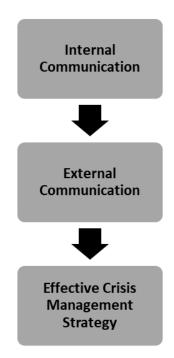
Another model can be highlighted within the available disciplinary literature that can be adopted in both *"Proactive"* and *"Reactive"* approaches (Knopf, 2006; Valackiene, 2011) has highlighted several elements that can have great significance on the all-in-all crisis management work –

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which includes the socialization of the concerned parties (better work chemistry), effective communication between the implicated parties, effective crisis communication, and effective crisis management strategies in the concerned organization. In other words, this model emphasizes (Loosemore, 1998; Coombs, 2007; Kouzmin, 2008; Khodarahmi, 2009; Valackiene, 2011; Crandall et *al.*, 2013):

- The role of crisis communication internally in order to help the concerned parties better understand their role.
- The role of crisis communication externally with implicated third parties (should there be any of them engaged in any activity).
- The importance of having an effective crisis management strategy that can be divided into several phases (within a repetitive cycle):
 - The creation of a crisis prevention program
 - The identification of a crisis
 - The Operational activities
 - Decision Making processes

Figure 10. Conceptual Matrix of a Crisis Management Model (Valackiene, 2011)



4. Proactive Crisis Management Process (PCMP)

4.1. Outline

As we have seen, crisis management can have a proactive process with specific steps, elements, and features – with the aim of preventing and effectively dealing with a crisis (should it occur). On another note, and we have previously explained, the whole process is cyclical (within the context of continuous proactive improvement). That said, there are several common (highlighted by most experts) and important aspects of proactive crisis management approach that can summarized as follows (Khodarahmi, 2009; Kaklauskas et *al.*, 2011):

- An ensemble of methods, approaches and tools that are used to prevent and terminate a crisis situation (should it occur) and stabilize the concerned environment.
- The purpose is to avoid a potential crisis, minimize the losses that derived from the crisis and reduce its all-in-all duration.
- The installment of a warning system and permanent evaluation of its signals.
- The cyclicality and continuation of the process of prediction, prevention, preparedness, recovery, learning and evaluation.
- The fact proactive measures will not avert all crises but can nevertheless reduce the consequences of their damage.
- Etc.

4.2. The Necessity of Developing a Crisis Project Management Framework

Within the context of crisis management, the integration of a project management framework will greatly facilitate the all-in-all work – as this will help the concerned entity (Loosemore, 1997; Knopf, 2006; Kouzmin, 2008):

- Develop crisis simulation project-response procedures to test their incident response.
- Develop an exercising capability that includes a governance structure and related processes to continuously test their incident response.
- Design fit for purpose reporting mechanism for the project management team.
- Test the response and recovery capabilities across the organization business lines by conducting several exercises.
- Validate the effectiveness and efficiency of response strategies.
- Build capability amongst the implicated parties.
- Empower key stakeholders to properly act during a crisis.
- Identify gaps and vulnerabilities in both the planning process and organization as a whole.

- Use the outcomes of a crisis as a guide to future strategy development to help an organization ensure its operational response and effectiveness despite potential disruption of critical activities.
- Etc.

4.3. The Project Crisis Management Framework

4.3.1. Outline

Project crisis management has its own particularities which focuses on responses to a major issue that represents a strategic or an existential threat to a concerned community and where an organization must swiftly respond (Kaklauskas et *al.*, 2011).

Our proposed approach for crisis frameworks includes many key elements to ensure the delivery of such crucial projects that can represent a critical risk to the future viability of the implicated organization's work and sometimes a threat to the impacted / concerned community. Such an approach was inspired by a model that was developed by Arthur D. Little.

1-	Crisis Project Governance	2-	Credible Scenarios Identification	Crisis	3-	Crisis Response St	Project rategy	4-	Stress-Testing
•	Crisis Management Structure Crisis Project response process Roles and responsibilities for crisis management	•	Threshold identification Risk assess (identification, analysis and evaluation) Credible scen identification	risk	•	plan	t n agement agement	• •	Crisis walkthrough Table-top exercise Etc.
	5- Continuous Improvement								

Figure 11. Project Crisis Management Framework

4.3.2. Establish Project Crisis Governance

The organization of a project crisis management framework will comprise of a project team, project sponsor, and panel of senior executives that exercise a project oversight (King, 2007). Experiences have shown that within the course of preparation for potential project crises, it is important to identify and formally appoint a dedicated governance ensemble – that is not part of the existing project team or its nominated governance, in order to provide independent governance during the planning and monitoring phases (Fink, 1986; Kaklauskas et *al.*, 2011). On

another note, such a group can provide further data, resources, expertise, management advisory, leadership, etc. as a crisis is either being dealt with or prepared for.

Ceteris Paribus (English: all things equal), if the project planning and delivery proceeds as planned, the crisis project governance group will only maintain a minimal commitment (e.g. advisory, supporting planning and monitoring, etc.) (Knopf, 2006; Kouzmin, 2008). As the potential of occurrence of a crisis increases – the group will take on a more active and implicating role.

Figure 12. Crisis Project governance arrangements

 Crisis Project Management Team Develop the project specific crisis project management plan Develop and implement the crisis response strategy Inform the project sponsor in case of crisis 	
 Crisis Response Team Develop and implement crisis response strategy Members of the crisis response team are selected based on their skills, expertise and experience 	Develop and Implement Crisis Response
 Project Sponsor Review and approve crisis project management plan Responsible for identifying and validating escalation to crisis decision committee 	
 Crisis Decision Committee Instigated at the decision of the project sponsor Validate crisis project response 	Take Key Decisions & Approve Crisis Response
 Crisis Project Leadership Team Highest level of escalation Includes Senior Project Management Informed of Decisions taken by the Crisis decision committee 	Informed and Intervene if decide to

4.3.3. Identify Credible Crisis Scenarios

Experiences have shown that there is no universal approach to managing a crisis project – and therefore, there is no generic crisis response that would be effective in all circumstances. Indeed,

effective project crisis response varies depending on the specifics of each crisis as well as on the event(s) leading to the crisis (Schoemaker, 1993; Loosemore, 1997).

The first steps towards a calculated crisis project responses will consist of identifying credible crisis scenarios (Kaklauskas et *al.*, 2011):

- That might be identified during risk assessments.
- That might be based on past experiences.

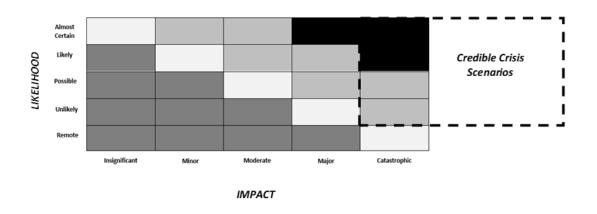


Figure 13. Crisis Project Assessment & Scenario Identification Process

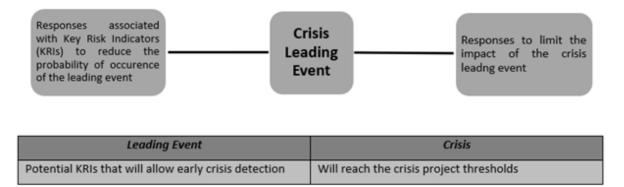
4.3.4. Develop Project Crisis Response Strategies

Once crisis scenarios have been identified, project team can further explore them and analyze potential reasons that can cause them as well as their potential consequences (Schoemaker, 1993; King, 2007). Prospective precursor events as well as mitigation measures can then be identified and formally recorded in a crisis project management plan.

In this context, the crisis project team must work identify potential crisis precursor events as well as try to identify relevant mitigation measures. That said, crisis precursor events can provide early warnings of approaching crisis so that a timely intervention could take place. This is done through the definition of *Key Risk Indicators* (KRIs) (Knopf, 2006).

The crisis project management plan must also document major key considerations (e.g. delay, side effects, etc.) as well as resources (e.g. cost, manpower, materials, etc.) that are associated with the responses. These elements will help formulate the all-in-all interventionist strategy and determine the implementation process (Crandall et *al.*, 2013).

Figure 14. Crisis Project Response Strategy Design



4.3.5. Crisis Project Testing and Continuous Improvement

Project testing and exercising are of crucial importance when it comes to crisis project risk management as such activities can bring about substantial benefits – which can lead to continuous improvement (Knopf, 2006; King, 2007; Jaques, 2010):

- Critically reviewing the crisis management plan.
- Challenge strategies and project dynamic.
- Periodic risk identification and risk assessment.
- Review assessment and responses.
- Reconsider scenarios.
- Rethinking mitigation measures.
- Studying adequacy of the crisis project management plan and response deployed by the project team.
- Review outputs from the testing and exercising activity.
- Conduct knowledge sharing.
- Review KRIs.
- Executing simulation exercise by acting upon detection of crisis occurrence.

The frequency of such an exercise can vary depending on the crisis' project, complexity and length.

4.4. The Crisis Project Management Steps

The crisis project management will have very detailed and specific steps to be undertaken which include (Schoemaker, 1993; Loosemore, 1997; Knopf, 2006; Kouzmin, 2008):

• Step 01 – Mobilization:

• Requiring, requesting, and acquiring relevant crisis management documentation.

 Identifying key stakeholders to support the development of implementation scenarios.

• Step 02 – Preparation:

- Organizing the first meeting to agree on the scope and objectives of the project tests and exercises.
- Conception and drawing processes in scope as well as associated vulnerabilities when it comes to project functionalities.
- Review initial scenarios and ideas.

• Step 03 – Exercise Design:

- Holding various workshops and exercise simulations.
- Produce supplementary scenarios.
- Conduct knowledge sharing.
- Finalize logistics.
- Step 04 Exercise Delivery:
 - Facilitating an interactive simulated exercise to test the required project team.
 - \circ $\;$ Hold debrief session to reflect on the team's performance.
 - Review other implicated project parties.

• Step 05 – Exercise Reporting:

- An executive detailed summary is formulated which includes remediation actions.
- The same report will outline the vulnerabilities as well as the strong points of response and recovery activities.
- The results and findings are to be shared with project executives.



Figure 15. The Crisis Project Management Steps

4.5. The Proposed Proactive Crisis Project Management (PCPM) Model

4.5.1. Outline

A proactive crisis analysis should be used when developing an interventionist project in an unstable and crisis-affected environment (e.g. with an average or high risk of conflict) as well as

in projects which entail a high risk of conflict because of the activities they undertake (Kouzmin, 2008).

A crisis project for a crisis-affected environment / community requires crisis analysis which runs as a theme through all stage of the project management – which includes : project identification, planning, project implementation, impact assessment and learning (Fink, 1986).

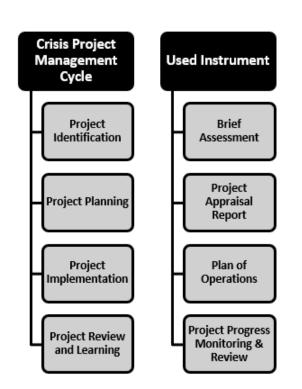


Figure 16. Crisis Analysis and the Project Cycle Management

It should be noted that throughout the entirety of the process – the responsibility for important management decisions passes from one implicated party to another. On another note, some of the implicated parties or team members are not all equally close to the crisis situation on the ground, and have different ways of perceiving it (King, 2007).

In order to ensure the greatest possible coherence in such circumstances, proper documentation of all preceding decision-making processes and detailed debriefings are essential.

4.5.2. The Proactive Crisis Project Management Model

The main aim of a proactive crisis management is to avoid the crisis as is or mitigate its consequences – even though, it cannot be assumed that this will actually happen (Mittrof et *al.*,

1988). That said, we are proposing a Proactive Crisis Project Management Model (PCPM) which comprises of:

- A set of methods, approaches, processes, and tools used to prevent and, if necessary, terminate a crisis situation and stabilize organizational functions in case of an intervention in an unstable environment.
- The aim is to avoid a potential crisis, minimize the losses that have resulted from the crisis, and reduce the event's duration.
- The continuous and permanent evaluation of warning signals.
- The proactive crisis project management is a continuous process of prediction, prevention, preparedness, control, recovery, learning and evaluation of the whole process.
- The belief that no crisis management approach will not avert all crises as sometimes they can eliminate the consequences of crisis damage, mitigate the crisis and effectively deal with it.

It should be noted that the PCPM dynamic is built around a two stage process : pre-crisis and post-crisis.

4.5.2.1. The Pre-Crisis Preparation Phase

When it comes to the pre-crisis phase, the Proactive Crisis Project Management Model (PCPM) includes a number of activities such as prediction, prevention and preparation, property determination and control, recovery, and learning (Mitroff, 1993; Khodarahmi, 2009). That said, the PCPM in its pre-crisis phase can be divided into five different steps:

- Step 01 Prediction: Crises will always send some early warning signals before they occur. Such signals are of great importance as they can give useful and vital information about crisis (Mitroff & Pearson, 1993). Identifying crises in a timely manner and with relative accuracy can prevent their occurrences as well as their subsequent potential damages. Hence, should project executive not follow and evaluate crises carefully, it will be inevitable to struggle and deal with them. It should be noted that the types of crisis must be incorporated in the model in order to serve as an early warning signal.
- Step 02 Prevention & Preparation: Project team following early warning signals either blindly or systematically is not an adequate a long-term solution against a crisis (King, 2007). The top management should make some preparations to ensure the proper deployment of contingency activities according to the significance of these signals. In this stage, project executives should try to minimize the risks and can compensate risky decisions with expected

results (Khodarahmi, 2009). If a crisis is inevitable, the preparing activities will help to control the crisis. These activities that should be performed by the project team during the preparation phase are (Register, 1989; King, 2007):

- Adopting a positive approach to crisis management.
- Obtaining trust by achieving the responsibilities in activities.
- Being ready and on alert for opportunities of crises.
- Forming / recruiting a competitive crisis project management team.
- Identifying potential crises types and categories.
- Improving policies to prevent potential crises.
- Developing strategies and tactics to face / counter potential crises.
- o Determining risk assessments and crises countering as well as control procedures.
- Forming and testing crisis plans and scenarios.
- **Step 03 Control:** When it comes to warning, prevention, and protection mechanisms they should work effectively. On another note, the controlling procedures should also be fulfilled to overcome crises (Khodarahmi, 2009).
- Step 04 Recovery: In this stage, short as well as middle-term recovery actions are executed. In order to do this, resources, processes, and project personnel should be directed in compliance with pre-determined strategies (Kouzmin, 2008). Hence, the purpose of this stage is to solve the crisis and obtain possible segmented results.
- Step 05 Learning & Evaluation: A number of activities should be engineered to be executed after crises in order to remove their negative effects and follow a new work direction (Loosemore, 1997; King, 2007):
 - Organizing training programs for all implicated parties.
 - Rehabilitating the working environment.
 - Set reports and crisis executive summaries for a long-term productivity and efficiency.
 - Turning the crisis management team into the solution development team.

Figure 17. Pre-Crisis PCPM



4.5.2.2. The Post-Crisis Preparation Phase

After a crisis, the implicated organization should record the lessons learned. To this aim, both data obtained in the crisis process and mistakes committed should be noted. In this post-crisis phase, relationships with low-performance implicated parties, suppliers, beneficiaries, etc. should also be reviewed (Kouzmin, 2008).

The main aim of a post-crisis phase is to avoid the repetition of the same event / problem or to avoid further potential crises:

- A thorough analysis of vulnerabilities of the organization is conducted.
- Based on the gained experience, early warning signals are reviewed and potential new ones are identified and evaluated for further potential crisis situation.
- Reevaluate training programs.
- Review monitoring and control procedures.
- KRIs are reviewed and new measures for crisis aversion are set.
- Crisis communication between implicated parties are reviewed.
- Strategy, strategic response, etc. are reevaluated and revitalized.

5. Conclusion

Today, when considering effective crisis management, we see that is a much more complex undertaking than simply putting a contingency plan. Organizations working in unstable environment and crisis-affected communities must be better prepared for possible crisisoutcomes and ensure they have: continuous risk and issues assessment, sound testing, contingency measures, appropriate crisis mitigation process, training and practice, strategic responses, etc.

This paper proposed a Proactive Crisis Project Management model that helps the organization work in both the pre and post-crisis phases. The model's dynamic includes constant analysis of vulnerabilities with the identification of warning signals and implementation of crisis management mechanism.

To conclude, given the analyzed literature, the Proactive Crisis Project Management model should be able to detect the potential crisis and ensure the preparedness of the organization to future threats. For this reason, it is necessary to conduct further empirical research and to enrich the conceptual model with crisis management for organizations working in unstable environments.

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