# TERRORISM AS A STRATEGIC CHALLENGE FOR BUSINESS:
# CRISIS MANAGEMENT IN THE GERMAN RAIL TRAVEL INDUSTRY

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## RESUMEN

El presente documento estudia el reto estratégico que la amenaza terrorista supone para las empresas, analizando la manera en la que este riesgo puede ser imbricado en la gestión estratégica general de las compañías. Primeramente estudiamos esta cuestión desde un punto de vista teórico, analizando alternativamente el riesgo que el terrorismo supone para la actividad empresarial y el diseño de supuestos de gestión de crisis derivados de esta amenaza. En segundo lugar, completamos el anterior análisis teórico, estudiando en profundidad las medidas adoptadas por el sector del transporte ferroviario alemán a este respecto, partiendo de un amplio conjunto de entrevistas de expertos realizadas con los responsables de la gestión estratégica de estas compañías. Los resultados de este análisis empírico vienen a confirmar plenamente nuestros planteamientos teóricos.

## PALABRAS CLAVE

Terrorismo, gestión de crisis, industria ferroviaria, Alemania

## ABSTRACT

The present paper studies the strategic challenge that the terrorist threat represents to business, analyzing the procedure by which this risk could be efficiently embedded into a firm´s general strategic management. This is done firstly from a theoretical point of view, analyzing how firms should deal with the risk of a terrorist attack. This is achieved through the integration of crisis management into a company´s strategic management. We complement this with an empirical analysis consisting of expertinterviews to the leading firms of the German railway industry. These results underpin our theoretical framework.

## KEYWORDS

Terrorism, crisis management, railway industry, Germany

# 1 Introduction

## 1.1 Terrorism as a business threat

"Terrorism will continue to be an issue for German companies at least for the next 100 years."[1] This recent statement prominently depicts the persistent relevance of the terrorist threat to the business community – German as well as international. Surely, the attacks of September 11, 2001 (hereafter 9/11) have thrust this matter into the global spotlight. The evolving events post 9/11 such as the wars in Iraq and Afghanistan have kept the modern Islamist terror issue on the agenda for political actors, the media and the public as well. Further fatal attacks followed in subsequent years to 9/11, for instance, in Djerba, Bali, Madrid, London and Mumbai, to name some of the most familiar ones. Failed terror plots also raised concern in society about matters such as security questions and preparedness in case of attacks. Failed plots in more recent years include a car bomb that was found in 2010 in Times Square, New York, the foiled attempt to detonate underwear explosives on a flight to Detroit in 2009, or the recent attempt to explode a car bomb outside the FED building in Mahattan. The years of 2006 and 2007 mark the failed 'Kofferbomber' attack in Germany as well as the arrests of the so-called 'Sauerland-Gruppe' terror cell.
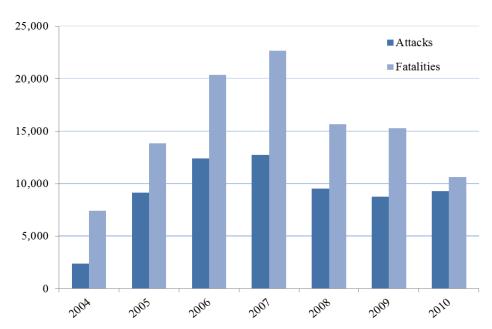


**Figure 1: Worldwide Terrorist Incidents. Source: Own Illustration.[2]**

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[1] Quote from a 'Bundesamt für Verfassungsschutz' member at an IHK meeting.
[2] Based on data from National Counterterrorism Center - Worldwide Incidents Tracking System (https://wits.nctc.gov). Non-combatants only.

The threat and scope of terrorism in recent years continue to be of concern, as the figure below demonstrates. Even though the bloodiest peak seems to lie in the past, the last year has seen a slight increase at a still high level viewed in absolute terms.

One might be tempted to see the focus of terrorist activity having moved to more insecure countries like Iraq, Afghanistan and Pakistan. However, staying alert in Western economies is more than advisable, since it is ultimately the West and its societies that Islamist terrorism – perceived to be the globally most prevalent form of terror these days – attempts to hurt. One main element of the strategies of groups like Al-Quaeda is to hit the economy as a central backbone to the wealth and prosperity that these groups loathe. This fact becomes even clearer when taking a look at what kinds of targets have been affected by attacks in the last couple of years. Most of the time, businesses were amongst the most affected, highlighting the importance of the terrorist issue to companies once again (cf. Baumert 2010, 173).



**Figure 2: Type of facility struck by terrorist attack. Source: Own illustration.[3]**

These explanations are not intended to negate responsibility within the political domain for fighting terrorism, but it is in the interest of every company to be diligent in keeping its operations running to the best possible extent once it is affected by a terrorist attack.

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[3] Based on data from National Counterterrorism Center - Worldwide Incidents Tracking System (https://wits.nctc.gov). Excluding attacks targeted at cars. Non-combatants only.

This undertaking naturally falls into the realm of crisis management. It has to be distinguished from risk management, a corporate function to monitor and deal with financial and operative risks inherent to an organization's business (cf. Aschauer 2008, 103; Töpfer 2002). A crisis induced by a terror attack does, in fact, constitute a risk to the business, however, it is "an unusual situation outside the normal operating framework of the affected organization" (cf. Reilly 2008, 331). Crisis management has gained more public attention and has seen a surge of research in academic journals particularly following 9/11 (cf. Fowler et al. 2007, 88ff.). What has been noted, though, is that crisis management is still not very well integrated into strategic management (cf. Pearson/Clair 1998, 59; Ritchie 2009). This circumstance prevails despite the fact that strategic management of organizations encompasses managing the core business just as well as exceptional situations like crises (cf. Preble 1997). It is due to this line of thought that the present work wants, amongst others, to demonstrate an integration of crisis management into strategic thinking through the specific example of the terrorist threat. A broader presentation of the goals of this work follows.

## 1.2 Problem definition and scope of research

The current threat of terrorism for companies is established as one motivational factor to shed light onto this issue from a business perspective. Since this issue is most probably going to preoccupy managers for many years to come, taking a long-term, and therefore, strategic perspective, makes perfect sense. However, there is still no definite approach to dealing with terror crises from a strategic management angle (cf. Shrivastava 1993, 33). Hence, it is especially important to explain how crisis management is incorporated into a broader strategic context. The current work addresses this research gap.

Furthermore, the practical implications of crisis management in an era of terrorism need to be reviewed. The literature proposes that crisis management research may consider investigating an array of different specific industries with public rail transport being one of them (cf. Fowler et al. 2007, 100). One reason for this is that terrorists have traditionally targeted public transportation systems as seen through the attacks in Madrid, London or Mumbai as well as the plots against German railway or Amtrak in the US. The railway is considered a soft and easily accessible target where the impact of disruption can be severe (cf. Barnes/Hiles 2011, 574). Curiously, there has been very little research on this specific industry in conjunction with terrorism and crisis management. The work known to the author includes a study by

Blanco et al. (2007) assessing direct and indirect economic costs incurred by the 2004 Madrid rail attack, as well as several reports on rail security issues (cf. Jenkins/Butterworth 2010; Jenkins et al. 2010; Taylor et al. 2005; Riley 2004). However, research becomes increasingly scarce when going from an economic to a managerial angle. While some companies and industries have already found attention, such as tourism providers (cf. Evans/Elphick 2005; Sullivan-Taylor/Wilson 2009), aviation (cf. Henderson 2008) or hotels (cf. Aschauer 2008; Stafford et al. 2002), there is still no work known to the author so far which takes to the topic of terror crisis management in the German rail industry.

It should be noted, though, that this work is not intended to be considered a panacea for coping with crises, since a universal formula cannot exist. Crises are single, unique events with unfolding characteristics that cannot be entirely foreseen (cf. Baumert 2010, 174). The present work rather wants to present a systematic approach to the issue of crisis management based on a differentiated view of its components and theoretical foundations. These elaborations shall function as decision guidance to the reader for a methodically sound line of action in event of a crisis. The work also represents a depiction of the latest state in current crisis management research and practice.

## 1.3 Research question and objectives

Therefore, the main research question of this work is expressed as follows: How is crisis management as an answer to terrorist threats structured in German rail travel companies? This question entails some distinctive underlying thoughts as preconditions. First, it supposes that there already is a suggested way of dealing with crisis management. It is indeed true that the literature has already approached crisis management, its functions and processes with regard to terror-like catastrophes, in general as well as in different industries, as already mentioned above. However, these findings may or may not be transferrable to our specific case. It is due to this line of thought that a suggested crisis management process model is intended to be compared and contrasted with the actions actually undertaken at the companies forming this work's data basis. Furthermore, another presupposed condition is that the threat of terrorism is noted as a topic worth pondering about in the relevant enterprises. In conducting this research, it shall also be examined which level of relevance is attributed to terror threats and crisis preparedness. Lastly, since the work takes a strategic angle, it will investigate when and if this approach is applied in practice. There may be several reasons for viewing terrorism related

crises as strategic threats. For instance, customer frequentation may be psychologically impacted and contract out of fear of travelling (cf. Sönmez/Graefe 1998). Suboptimal crisis management efforts may have a longer-term negative image effect. Such examples ultimately touch on revenues and affect competitiveness. Outlined below is a description of how the work intends to proceed in confronting these issues.

**1.4 Outline**

After this brief introduction, the following chapter will go on to illuminate core concepts of this work. It shall start out by making the notion of terrorism clearer. It is indeed a topic quite frequently used in the media and therefore, probably common to the reader. However, inferring knowledge about terrorism from personal exposure to media coverage alone lacks a sound background for approaching this subject. As a topic theoretically rather distant to management studies, it should be introduced to have necessary background knowledge for recognizing the nature of its connection to business management. Subsequently, the naturally broad concept of crisis will be portrayed and narrowed down to this work's specific focus. This will provide the frame for approaching crucial aspects of crisis management as well as its process. With this foundation, the following part will present the research method and hypotheses. The penultimate part of this work will present empirical data obtained from undertaking the practical research. In the end, a conclusive overview of the main points is offered along with a critical assessment of the value of this work. Suggestions for further study and an outlook for the research area will be set out to close the final subsumption.

## 2 Core concepts
### 2.1 Terrorism
#### *2.1.1 Working definitions*

As this work focuses on the strategic implications of terrorist induced crises, it is first and foremost important to define the phenomenon of terrorism and narrow down its relevant aspects for this specific research.

With regard to a terminological introduction, several definitions of terrorism have already been presented in the literature. A potential starting point is to consider legal definitions. For instance, the Council of the European Union (cf. 2002, 2) regards terrorism as threats and

intentional acts against persons or property, which aim at intimidating a population and damaging political, economic or social foundations of a society.

Another possible definition can be found in Resolution 1566 by the United Nations Security Council (2004, 2), which refers to terrorist acts as

> "criminal acts, including against civilians, committed with the intent to cause death or serious bodily injury, or taking of hostages, with the purpose to provoke a state of terror in the general public or in a group of persons or particular persons, intimidate a population or compel a government or an international organization to do or to abstain from doing any act, […] by considerations of a political, philosophical, ideological, racial, ethnic, religious or other similar nature".

Furthermore, national law has also given birth to numerous other examples of terrorism definitions (cf. Golder/Williams 2004; Smith 2003). However, from a legal viewpoint, casting the term of terrorism in a mold is not an easy endeavor. This approach is impaired by the danger of taking positions and ideologically misusing the term (cf. Saul 2008, 11). Thus, attempts of defining terrorism run the risk of being inherently subjective (cf. Hoffmann 2006, 23). That fact is also expressed in the phrase 'What is a terrorist for one, can be termed a 'freedom fighter' by others' (cf. Golder/Williams 2004, 272; Shugart II 2006, 10).

Less affected by such restrictions, scholars of terrorism have also proposed a number of possible definitions, amongst them Enders/Sandler (2006), Hoffmann (2006) and Shugart II (2006). Enders/Sandler (2006, 3) describe terrorism as the "premeditated use or threat to use violence by individuals or subnational groups in order to obtain a political or social objective through the intimidation of a large audience beyond that of immediate victims."

By revisiting the many propositions for defining terrorism, it becomes evident that there is no clear consensus.[4] Nevertheless, what most efforts to illustrate the term have in common is the presence of violence, a public audience, a certain cause and the spreading of fear (cf. Jackson et al. 2007, 2; Shugart II 2006, 10; Valiño et al. 2010, 4). As it is necessary to have at least a working notion for this concept central to the present work and to delineate it from other

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[4] For further elaborations on the problems of defining terrorism, refer to Cooper (2001), Fletcher (2006), Schmid/Jongman (2005) and Walter (2004).

forms of violence such as war and crime, it shall be proposed that the aforementioned definition suggested by Enders/Sandler (2006) be used for the upcoming analyses.

Apart from plain terminology, terrorism itself can be further broken apart and classified in many ways, depending on criteria such as the type of attack (assassination, kidnapping, etc.) or the weapons used (bombs, suicide, biological, etc.) (cf. Schmid/Jongman 2005, 39ff.; Valiño et al. 2010, 5). Another categorization hinges on the occurrence of terrorism. Attacks involving actors and sites of only one country can be deemed national terrorism, whereas transnational terrorism links incidents in one country to actors of another (e.g. foreign trained terrorist, global implications of 9/11) (cf. Enders/Sandler 2006, 7). That distinction plays a role insofar, since these days the terrorist threats perceived as the most predominant ones count towards the transnational category, in the form of Islamist motivated terror attacks. The reason for this can only be understood in a broader context of the terrorism's development, which will subsequently be discussed.

### 2.1.2 Development

Although terrorism has received a jump in worldwide attention from the attacks of September 11 onwards, it is far from being a new phenomenon. Its origins date back in history at least as far as the resistance of the Jewish Zealots and Sicarii against the Roman Empire (cf. Laqueur 2000, 10f.; Rapoport 1984).[5] However, the high number of victims of the 9/11 attacks, its media visibility and global impact – psychological, political and economic – have marked a turning point in modern day terrorism (cf. Rapoport 2004, 419).

As an expression, terrorism initially emerged as a result of the French Revolution (régime de la terreur) and from then on, it is possible to identify four waves of terrorist activity (cf. Valiño et al. 2010, 6). The first wave materialized around 1880 characterized by anarchists such as the Russian group Narodnaya Volya ("People's Will"), who are considered to be the first group that systematically carried out a clearly defined strategy to radically transform society (cf. Shugart II 2006, 14). It was followed by separatist liberation movements in various parts of the world (cf. Hoffmann 2006, 11ff.) and left wing terrorism initiating in the 1960s, infamous for groups such as the German Red Army Faction (RAF) (cf. Shugart II

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[5] For a more detailed introduction into the history of terrorism, refer to Law (2009) and White (2002).

2006, 20ff.)[6]. The fourth and still concurrent wave encompasses religion as its distinctive characteristic (cf. Rapoport 2004, 424). It is deemed to have found its beginning during the Iranian Revolution in 1979, fuelled by "pan-Islamic dreams of uniting fundamentalist Muslim states, freed from western cultural contamination, under Caliphate hegemony and *Shar'ia* law" (Shugart II 2006, 8).[7] With those radical foundations laid, subsequent incidents such as the Soviet war in Afghanistan and the demise of the Soviet Union contributed, amongst others, to the fourth wave still haunting the world in the 21st century with the declared enmity of radical Islamist terror groups against the modern Western civilization.

Further attempts were made to understand the phenomenon of terrorism and its roots from various other angles: psychological, religious, social, political or economic.[8] However, it is not in the scope of this paper to analyze causes of terrorism more in-depth. Such research is in fact a focal foundation for effectively countering terrorism, yet more so in the arena of public policy. It lies mainly with efforts of the international community, governments and federal authorities to combat effects and find solutions for the roots of terrorism. Still, that does not imply for the remaining parties to rely exclusively on political mechanisms to secure them from terrorist threats. One of those parties affected is the economy as a whole and the businesses taking part in it. The necessity for those actors to actively consider their exposure to terrorist activity is also visible in the terrorists' indifference to collateral damage. Islamist terrorists do not have to distinguish between the types of targets, let them be 'conventional', military ones or civilians, as expressed by Osama Bin Laden's 1998 comment "As far as we are concerned, they are all targets" (quoted in National Commission on Terrorist Attacks upon the United States 2004, 47). Additionally, it can be pointed out that Al-Qaeda considers business as a top priority target, as Bin Laden considered "bleeding America to the point of bankruptcy" (quoted in Costigan 2007, 2). The relevance for the business community to consider their exposure to possible terrorist attacks will therefore, be explained more in-depth in the next section.

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[6] Aust (2005) describes the fact, that many RAF attacks were targeted at business professionals.

[7] Fromkin (2009) shows, though, that the breeding of conflict arising from the Middle East traces even further back to the artificial border-drawing after World War I in response to the downfall of the Ottoman Empire.

[8] For work on these aspects refer, amongst others, to Crenshaw (1998), Krueger (2007), Li (2005) and Victoroff (2005).

## 2.1.3 Economic relevance

Attacks of Islamist terror groups like Al Qaeda and its affiliates aim at causing economic damage in the countries affected (cf. Aschauer 2008, 20). The economy is therefore a central target in the strategy of Islamist terrorist activity (cf. Aschauer 2008, 20ff.). The type of damage that can be created and its subsequent cost can roughly be divided into both direct and indirect costs. Direct costs arise as an immediate result of an attack and can include, amongst others, elements like the loss of property and/or human live, the costs of rescue and recovery and the damage to businesses resulting from temporary closures or loss of sales (cf. Valiño et al. 2010, 15ff.). Indirect costs by contrast accrue in consequence of the reactions by the public and private sector following terrorist incidents (cf. Valiño et al. 2010, 17ff.). Governments can increase their expenditure on security measures, restrict freedoms and issue new safety regulations, while consumer behavior may alter and contract out of greater fear and uncertainty about the future (cf. Valiño et al. 2010, 17ff.).[9] The business environment therefore becomes more unpredictable as new regulations add further frictions to global trade flows, business opportunities might wane and interruptions along value chain activities occur in the aftermath of terrorist attacks (cf. Czinkota/Knight 2005, 42ff.).

In its focus on economic implications of terrorist attacks, the literature has been productive in the last years. Tavares (2004), for instance, focuses on the economy in general and develops a model to estimate the effects of a terrorist attack on GDP. According to his results, the impact could lie in the range of approximately 0.2 percent. Much larger is the effect of about an estimated 10% lower growth due to ETA terrorist activity in Spain's Basque region (cf. Abadie/Gardeazabal 2003). Other indicators such as the FDI could vary by up to 5 percent of total GDP in response to terrorist activity (cf. Abadie/Gardeazabal 2007). In a less macroeconomic ambit, Richardson et al. (2005; 2007; 2009) have directed attention on impacts and consequences of terror attacks with regard to business sectors such as infrastructure, here more specifically ports, highways or the electricity system in the US. Work by Ito/Lee (2005) and Blunk et al. (2006) shows that travel in the US airline industry has been negatively affected by the 9/11 attacks, amounting to a fall in demand of roughly 30%. Furthermore, given that stock markets' immediate reactions reflect their assessment of economic costs of attacks, Baumert (2010) studied the effects of 9/11, as well as the attacks of Madrid and London on stock market reactions. The adverse effects of terrorism on tourism in

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[9] For a closer look on the perception of risk and uncertainty in general see Breakwell (2007), with a focus on terrorism see Mueller (2004).

general and more specifically on the hotel industry as one component of tourism have also received examination (cf. Aschauer 2008; Stafford et al. 2006). All these considerations illustrate the importance of terrorist issues and their impacts on manifold industries.

Henceforth, businesses are in the need to consider the global repercussions of terrorism and prepare against the critical asymmetry they are facing, as prominently expressed by the IRA after a failed attack in 1984: "We only have to be lucky once. You will have to be lucky always." (quoted in Cowell 2010). However, a 100 per cent prevention surely is a fruitless goal (Richardson et al. 2005, 3) and cannot be in the scope of anyone confronted with terrorism. Still, as a first step, it is necessary to acknowledge that terrorism is in fact a business problem (cf. Czinkota/Knight 2005, 45). Following from that point on, anticipation and planning of terrorism effects can make companies more resilient and reduce their operation's vulnerability against possible attacks (cf. Czinkota/Knight 2005; Sheffi 2007). Even more, firms can build superior management strategies by dealing with the 'before, during and after' of terrorism in a way that differentiates them from their competitors and thus has the potential to provide a competitive edge (cf. Czinkota/Knight 2005, 44). Already having recognized this significance, many corporations have elaborated crisis management plans to deal with potential disasters, let them be of a terrorist nature, caused by manmade failure or natural disasters.

How one can approach the phenomenon of crisis more methodologically and how exactly viable responses to crisis induced by attacks could look like is explored in the following chapters.

## 2.2 Crisis

### 2.2.1 Terminology and classification

When dealing with the literature concerning crises, one encounters very quickly a vast abundance of varying terms attempting to describe the state of a crisis: the term crisis itself, a disaster, an occurring contingency, risk, errors, incidents, accidents, disruptions, catastrophes, and so forth. Often it is not so clear how and where it is feasible, if at all, to draw a line between the different items.[10] Complicating matters further, the term 'crisis' is applied in a growing number of contexts and has seen an inflationary use over time (cf. Glaeßer 2006, 11). Merely thinking of one's own more recent contact with the term will make various occasions

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[10] Power (2007) hints that this debate may lack substance for these terms refer vaguely to the same concept.

spring up: a certain company's crisis, financial crisis, economic crisis or monetary crisis are expressions all too well familiar from the international media coverage of the last few years. How is it possible to bring in a more systematic understanding of the concept of crisis into this seeming randomness?

When looking at the etymological origins of the word 'crisis', it apparently derives from the Old Greek 'krisis', describing a situation of decision or differentiation (cf. Glaeßer 2006, 11). Meanwhile, the term is used in a wide variety of domains, as the chart stated below illustrates.

| Scope of crises | Characterization by areas of research |
|---|---|
| Individual sphere | Medicine:<br>• Crisis as a turning point during an infection<br>Psychology:<br>• Personal situation perceived as insoluble by an individual's capabilities |
| Collective sphere | Politics:<br>• Endangered national interests due to conflict or war<br>Economics:<br>• Exogenous shocks; recessions<br>Management:<br>• Considerable negative impact on a company's development |

**Table 1: Fields of crisis research. Source: Based on Glaeßer (2006, 12).**

Naturally, the area of management is the relevant one for this specific work and in that sense, crisis will subsequently be regarded as an

exceptional situation with considerable negative influence on the management and continuity of a company (cf. Aschauer 2010, 101).

Thereby, certain components of a crisis situation become clear. Amongst the main elements one can discern the attribute of hazard, as the continuity of operations might be endangered, as well as an often surprising occurrence of such an unusual – exceptional – event, which is not part of the daily routine (cf. Zelewski 1995, 898). Likewise elevating the seriousness of the event is a generally short reaction time and an associated time pressure (cf. Glaeßer 2006, 13f.). A further distinctive element can be identified in the process character of a crisis, meaning that it follows a path of evolution, which in turn, has the potential to be influenced to the benefit of the affected actors – that is the basis why it makes sense to consider crisis management at all (cf. Aschauer 2010, 101; Glaeßer 2006, 13f.). A more manageable and positive connotation of crisis can also be found in Max Frisch's comment that a crisis can even be a productive situation – you just have to stop regarding it as a catastrophe (quoted in

Landert 2004, 53f.). Looking further east, Chinese mentality concerning crisis is expressed in their word for 'crisis' being made up of the two characters for 'danger' and 'opportunity' alike (cf. Fink 1986, 1). However, that mindset should be used cautiously in a crisis event such as a terrorist attack with possible human fatalities. Under those circumstances, making use of a chance could rather mean to minimize the negative effects up to the largest extent feasible, instead of viewing it as chance like successfully managing a corporate turnaround after a crisis, which quite apparently is a different kind of crisis situation for a company.

After having examined the term of crisis, this leads to a more systematic view of how one can classify the types of business crisis to be encountered, their differing origins, etc. The attempt of categorizing crises bears at least as much diverse options as already included in the definition. In relation to the factor of time, for instance, the literature makes a distinction between potential, latent and acute crisis (cf. Glaeßer 2006, 15; Zelewski 1995). The idea behind this is straightforward and can be derived from the wording. A potential crisis is more or less the basic state an entity finds itself in (cf. Linde 1994, 9). If there is no crisis, there can always be one waiting to emerge. A latent crisis already lingers, but an enterprise might not yet be fully aware of all its symptoms and be able to construct the bigger picture, whereas an acute crisis is already obvious via its grave effects (cf. Dreyer et al. 2001, 5). It is also possible to make a more refined distinction between the phases, leading to the view of six evolving steps (cf. Ritchie 2004). In a pre-event stage, crises are still potential, while in the prodromal stage it is already visible that a crisis is about to hit. In the emergency stage the crisis hits and needs immediate damage limitation, while in an already more intermediate crisis phase, emphasis is applied to restoring the services that were affected (cf. Ritchie 2004, 674). During the fifth and sixth stage, namely recovery and – hopefully – resolution, longer-term restoration and reinvestment play a role until a state of normalcy is reinstated (cf. Ritchie 2004, 674).

Attending more specifically to the terrorist issue, this leads to another possible classification of temporal depiction as provided below, which explores the development of crises over time and the resultant public sense of emergency that is incurred by them.
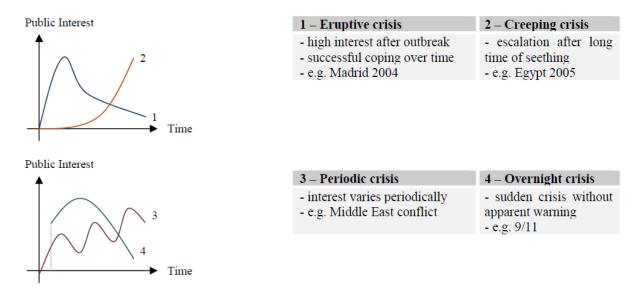
| 1 – Eruptive crisis | 2 – Creeping crisis |
|---|---|
| - high interest after outbreak<br>- successful coping over time<br>- e.g. Madrid 2004 | - escalation after long time of seething<br>- e.g. Egypt 2005 |

| 3 – Periodic crisis | 4 – Overnight crisis |
|---|---|
| - interest varies periodically<br>- e.g. Middle East conflict | - sudden crisis without apparent warning<br>- e.g. 9/11 |

**Figure 3: Development of crises (with examples of terrorist events). Source: Based on Aschauer 2006, 102f.; Dreyer et al. 2001, 5ff.**

Besides the aspect of time, other factors can be used for classifying crises, such as their origins, which can roughly be of a natural, human or technical cause (cf. Zelweski 1995, 899). Theses causes can be split up and combined even further, since technical failure might be due to production errors or an electricity blackout or a combination of both, just as human mistakes can encompass behavior ranging from machine mishandling over a faulty procurement decision to an inappropriate overall strategic focus (cf. Zelewski 1995, 899). By that, it becomes clear that a never-ending causal chain is basically possible, but instead of becoming subject to an infinite regress, one needs to design and to cut off the process in a way that is suitable for the specific analyzing needs of a company's situation. Henceforth, fitting to the present analysis' focus, a classification developed by Sheffi (2009) shall be proposed, which distinguishes three disruption categories, namely: natural disasters, accidents and intentional attacks – such as terrorist attacks. However, classifying a crisis is merely the first step. In the following, a crisis asks you to respond to and deal with it. How a company can manage, such a situation shall be examined in the next section.

### 2.2.2 Crisis management

2.2.2.1 Preliminary thoughts

Once the phenomenon of crisis has been introduced, the next logical step would be to consider how to handle a crisis situation. By embarking on such an endeavor, one has arrived in the realm of crisis management. Management in this sense refers to the task to secure the long-term survival of an enterprise, including all aspects necessary for sustaining its decision-

making ability (cf. Müller 1986, 49ff.). This becomes particularly visible in a crisis, since such a situation has fundamental significance for the continued operations of an enterprise (cf. Müller 1986, 49ff.). The consideration of crisis management, therefore, seems to be fittingly located at a strategic level. Pauchant et al. (1991, 214) also see crisis management as intertwined with an organization's strategy, since crisis management's actions encompass the organization as a whole as well as its relations to its environment. Hence, crisis management must be located on a strategic level. Combining it with a holistic strategic management process model will therefore be undertaken in short. Before doing so, the discussion revolving around crisis management must first be filled with substance.

Crisis management surely is not a new invention in business. Still, different authors ascribe differing starting points to it. Müller (1986, 19), for instance, goes back to the 1920s to discover early forms of crisis management due to insolvencies and corporate restructuring. Others, however, locate the origins to the conflict between the US and the former USSR. During the Kennedy era, the Cuba crisis in 1961 supposedly gave rise to the notion of both concepts of crisis and management in conjunction, and from then on, crisis management made its way from the political arena into the managerial territory (cf. Schulten 1995, 3). The roots of "modern" crisis management are then attributed to the 1982 'Tylenol poisoning crisis' of pharmaceutical and health care giant Johnson & Johnson (cf. Mitroff 2001, 13ff.).

The narrative of the 'Tylenol poisoning crisis' is that an unknown person filled Tylenol capsules with cyanide before placing them back on the shelves of several stores in the Chicago area. As a result, seven people died after having taken the tampered medication. This act of sabotage caused widespread concern in the public whether Johnson & Johnson's product was still safe and trustworthy. Even though this incident already dates back about 30 years, it is still very much up-to-date. The anthrax letters in the US in the months after 9/11 bear similarity to such a contamination of items of everyday day life, and have shown that contemporary terrorism does not just have to be confined to bombings. Apart from claiming lives, the fine anthrax spores also contaminated the mail-sorting equipment in several United States Postal Service (USPS) facilities. They had to be closed down for clean-up for two years and it was only due to USPS's excess capacity that mail processing could be re-routed and its operations were not disrupted more severely (cf. Sheffi 2007, 171f.).

Crises like the Tylenol crisis were, however, not the only company crisis in recent decades that has shaken the business community and the broader public. A brief illustrative collection of examples of (in)famous company crises during the last decades will be given below.

| Year | Name | Description |
|---|---|---|
| 1979 | Three Mile Island | Nuclear meltdown in a reactor near Harrisburg, US |
| 1982 | Tylenol poisoning | Cyanide sabotage of Johnson & Johnson's Tylenol product |
| 1984 | Bhopal disaster | A methyl gas leak in a Union Carbide plant in India kills and harms thousands of people |
| 1986 | Challenger explosion | Space shuttle breaks apart shortly after take-off, grounding the following NASA missions for more than two years |
| 1989 | Exxon Valdez | Huge oil spill near Alaska |
| 2001 | Enron scandal | Accounting fraud with ultimate insolvency |
| 2010 | Toyota | Break problems causing deaths and vehicle recalls |
| 2010 | BP | Explosion of oil rig Deep Water Horizon with following oil spill in the Gulf of Mexico |
| 2011 | Fukushima | Nuclear meltdown after earthquake |

**Table 2: Company Crises. Source: Own illustration.**

Few of the aforementioned crises could be regarded as successfully managed, or at least in part successfully managed. Almost all of them have already received scrutiny in various case studies that shed light on these crises' components (cf. Harrald et al. 1990; Meshkati 1991; Ishikawa/Tsujimoto 2009). Even though these components are naturally unique to any single crisis event, what could be determined in a large number of cases was a serious lack of ability to quickly recognize and deal with the crisis (cf. Mitroff 2001).

In fact, an early identification and acknowledgement is vital to all the following steps of managing a crisis. In doing so, one already embarks on the first step in crisis management. This processual view of crisis management is one way how to approach it; the other would take a more structured perspective, referring to organizational design with regard to the departments and people involved with their respective roles and responsibilities, such as for instance a crisis task force team (cf. Zelewski 1995, 906ff.). Those two aspects are naturally intertwined. However, this work will place an emphasis on the processual approach of crisis management and present it in the following section.

## 2.2.2.2 Crisis management process

To make the complex process of coping with a crisis more comprehensible, it can be broken into several steps that should rather indicate a logical order of the tasks that require management, instead of being viewed as a strict chronological sequence (cf. Müller 1986, 317).

Concerning the necessary steps in the crisis management process, there seems to be a consensus in the literature as to what elements are sensible to include, although the way in which the several steps are broken down or synthesized may vary. An early research by Pearson/Mitroff (1993) builds on information from crisis managers of Fortune 1000 companies and proposes a five-stage procedure. Comparable results of mapping the management phases can be found in the suggestions of Augustine (1995), Töpfer (1999, 59) and Fink/Siebe (2006, 320).
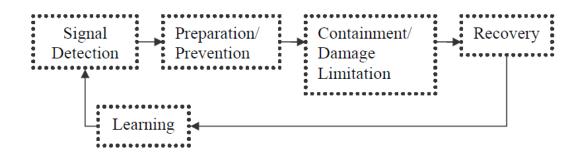


**Figure 4: Stages of crisis management. Source: Based on Pearson/Mitroff (1993, 53).**

The denomination of the stages might be self-explanatory by mere wording; however, we will also take a closer look at some important elements. The starting point of every crisis handling is an early identification of what might constitute a reason for crisis. A way to approach such an early identification is through the consideration of so-called 'weak signals'. The idea of weak signals had been introduced by Ansoff (1975) and is based on the assumption that incidents do have certain warning signals, albeit not very clear at times, but there is an opportunity to scan and detect them before they strike with their full magnitude. Companies do take that opportunity by various well-known means such as Delphi techniques, scenario planning or environmental monitoring (cf. Krystek/Müller-Stewens 1999; Welge/Al-Laham 2008, 432ff.). An early preoccupation with such issues is crucial, since the longer that time is permitted to pass, the more reaction options are destroyed and the number of feasible countermeasures left is more and more reduced (cf. Krystek/Müller-Stewens 1999, 175).

For combating such constraints and for preparing possible countermeasures at an early stage, it is helpful to prioritize the identified threats that are being faced. This can be accomplished by mapping incidents' severity level against the probability that they will occur. An additional benefit of doing so is that it can foster an understanding for adequate resource use in an emergency. A visualization of such an exemplary mapping is shown below. Of course, the items and their respective location on the chart will vary according to each company's unique situation, its industrial environment and own vulnerability or exposure to certain incidents.
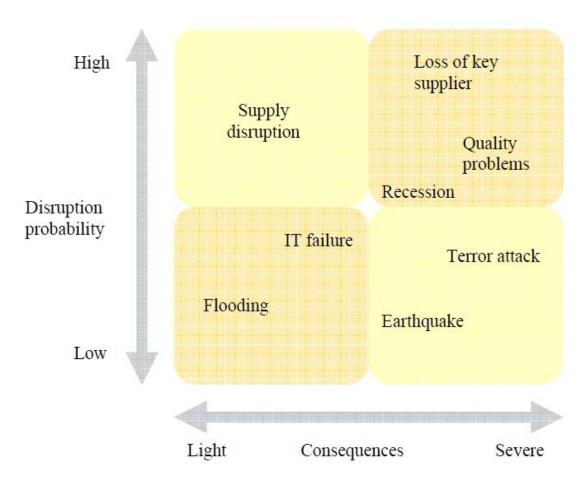


**Figure 5: Example of incident priority chart. Source: Based on Sheffi/Rice Jr. 2005, 44.**

The following prevention and preparation phase indicates the need to create crisis teams and devise plans to support a response in the case of an incident (cf. Pearson/Mitroff 1993, 53). Such thoughts are also present in government publications concerning private sector crisis management, supplying supporting checklists and setting norms (cf. Bundesministerium des Innern (BMI) 2008), just as well as institutional players in the field do, such as the International Organization of Standardization (ISO) issuing recommendations about necessary elements for crisis handling (cf. Johanson/Nilsson 2006, 92).

Furthermore, it is advisable, to conduct regular test runs of the crisis management plans once in place to evaluate their effectiveness and train employees (cf. Pearson/Mitroff 1993, 53). In Germany, for instance, the LÜKEX (Länderübergreifende Krisenmanagementübung (EXercise)) brings together public and private sector actors to facilitate cooperation in the case of emergency. It had already simulated threats to a world soccer championship in 2005 and a pandemic in 2007 (cf. Borchers 2007). The most recent simulation involved multiple terrorist attacks on German critical infrastructure, in this case, being transport and railway (cf. Unger 2010, 439), which has underlining relevance to the topic.

As a crisis hits, the intent of the damage containment stage is to respond successfully in order to limit negative effects (cf. Pearson/Mitroff 1993, 53). The ultimate goal is to keep the critical operations running to the best extent possible while trying to restore the remaining services (cf. BMI 2010, 23). However, the acute phase of a crisis can also be complex and chaotic, so while implementing countermeasures, flexibility is always an issue (cf. Ritchie 2004, 675). Another key component is communication. Crisis communication has to be taken into account from the very beginning of a crisis, whereby it needs to address the interests of the stakeholders like media and customers, but also internal communication (cf. BMI 2010; 29; Ritchie 2004, 676f.). The consistency and quality of response is one aspect of limiting the (media) harm to an organization that could potentially be done in case of crisis (cf. BMI 2010; 29; Ritchie 2004, 676f.).

In the following, recovery then concerns a longer-term perspective of crisis management, after quick and direct reactions to an outbreak have begun. It can encompass use of alternative sites for operations, if needed, and is about bringing the organization back to normal (cf. Pearson/Mitroff 53f.; Töpfer 1999).

Leaping into focus is that the process itself does not have a definite ending point. The fact that crisis management models usually do incorporate learning from the crisis makes crisis management recursive and builds in a feedback loop. When learning from a crisis, the effectiveness of the formerly chosen and executed response strategy is assessed and evaluated with the aim of enhancing the quality of future actions (cf. Ritchie 2004, 674ff.).

Now, that the core concepts of this work along with a more elaborated notion of crisis management and its components have been introduced, it seems advisable to take a look at the link to practice and examine some case studies already available in the literature that have attended to connecting crisis management with the experience of certain industries.

2.2.2.3 Significant case studies

As mentioned in the introduction, a few works have discussed crisis management in connection with terrorist related risks and how companies in practice have approached these. Shedding light on their results shall help in further building a reliable basis for this research. We shall consider papers focusing on travel and transport, as their findings may connect most likely to the rail industry.

One of the papers concerned with terrorist risk attends to the UK aviation sector (cf. Henderson 2008). It applies case study methodology to the case of the alleged 2006 summer terrorist plot, whereby it examines the responses by the parties affected, like airlines and airport operators. Its aim is to structure these actions according to a sequential crisis management model and to find activities relating to the several phases introduced further above. For instance, the information published by the media concerning the terror plot was regarded as the initiating event, followed by acute security measures from federal authorities to tighten baggage regulations (cf. Henderson 2008, 128). These were actions that airports and airlines had to implement, causing delays in operations, as well as cancellation of bookings (cf. Henderson 2008, 130f.). In the aftermath, disruptions abated and debates about future enhancements of travel security measures were being undertaken (cf. Henderson 2008, 132ff.), conforming in a sense to subsequent feedback processes. Even though not all phases were clearly discernible, the paper showed how the model provided a guide for tracking crises and indicated the value of prior strategic planning (cf. Henderson 2008, 134). Another paper with a focus on the UK-based travel industry has a similar approach, comparing the crisis management process model with steps actually undertaken by companies in the time after 9/11 (cf. Evans/Elphick 2005). This industry had experienced significant losses in revenue, job cuts and decreased capacity due to 9/11 (cf. Evans/Elphick 2005, 139). The paper uses case study methodology, as well, and conducts interviews with key managers from one tour operator. In the pre-crisis preparation phase, the respective company did have a crisis management policy with pre-arranged structures of information flow and response plans in

place (cf. Evans/Elphick 2005, 143). After the attacks struck, attention was focused on taking care of employees, securing customers who were travelling within the US as well as working with the media. The long-term action consisted of capacity adjustment (cf. Evans/Elphick 2005, 144ff.). Similar findings are present in the work of Sullivan-Taylor/Wilson (2009), which also attends to UK airports, airlines as well as tour operators and uses the same methodology of interviews. A publication by Taylor et al. (2005) sheds light on practical security measures undertaken by US transit companies and incorporates interviews with experts from Paris, London and Madrid, who had suffered attacks in the past. Their survey of 113 of the largest transit operators in the US reveal a conceptual model that broadly distinguishes planning, immediate response and long-term recovery (cf. Taylor et al. 2005, 21f.). The findings show that transit operators remain concerned about the possibility of attacks targeting their systems (cf. Taylor 2005, 108). The following section applies these results as a starting point from which to transfer them to the German rail market and combine them with theoretical deliberations of managerial science.

So far, the previous chapters have presented the core concepts of this work. With a sound understanding of these, we can now embed them in a broader strategic context. The next chapter will undertake this task of explaining just how the aspects discussed so far connect more precisely to elements of strategic management.

## 2.3 Framework integration

Several aspects of crisis management and strategic management have been introduced so far. The purpose of this chapter is to synthesize them into a more holistic framework as a basis for developing the research agenda. To undertake a comprehensive conception of crisis management and strategy is not far-fetched. Their "potential for synergistic integration" (Preble 1997, 769) has already been acknowledged. One reason for this lies in the potential for competitive advantage by successful crisis management. It can be based on the superior knowledge build in an organization for coping with incidents. If a company can effectively institutionalize knowledge learned about crisis management, it is possible to reduce its vulnerability to crises in the future (cf. Wang/Belardo 2009, 654).

A second basis for integration can be found in the compatibility of both the crisis management and the strategic management model (cf. Preble 1997, 776). The traditional strategic

management model is concerned with the formulation, implementation and evaluation of strategies chosen to accomplish strategic goals and objectives (cf. Welge/Al-Laham 2008, 186ff.). The goal of the formulation activity is to design the strategic course a company wants to move on based on an assessment of its external and internal circumstances (cf. Thompson et al. 2010, 24ff.). Implementing refers to the operative realization of the plans elaborated in the preceding step, whose outcomes then receive examination in an evaluation process intended to feed new information acquired throughout the process back to the formulation phase (cf. Thompson et al. 2010, 41ff.). However, learning from how well plans are able to be executed is not simply a subsequent task, vigilance for new information or deviant results is appropriate throughout all stages of the strategic management process (cf. Thompson et al. 2010, 43).

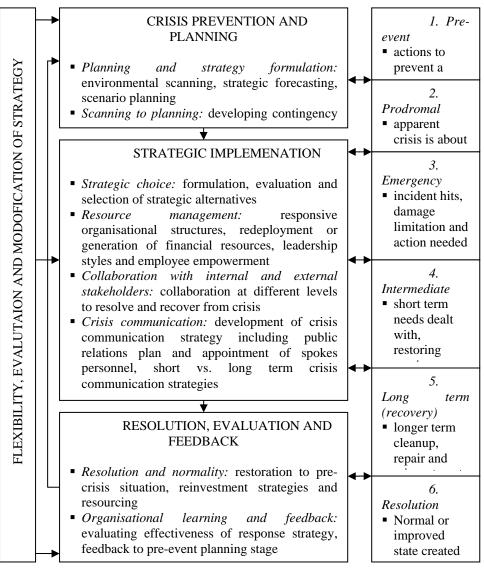| FLEXIBILITY, EVALUTAION AND MODOFICATION OF STRATEGY | CRISIS PREVENTION AND PLANNING<br><br>▪ *Planning and strategy formulation:* environmental scanning, strategic forecasting, scenario planning<br>▪ *Scanning to planning:* developing contingency | *1. Pre-event*<br>▪ actions to prevent a |
| --- | --- | --- |
| | | *2. Prodromal*<br>▪ apparent crisis is about |
| | STRATEGIC IMPLEMENATION<br><br>▪ *Strategic choice:* formulation, evaluation and selection of strategic alternatives<br>▪ *Resource management:* responsive organisational structures, redeployment or generation of financial resources, leadership styles and employee empowerment<br>▪ *Collaboration with internal and external stakeholders:* collaboration at different levels to resolve and recover from crisis<br>▪ *Crisis communication:* development of crisis communication strategy including public relations plan and appointment of spokes personnel, short vs. long term crisis communication strategies | *3. Emergency*<br>▪ incident hits, damage limitation and action needed |
| | | *4. Intermediate*<br>▪ short term needs dealt with, restoring |
| | | *5. Long term (recovery)*<br>▪ longer term cleanup, repair and |
| | RESOLUTION, EVALUATION AND FEEDBACK<br><br>▪ *Resolution and normality:* restoration to pre-crisis situation, reinvestment strategies and resourcing<br>▪ *Organisational learning and feedback:* evaluating effectiveness of response strategy, feedback to pre-event planning stage | *6. Resolution*<br>▪ Normal or improved state created |

Figure 6: Strategic framework of crisis management. Source: Based on Ritchie (2004, 674).

The strategic management model is found to be an accurate representation of planning practice (cf. Al-Laham 1997; Gintner et al. 1985). The crisis management steps also bear similarity to such a procedure. Planning and preparing are part of it, just as implementation of containment measures are, which are followed by reflection and feedback processes. Owing to that, an integrated framework is presented, encompassing the connection between the important issues of crises and strategic management that have been discussed.

Starting from the top, one can identify the first point of the process comprising the strategy formulation aspect with risk assessment and planning tasks. It is possible to link these actions to the crisis stages, which one may be confronted with. At the beginning, apparently, crises normally fall into a pre-event stage. As a crisis develops over time and enters its acute stages, implementation actions gain importance. The framework identifies central aspects to this. For instance, it touches on communication as an essential element, since a company's approach to it will significantly affect the success or failure of its crisis management efforts (cf. Benoit 1997; Preble 1997, 786). It also enumerates collaboration, since a company might need to rely on outside services and knowledge (cf. Wang/Belardo 2005, 10). Emergency exercises such as LÜKEX showed what this might mean in practice, bringing together public service providers such as police or rescue teams with internal company crisis experts. When longer-term actions enter the scene, evaluation takes precedence. What becomes clear in the model once again is the importance of flexibility and feedback. One function of feedback can be found in its value as organizational learning. Since crises are low frequency events, companies do not have sufficient opportunities to learn regarding this specific issue, therefore, learning and closing that knowledge gap is a crucial strategic part of crisis management (cf. Wang/Belardo 2005, 258). Another point is that feedback works throughout the process and requires constant evaluation in any stage once discrepancies are discovered. In fact, the opportunity for learning can be found throughout the whole crisis management process (cf. Veil 2011, 140), in a similar taste to learning in the strategic management process.

Equipped with this foundation, the following chapter will shed light on the research agenda derived from the above elaborations.

# 3 Research Design

## 3.1 Research Method

In deciding upon the research method for this work, it is important to bring to one's mind certain characteristics of this research. It is intended to infer statements and accurate descriptions of crisis management in rail travel in a way that depicts the real experience and environment within a company. To access and capture authentically such a *Lebenswelt* (cf. Mayer 2008, 25) of the actors concerned, it seems adequate to choose a rather open way of approaching the research area. It already becomes clear that these thoughts will move the research method into a qualitative context. This may also be justified by the fact that alternative quantitative methods, in general, rely on a high standardization due to their comparative-statistical assessments (cf. Flick et al. 2004, 8). This seems unfavorable for approaching a topic for which flexibility has already been noted further above. Another point is that there has not yet been extensive research for the chosen research question. A quantitative approach, which reduces the possibility of complexity very early on in the research process, may therefore cut off potential new insights not thought of or incorporated yet in standardized methods (cf. Lamnek 2005, 15). In such a case, allowing more comprehensive verbal descriptions of the issues at interest do more justice to the sophistication of managerial acting.

Paying respect to this, it has been decided to choose interviewing as the research method for this work. In general, thinking of a research interview may make it seem like a colloquial conversation at first, however, the differences to everyday communication emerge from the following (cf. Gläser/Laudel 2010, 111f.):

- There are certain pre-settled conventions, such as that the interviewee may refuse to answer a question without sanctions.
- There is an acknowledged roles allocation between the interviewer and the interviewee.
- The interviewer has the task to lead the dialogue. The questions are posed with a certain background of knowledge interest and fulfill the specific goal of information collection.

Interviews in qualitative research may take different forms (cf. Hopf 2004). Here, it is necessary to choose the kind of interview that corresponds best with a certain study's knowledge interest and seems most fitting to answer the overall research question. The present purpose of investigation is to gather information on how companies react to the threat of terrorism with their crisis management processes. It can be expected that the specific knowledge about such issues requires profound consideration and therefore, will be centered within certain specialized professionals inside an organization. Thus, this work will use expert interviews. Expert interviews are generally conducted as so-called guided interviews (cf. Mayer 2008, 43). This means that the interview situation is not strictly standardized; instead, the interviewer will have a prepared list of open questions as a flexible dialogue basis (cf. Gläser/Laudel 2010, 111). This approach is especially advisable in a context when the research interest is composed of several different aspects and processes, which need to be reconstructed (cf. Gläser/Laudel 2010, 111).

In order to prevent arbitrariness in such a rather open and flexible approach, there are a number of different methodological principles to follow to ensure research quality. Traditional criteria like validity and reliability taken from the quantitative paradigm are less applicable in this case; therefore, qualitative quality criteria take a somewhat different form (cf. Flick 2007, 487ff.; Mayring 2002, 140ff.). Amongst them is the requirement of a rule-governed procedure, which means to document how the research result was generated, making clear the process of data collection and explicating its interpretation (cf. Mayring 144ff.). This is ensured through the fact that the development of propositions and questions is theory-driven. Additionally, the interpretation of the interview results will follow a predetermined logic of qualitative content analysis, which will be introduced in short in the data analysis section. These provisions make the research inter-subjectively reviewable.

However, several classical problems may arise in interview situations. For instance, even though an interview situation should be as neutral as possible, it is nevertheless a social interaction and therefore, the actions – verbal and nonverbal – of both interview partners shape their behavior towards each other (cf. Mayer 2008, 100f.). The interviewee may want to anticipate the research results and modify his responses so as to reflect a position that he considers desirable. This might be supported if an interviewer, being inexperienced with the required flexibility of the interview situation, spontaneously creates question formats that are suggestive (cf. Gläser/Laudel 2010, 135ff.). An interview situation also requires balancing the

response behavior of the interviewee in a sense that he does neither stray from the topic nor reduce the answers to simple sentences. A short-spoken comportment, however, may also be a manifestation of lack of time, especially in the context of professional experts. These addressed problems cannot always be satisfyingly avoided. Nevertheless, some light was shed on these issues to create awareness, since sensitizing may help in recognizing and possibly reducing their effect.

The introductory background knowledge on research methodology shall be of help in further conducting and assessing the following procedures. As a next step, it will be necessary to develop specific propositions to channel the research interest.

## 3.2 Derivation of propositions

To address potential research propositions, it is helpful to remember this work's overall research question stated at the very beginning. It asks the question of how crisis management as an answer to terrorist threats is structured in German rail travel companies. It was already outlined in the introduction, that this research question is composed of several aspects. First, the consideration of infrastructure attacks in the past and public information available on trainings such as LÜKEX suggest, that the threat of terrorism may be a considered issue in the relevant enterprises. In this sense, the first proposition may be formulated as:

*Proposition 1:* Terrorism is an acknowledged threat to rail business.

Since the work takes a strategic angle, it shall also be investigated whether this approach is applied in practice. As it has been derived further above, attacks may threaten long-term business prospects especially in sensitive areas such as travel and transport. Realizing this leads to the second proposition, which is:

*Proposition 2:* Rail businesses will consider this threat to be of strategic relevance.

Furthermore, it has been discussed that crisis management can be approached in a way that structures the different measures forming part of it. Structural outlines prevalent in the literature and practice of other industries have features that make them comparable to a strategic procedure, distinguishing phases of planning and preparation, implementation and

evaluation. Considering this, proposition 3 reckons that the rail industry may have adopted similar lines of thought.

*Proposition 3:* Rail businesses draw upon crisis management plans, which consist of separate actions that broadly follow a concept of planning, implementation and feedback.

The literature suggests that knowledge can be considered a crucial aspect in crisis management. Furthermore, it needs to be understood that it is not the mere presence of knowledge itself that creates value, but rather the application of it (cf. Alavi/Leidner 2001, 122ff.). Knowledge also needs to be practiced in order not to decay (cf. Alavi/Leidner 2001, 118). It can be hypothesized that a focus on crisis knowledge will play an important role in our sample. Associated with this are supporting mechanisms such as learning and communication. This seems plausible, since there can be no knowledge creation and exchange without communication (cf. Schreyögg/Geiger 2007). Therefore, a fourth proposition can now be stated.

*Proposition 4:* Rail businesses recognize the strategic value of crisis knowledge and therefore, emphasize the generation of such through training, communication and learning cycles.

Together, these four propositions should form the basis for answering the research question. These will now be translated into concepts that can be elicited in practice via questions in an interview situation.

## 3.3 Operationalization of propositions

In general, stated propositions in a work of research cannot be measured. They need to be transferred to a set of facts that can be extracted from reality (cf. Mayer 2008, 72f.). The task is to break them down into several sub-parts to which a respondent can make comments. When we turn to the first proposition, which is that terrorism is supposed to be an acknowledged threat to rail business, it might be possible to distinguish two perspectives. The former perspective elicits whether a company thinks it constitutes a likely target, the latter perspective relates to the perceptions of customers a company relies on to demand its services.

Building a picture from those two viewpoints about the terrorist threat should be useful in assessing proposition 1.

Proposition 2 locates the relevance of terrorism on a strategic level. Triggering response directly to such a statement may result in bias due to the anticipation of a supposedly socially desirable answer. Therefore, looking more closely at the meaning of 'strategic' in this context, offers some further possible reference points. Strategic thinking is preoccupied with a long-term time horizon, leading to an elicitation of the duration of relevance of terrorism in our cases. Strategic decision-making also most often involves upper management levels; therefore, the location of organizational responsibility may support a proper assessment of proposition 2.

Proposition 3, which relates to the existence and structure of crisis management plans, already entails by its nature the various aspects and phases of crisis management and can be addressed in several open questions relating to measures undertaken in the respective companies. The final proposition emphasizes a hypothesized importance of crisis knowledge creation and may be elicited in conjunction with questions relating to proposition 3. A brief table summarizes the above elaborations more vividly.

| Propositions | Operationalization |
|---|---|
| (1) Terrorism is an acknowledged threat to rail business. | ▪ External (customer perspective) and internal (interviewee) perception of terrorist threat |
| (2) Rail businesses will consider this threat to be of strategic relevance. | ▪ External (customer behavior) and internal (interviewee) perception of duration of problem relevance<br>▪ Locus of organizational responsibility<br>▪ Competitive situation with regard to crisis management |
| (3) Rail businesses draw upon crisis management plans, which consist of separate actions that broadly follow a concept of planning, implementation and feedback. | ▪ Depiction of crisis management components and processes |
| (4) Rail businesses recognize the strategic value of crisis knowledge and therefore, emphasize the generation of such through training, communication and learning cycles. | ▪ Relevance attributed to these specific parts |

**Table 3: Operationalization of propositions.**

The following subchapter deals with the process of gathering the empirical information.

**3.4 Data collection**

When collecting empirical data, sample selection is always a crucial issue (cf. Mayer 2008, 38ff.). It determines to what extent generalizable statements about reality can be justified. This work has chosen a specific focus on the German rail travel industry. Since choosing a basic population encompassing all German rail travel companies does not seem feasible, this work has decided to contact the leading seven rail travel corporations in Germany (cf. Doll 2011). Taken together, they cover almost all of the German rail transport market (cf. Holzhey et al. 2011) and therefore, seem to be a reasonable choice in order to offer a realistic account on the research topic. It was also hypothesized that these firms were large and important enough to have the need as well as the resources for elaborated crisis management capabilities.

The first contact round was administered by sending out letters to the firms' crisis management professionals, in case contact details were publicly available, or to general management. For the latter situation, assistance in contacting respective company experts was kindly requested. The companies not having replied to the first correspondence were contacted a second time via e-mail or phone calls. In the end, it was possible to gain the support of six companies, which is gratefully acknowledged. Together, these form 86% of the base sample and almost 100% of the German rail market, respectively. A total of five interviews were conducted, paying respect to the fact that some companies were joint ventures of two different rail travel corporations comprised in the base sample. Apart from one interview, where two interviewees were involved, all interviews took part with one interviewee. The interviews were conducted in German. Afterwards, the relevant quotes presented in the data analysis section were translated into English.

A final word should be said about ethical considerations. Writing about terror related issues is a sensitive undertaking. By presenting research information about possible countermeasures, one inadvertently increases the vulnerability of targets. However, it may be argued, that the benefit gained by a deeper understanding of the topic will offset this risk. Furthermore,

anonymity was provided for all interviewees and entities involved in the research process at all times. Cooperation was voluntary and followed the standard rules of informed consent.

After having explicated the relevant issues of this work's research design, the following chapter shall continue to present the results that have been discovered in undertaking the empirical part of this work.

## 4 Data Presentation and Analysis

Conducting interviews for this kind of work produces a large quantity of verbal data, which creates the need to use the method of qualitative content analysis to extract and organize its relevant content. The transcribed interview texts were scanned according to several research criteria, which follow the four stated research proposition. Information relating to the propositions were extracted from the interview data and ordered along these main categories. This structured information is then used to assess the research propositions. The depiction below illustrates the method.



**Figure 7: Schematic concept of qualitative content analysis. Source: Based on Gläser/Laudel (2010, 200).**

Therefore, the findings shall now be discussed according to the research propositions.

*Proposition 1:* Terrorism is an acknowledged threat to rail business.

As the first proposition suggests, it is expected that the respective companies realize they are in fact a target for terrorist activities. This view could have been suspected since attacks on transportation systems had taken place in the past in London and Madrid, for example. It was mentioned in the interviews, that former incidents did indeed show a relevance of the terrorist

topic. However, as no fatal bombing has taken place in Germany until today, the sense of urgency might not be as present. This is something that was mentioned consistently, particularly when it came to customers' perceptions. As one interviewee put it,

"Well, I think that the broad mass in public actually feels quite safe in Germany. In a sense that they don't immediately deal with the potential to have a threat situation on a daily basis."

However, there may be regional differences. The interviews revealed the opinion that it is most likely busy, visible places that can become targets of an attack. Travelers in metropolitan regions seem to be more concerned, especially if a recent awareness campaign or heightened security presence had just taken place. For instance,

"[e]specially elder customer, they experience that quite differently. Maybe they've seen times of war, now [the police] are running around with a gun, and what's going on there right now?"

Even though the current threat level may not be on high alert, the awareness for the general exposure of rail companies as part of an open transportation system exists. They consider themselves a 'soft target' and are conscious of the fact that terrorists may want to target rail-related infrastructure and passengers just as any other part of an open society where victims and attention-catching media can be created. One professional describes this underlying risk in the following statement.

"It's actually a coincidence that nothing of the sort has happened so far in our place. […] We're in Afghanistan just as well, so ultimately, we're in the same danger."

Seeing that the companies do not only recognize the issue of terrorism, but also realize their specific exposure, this provides proof for the first hypowork. No one expressed that terrorism is exclusively relevant to other industries, e.g. aviation, nor that is has become obsolete for any reason. Therefore, the first hypowork can be supported by the findings.

Once general awareness is established to be linked to the rail industry, it is then appropriate to inquire about the perception of the severity of the terrorism threat. In order to judge about the

relative importance of the terrorist threat for rail business, it is necessary to proceed to the second proposition.

*Proposition 2:* Rail businesses will consider this threat to be of strategic relevance.

The relative importance of the terrorist threat may be visible through various aspects. For one, businesses need their customers' long-term support. Therefore, the question can be asked as to what extent can terrorism impair this relationship? It could be hypothesized that customers will avoid rail travel, which would then lead to revenue losses. The interviewed experts' viewpoint related any possible demand slumps to a rather short-lived time horizon. As one interviewee explained,

„ […] the experience until now is, Paris or Madrid or the like, too, people are traveling again. Because, firstly, many don't have any other choice and secondly, it's in relation to the risk to have an accident on the street and so forth, well, life is always risky. I don't think there will really be any lasting reductions in demand."

It was also noted that other ways of travel do not constitute perfect substitutes, since flying can be seen as at least as risky in terms of terror-relatedness, and cars may induce expenses that not everyone may be able to support compared to the costs incurred by public transport commuting. Besides, competing with other means of transport is a phenomenon, which is part of the basic everyday business and not expected to aggravate in the case of an incident or a heightened threat level. Moreover, an overly negative reference to a certain provider is not expected.

"And I don't think, well, as a consequence it won't lead to someone saying, we're now going to avoid *(the specific company)* or the like."

Deeming a customer impact to be of a rather temporary nature does not mean, however, that the interviewees deny an influence on customers outright. This becomes visible in the following exemplary statement.

"[…] the customer who is directly affected by such a crisis, I'd say you won't satisfy him again in the next ten to fifteen minutes or within the next couples of days, because he is affected, and that is immediately going to influence his opinion […]"

If a profound strategic business risk does not originate from the customer side, however, it may be worth looking towards the competitive side of the rail travel industry. It was already conjectured further above in this work, that traditional competitive thinking in terms of outpacing hostile business rivals may not be applicable in this case since security is a good that benefits all. In fact, it was even found that there is a decent amount of cooperation taking place in this respect, mirrored by the two quotes below.

"And one should put that aside to say, alright, we're usually kind of competitors, but look, we're all operating together on a public infrastructure and in case there's an incident on our train, it could be you're on the adjacent track and I say, if there's some bigger incident, a bomb would explode, let's make the absolute worst case, it could well be your train is affected just as well, so let's deal with this together."

"Competition takes place during the bidding and apart from that, the transportation companies are working together […] There are no fundamental differences regarding this issue."

This collaboration can take different forms, ranging from joint participation in associations and working groups over conferences and scenario exercises with local, state and federal police to communication channels between the respective companies. These collaborative efforts will also be of importance in the further course of this analysis as we later pass on to the following propositions. Moreover, they are not restricted to purely preventive activities. Mutual support in the case of a concrete event has also been touched upon in the interviews. Any rail participant will be integrated in the case of an incident since security actions do not stop at the border of a certain company. One past example was referred to where an employee care system was provided for conjoint benefit.

Hence, strategic relevance does not quite seem to arise from competition in this specific case, either. However, it was also elicited which management levels are in charge of dealing with the issue of terrorism. Here, the answers diverged. For example, General Management,

Security CEO or Rail Operations Manager were featured in the replies. It also became clear that operative personnel play a central role. Employees in charge of security on site or conductors are those who are the very first to experience and respond to a threat or attack. Therefore, they have great value and expectations placed on them. Only in response to that can higher management levels process the incoming information and act vis-à-vis the public and media. These answers point to multiple levels of responsibility, instead of an exclusive upper echelon importance. This, however, does not contradict a strategic relevance at all, since strategic relevance is not characterized by exclusivity. It could be expected that different layers inside a company are involved with activities relating to terrorism, including existing awareness of senior executives.

Moving further from the possible reasons for strategic relevance presumed so far, risks originating from terror can also entail hazards for a company's bottom line. In conducting the interviews, it was contended that any rail company is a commercial enterprise; therefore, a crisis will have an effect in the first place. However,

> "the risk is not measured in draining customer flows, no, nor in sales not being ensured anymore […] the risk is rather in the area of damage and effects, delays or the like or rail traffic can't be guaranteed for a certain period of time and because of that, we will lose passengers during that period of time and with that naturally revenue losses as well […]"

As seen, disruption of operations is what more concern may be placed on. This could probably hint at a different focus in operationalizing strategic relevance. Companies do see that a terror incident can evoke a crisis, it is therefore taken seriously, but overall, there is great confidence that such a crisis will be mastered in the long-term.

Taking the above results into account, the response to the second proposition appears somewhat mixed.

> "[…] there is a crisis management, yes, but, the area of terrorism is rather subliminal there […] one rather concentrates on more comprehensive issues, severe accident scenarios, pandemics, in that direction."

Even though terrorism plays a role for the respective companies, it seems to mingle in into a greater collection of company threats. It has nonetheless been identified as a topic belonging to everyday business. Because of that relevance for sustainable and lasting company operations it can be fitted into a longer-term, and therefore, strategic time-horizon. Yet, a shift towards a stronger operational preoccupation might be discernible. Following this, the second proposition can only be partially supported.

Moving on to specific actions that rail businesses can undertake in order to respond to the terror threat, proposition three will now be assessed according to the interview feedback.

> *Proposition 3:* Rail businesses draw upon crisis management plans, which consist of separate actions that broadly follow a concept of planning, implementation and feedback.

Several sources were examined in the earlier part of this work, both from the academic literature as well as from practice. They concur insofar as they portray the crisis management process broadly by three main activity categories. It was intended to elicit whether these findings were applicable to the German rail travel industry.

The reactions of the respondents all displayed activities relating to all main categories. Referring to preceding steps belonging to the realm of planning like information collection and evaluation, contingency planning and exercises, these were all mentioned in the interviews. Companies place a lot of emphasis and value on the qualification of their personnel and conduct in-house trainings. The same holds true for informative and/or preventive collaboration with external partners that was already mentioned further above. Whether these activities take place on a more ad-hoc basis or on regular terms depends, for instance, on their regional scope, especially when external partners are involved. Notwithstanding their varying frequency, their occurrence was consistently voiced.

> "[…] we have periodic intervals with the police […] we do a lot in form of seizure exercises, evacuation exercises […] this is a continuous business, which makes it easier for both parties […]"

This indication towards the ongoing nature of this crisis management preparation also points to the flexibility and the constant evaluation, which is taking place throughout the crisis

management process. The theory suggests that a certain flexibility and re-evaluation of all parts of the stages is advisable. This is found in the present survey as well.

> "Based on the planning meetings you already see in most of the cases, if a process, perhaps, is not that optimal anymore because certain things have changed. Those things will be recorded, analyzed, evaluated […]"

In case there is a real event that needs to be responded to, companies feel well prepared, as far as preparation for such an incident can go. It was stated that no event is like the other and therefore, flexibility again plays a key role. Although there are several plans, preparative handouts or outlines according to which threat one needs to respond to, the certain rigidness that they incorporate is not believed to be supportive if quick and determined actions are needed. Therefore, interviewees again place emphasis on the qualification and empowerment of personnel on site in the acute phase as well as on teamwork, indicating a people-centered perspective.

> "Now, there are certain manuals, action manuals I'd say, for such cases. However, this is rather rigid, this system, in fact. So, as a principle we're trying to ease that a bit in a sense that someone who is on site has to take a decision […] And essentially we've asked ourselves, it is dependent on the situation of the individual who says, I've now found a suspicious item."

The acknowledgement of a certain firmness of pre-planned procedures should not, however, be misunderstood as a dismissal of these plans, since their significance for clear responsibilities and notification processes has been documented in the interviews as well. This line of thought can be connected to a reasoning already presented earlier on in this work. An inflexible sequence of tasks is not what characterizes crisis management. Crisis management is rather characterized by a certain bundle of different activities with varying relevance over the development phases of a crisis.

During an acute crisis containment phase, material arrangements have to be tackled as well, for instance, when it comes to the provision of lost capacity or the care for victims. In that case, collaborations with external partners again proves to be vital. These actors include many parties relevant in an incident, such as police, bomb disposal squads, rescue teams or service

providers supporting the continuation of operations. One interview partner gives an example of the latter.

"And there, you need to make sure that through the respective emergency plans […] operations can be immediately maintained and customers can still be transported […] We have relatively good relations, especially when it comes to rail replacement services, which are established relatively quickly. There, we have good ties to bus companies […]"

Another key component in the course of the implementation according to the work' preceding lines of thought was also identified in the present investigation. The element considered is the role of communication. It was voiced consistently as an integral part of crisis management. The relevance of media relations and media impact on customers are acknowledged comprehensively.

"Parallel to that, we have here regionally, of course, yeah, I'll call it press mailing list. Press contacts. You have here, of course, the regional media, but also nationwide stable contact persons, stable editors. There, as well, ongoing contact, ongoing maintenance of contacts is really relevant."

"[…] it pays to have competent leaders, who know how to deal with the media, that you really have such an air of calmness, integrity, communicate clearly what the company is doing, that the company is prepared for that, in order to still give passengers confidence […]"

More thorough evaluation processes are expected to commence as soon as the severest part of an incident concludes. Participating firms, too, touched upon this last phase.

"Of course such incidents will be taken as an occasion to look at the respective standardized procedures. What had worked, where could it possibly be improved, etc., planning, sure."

"And for us, internally, I can only say I think we would learn from it and draw our conclusions and simply deal with it in a self-critical way as well."

Since learning cycles, either throughout or subsequent to processes, feedback their experiences and results to improve any further plans for future actions against threats, they are of special importance to knowledge creation. Knowledge, its creation and use has already been documented as the pivotal cause for competitiveness and strategic survival of a firm in a market in the theoretical part of this work. The last proposition incorporates this significance and wants to stimulate reactions from practice to this matter. Therefore, the emphasis will soon be put on the subject of knowledge and the issues integral to it such as learning, training and communication.

Before that, a concluding assessment of the appropriateness of the third proposition has to be given. The interviews revealed answers pertaining to all three main crisis management categories. Preventive efforts were frequently cited, such as a focus on qualification, information gathering or test runs evaluating the functioning of plans and communication channels. Statements relating to acute implementation actions also occurred, encompassing, amongst others, the attendance to continuing operations or the media. Feedback activities were important, as well. Here, it is interesting to note that the interview participants have stressed the continuous character of new information and learning, which therefore, also points to the flexible nature of crisis management. In line with this, the participants deemed a too rigid planning approach inappropriate since every crisis' individual development asks for varying foci regarding the choice and relevance of specific actions.

There was no information, which considerably altered the content, or composition of crisis management functions as it had been detailed in the theoretical part of this work. Overall, the description of the interviewed experts' coincided very well with this work's expectation. It shows that the prevailing understanding of crisis management in the literature can also be found in the specific practical example of the German rail travel industry. Therefore, the third proposition can be supported by the findings.

With this, the work shall proceed to assessing the fourth and last proposition.

*Proposition 4:* Rail businesses recognize the strategic value of crisis knowledge and therefore, emphasize the generation of such through training, communication and learning cycles.

The last proposition is related to the role of enterprise knowledge in managing terrorist threats against businesses. Such knowledge has been hypothesized to play a central role in addressing the terrorist threat. Reasons for that have been grounded in both the management literature coming from the knowledge-based view of economic success as well as from counter-terrorism industry practice existent so far.

Knowledge creation and access can cover elements such as fostering communications, undertaking trainings and support learning cycles inside and outside a firm. In the course of assessing the fourth proposition, we shall elicit if knowledge is indeed central to the participating firms and which forms this knowledge handling takes in practice. During the assessment of the previous propositions, it was already sounded that learning and knowledge handling is a natural element of rail businesses' crisis management process. Now, in attending to it specifically, this can become even clearer.

The interviews pointed to the criticalness of information and knowledge in order to deal with terrorist threats properly. Without accurate information, it is very difficult if not nearly impossible to undertake relevant processes in a suitable manner. Participants' answers highlighted knowledge and information to be in fact the decisive factor.

"[…] you really have to put it that way, without this information it would be very, very difficult to stay up to date and to initiate the respective measures inside the firm."

As it was already voiced further above during the reflections on the preceding propositions, the dissemination of the relevant knowledge needs a lot of effort in pursuing constant communication with the respective partners, be it with security forces, working groups or other intra-industry enterprises. As one company expert put it,

"[i]t is important to stay with the topic, it is important to pursue communication with the participants […] You can spare yourself a lot of […] work, if you just have that communication and have it on a relatively regular basis […] And I think that is the approach you should pursue, this bonding and this network, which has now developed, to maintain that […]"

Concluding from this, one can already spot the appreciation firms show for the value of crisis knowledge and the relevance of communication relating to it. A slight distinction was discernible in the interviews depending on how they judged the quality of knowledge collaboration. Some voiced possible room for improvement with certain actors, while the overall tenor, in general, was very positive. Another small particularity still worth mentioning relates to the frequency and centrality of knowledge handling. Depending on which cooperation partner or working group was referred to, frequency of interaction was bound to vary, however, without substantially influencing the importance attributed to the knowledge sharing efforts. Variations were also possible in conjunction with the departments or level of responsibility at which knowledge handling was ultimately situated, again without distinctive alterations in significance ascribed to crisis knowledge.

Transferring the efforts of communication to other areas where additional partners play a role, the media was again brought into this field in the interviews. The utmost importance of a continuity of work is expressed again, underlining the interconnection between all the stages of crisis management. In relation to these communication processes, one interview partner pronounced the following.

"And that, again, is a continuous process, […] you have to talk to the media, you shouldn't keep a low profile […] That means essentially, you can only achieve good public relations if you're open, if you're transparent, if you try to inform in a very timely manner."

Customers also belong to the realm of communication and public relations. They do in fact receive news relating to a company from media sources, but still, they come into direct contact with a firm. This was touched upon in the interviews in various forms, since customer communication can take place during different process stages. While interviewees voiced the significance of transparency, they also noted that not every communication is intended to flow outside of the firm for security reasons. In addition, communicative action with the aim of building customers' trust and security feeling was mentioned, but in a restrictive way, for too much police presence or awareness building might also result in counterproductive psychological outcomes. One interview partner stated,

"[w]ell, we've had the experience that a customer actually feels insecure if he sees something like that […] So we're really very sensitive with such measures."

Overall, the interviews revealed a notable appreciation for information and communication efforts. Their value can be deduced from the relative weight attributed to them, but has also been explicated more obviously similar to the assertion of the quote below.

"Yeah, central insights are of course that you specifically have to work on communication processes and notification processes. […] That is the focus."

So far, the elaborations have covered several parties concerned, while still waiting for more attention towards an internal perspective and an employee focus. Indeed, what came through during the course of the interviews, as well, was again a people-centered focus of the subsequent learning and feedback activities. As it had already been described in prior stages, employees are of considerable value to the respective companies in crisis situations. This also seems natural in light of the fact that theory also locates knowledge capabilities at the level of the individual. Especially, when it comes to a feedback stage, it was voiced that it is important to strengthen employees and let them feel the company's concern. Since a crisis situation is always a straining situation to them, internal communications play a vital role. One interview explained that circumstance in the following sense.

"[…] it is highly important to have a certain social competence, as well, and a social network within (*the company*), which we do build with the respective aides that benefit these employees in the aftermath. […] We offer our employees a lot through our social network and if an employee knows that, of course he will approach such a crisis coping differently compared to if he knows I'll be left alone as soon as I'm going home today."

Social competences and leadership competences were introduced as a precondition to sustaining employee spirit. It was also mentioned that giving feedback and praising employee behavior after an incident is important. It shows them that the organization is standing behind them and is taking them seriously. This may then again feedback, or feed forward, if you so will, to the next prevention phase, since crisis management is a circular endeavor in that sense. It also highlights that the topic of knowledge is not exclusive to an immediate post-incident phase. This seamless and smooth blending may be drawn from the exemplary comment below.

"I think to make it clear to staff that as the company, you are standing behind them in the first place regardless of what's happening. That they can in fact expect help and ask for that help, too. If they already have questions, well, I'm relating to the topic of prevention […] so that [the employee] is simply putting that question on the table."

This brings us back to actions that relate to knowledge building and assessment through preventive efforts, which were previously discussed. When it came to specifically addressing the value of knowledge in the course of the interviews, these topics were revisited and emphasized, thus constituting a first reasonable evidence for the fourth proposition. With regard to elements in this area, careful selection of employees, good training and exercises were illustrated as possible examples of knowledge creating measures, just as it was hypothesized. Cooperative efforts outside the firm, which were exemplified early in this interview data analysis, were even taken on an international network scale by one participant.

"There is an international European network of corporate security departments and rail police […] it is part of that to take a look at how others design their processes and the like, so you can incorporate issues that are relevant for you […] and check what can be improved, what has to be adjusted etc."

This displays once more that learning is a vital part of the efforts undertaken by the German rail travel companies and that this learning is also done by pulling knowledge from outside sources.

All these efforts have one final goal: To inhibit or reduce negative consequences arising from terrorism. Only then, have crisis management and in connection with the last proposition, knowledge and learning, achieved their objective. This ultimate relevance of knowledge underlying crisis management affects the robustness and resilience of firms in coping with terrorist threats. The role they attribute and the way they deal with learning determines how they come out of crises in the long-term. This insight has been presented in the interviews and is displayed by the subsequent explanations.

"What we have to improve, I think, 'you should put your own house in order first', as they say. And then to say, that won't happen to us again next time."

"You've learned from it, it is of course a very bitter experience […] But I think you always come out stronger, because as the saying goes, experience and also bad experience is the most bitter opportunity to learn, but you learn more through that and draw lessons for the future from these incidents, that's just how it is."

Based on these findings, it has become obvious that respondents attribute great value to knowledge activities, be it internal or external communication, training and exercise efforts with various partners or learning and feedback processes after an incident as well as flexibly throughout the whole crisis management process wherever necessary. As a result, the last proposition is supported by the presented data.

After this ample analysis of the research propositions, a final conclusion of this work shall now be given in the last chapter.

# 5 Conclusion

This research's main motivation was to shed light on the relationship between terrorism and its influence on business activities. Terrorism, specifically its Islamist form, has hit Western nations with an unprecedented force by the attacks of 9/11 and has not abated since then, with bombings following in places like London or Madrid. Apart from its relevance to political science, the impact terrorism can have on the economy and on enterprises has become of concern to studies in economic and managerial science. Its impacts are not constrained to damage on property and people in the aftermath on an attack, but also encompass psychological effects in society as a result of heightened security levels. Furthermore, the impacts on businesses do not merely belong to the area of collateral damage; businesses are in fact an explicit target of terrorist activities.

This work wanted to pay respect to that fact and analyze how businesses deal with their responsibility to address and counter the terrorist threat that they are facing. Such efforts are generally situated in the broader ambit of crisis management. Several studies have attended to crisis management in conjunction with terror threats, for instance with relation to the tourism sector (cf. Aschauer 2008; Henderson 2008; Sullivan-Taylor/Wilson 2009). However, not

much scientific work has been undertaken with regard to the rail travel industry, even though public transport has been targeted in the attacks of London or Madrid, for example. This work wanted to fill this research gap and focus on the approach towards terror issues in this industry in Germany through conducting interviews with experts from the industry's main players.

Furthermore, it was intended to bridge the gap between crisis management and strategic thinking, which is identified in the literature. Since terrorism is an issue, which will most probably be relevant to business for many years to come, taking a longer-term strategic view seemed advisable.

In attempting to achieve this, the work proceeded by presenting core concepts critical to this work, such as terrorism and crisis management, and narrowed them down to this work's specific focus. Following, the link towards strategy was established and presented a strategic framework of crisis management to be applied in the research. These elaborations then provided the basis for presenting and assessing the research propositions.

The research propositions were built on the overarching main research question of this work: How is crisis management as an answer to terrorist threats structured in German rail travel companies?

Drawing on this foundation, it was proposed that as a first step enterprises need to realize their exposure before any actions would be embarked upon. This might have been taken for granted, but since this work's interest was to cover a specific industry's focus, it seemed advisable not to transfer other industry's findings as self-evidently applying to any other case. It was then found that the German rail travel industry recognizes their relevance as a target to terrorist activities, while not currently on high alert. Next, it was proposed that the terrorist threat would be of strategic importance to them. Here, the results were mixed. Several layers of responsibility inside a firm seem to be preoccupied with the threat of terrorism, and even though senior management levels belong to these, the topic rather mingles in into various different challenges that rail businesses face on a daily basis. Nevertheless, it was found that all of them already have developed approaches and crisis management plans on how to deal with this issue. Their answers portrayed the suspected model of planning, implementation and evaluation. Participants addressed crisis management measures relating to all three phases.

Finally, it was hypothesized that while presenting their crisis management efforts participants would place an emphasis on communication, training and learning features, thus coinciding with the value of knowledge defined in strategic management research. This was discovered in the answers of the participants who stressed the importance of crisis knowledge through external collaboration, employee training and communication within and outside the firm throughout all stages of the process.

Based on this, the overall research question of how German rail travel companies structure their crisis management has found a sound answer that showed considerable commonalities across the participants and matched almost all of the supposed propositions in a comprehensive manner.

Via carrying out the literature analysis, this work concluded that there is a need for a stronger consolidation of the research areas of crisis management and strategic management (cf. Pearson/Clair 1998, 59; Ritchie 2009). The present work drew on prior authors' foundations to elaborate more profoundly on the congruence that exits between the main elements of both approaches. It was found that the structure of their processes bear similarity to each other, for both follow a composition of planning, execution and evaluation. Through contrasting the relevant academic background of both research spheres, the provision of a well-founded synthesis was envisaged. This intention concluded in presenting an integrated framework of strategic crisis management, adapted from the work of Ritchie (2004).

Apart from this, literature called for further work investigating various different industries in terms of crisis management, public rail transport being one of them (cf. Fowler et al. 2007, 100). This work has answered to that call in attending to the specific example of the German rail travel industry, since there was a lack of research in this area, even though public transport is known as a possible soft target exposed to terror attacks. This work provided genuine work in this area and addressed the existing gap. It was found that the elaborations on crisis management were very well in line with what crisis management experts from the participating companies revealed. By having covered a most significant part of the German rail travel market, this work claims to provide a novel and comprehensive statement about the structure of crisis management efforts in the German rail travel industry.

The implications of this work for practice are manifold. Amongst others, they lie in the fact that an exclusive overview of the latest situation of crisis management in the German rail travel industry has been given based on inside information gratefully received from participating partners. Companies may see this as a reassurance and positive reinforcement of their practices. They may also capitalize on this overall industry-wide assessment for their own crisis management procedures. Furthermore, this work may function as a stimulus across all industries in order to rethink or refine processes that ultimately target at enhancing business resilience. Increasing resilience against terrorism with the goal to minimize all classes of damage that can be done is in fact the final goal of any research situated in the area of strategic crisis management.

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