



**VILNIUS UNIVERSITY
BUSINESS SCHOOL**

INTERNATIONAL PROJECT MANAGEMENT PROGRAMME

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FINAL MASTER THESIS

<p><i>KRIZIŲ VALDYMAS PROJEKTUOSE: GALIMI IŠŠŪKIŲ SPRENDIMAI RUSIJOS-UKRAINOS KARO METU</i></p>	<p><i>CRISIS MANAGEMENT IN PROJECTS: NAVIGATING CHALLENGES AMID THE RUSSIAN-UKRAINIAN WAR</i></p>
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Vilnius, 2023

SUMMARY

VILNIUS UNIVERSITY BUSINESS SCHOOL BUSINESS SCHOOL
INTERNATIONAL PROJECT MANAGEMENT STUDY PROGRAMME

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CRISIS MANAGEMENT IN PROJECTS: NAVIGATING CHALLENGES AMID THE
RUSSIAN-UKRAINIAN WAR

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Master’s thesis was prepared in Vilnius in 2023

Scope of Master’s thesis – 91 pages

Number of tables used in the FMT – 5 pcs.

Number of figures used in the FMT – 7 pcs.

Number of bibliography and references – 142 pcs.

Nowadays, many countries are engaged in crises and conflicts worldwide, the Russian-Ukrainian war being one of them. Such geopolitical crises impact the global financial and security picture, business practices, and market dynamics. These circumstances have also required reviewing crisis management methods, specifically in project management. This particular demand emphasises the importance of research and knowledge transfer on crisis management methods in light of present geopolitical shifts to sustain project resilience in addition to sustainability in a rapidly changing world.

This exploratory research employs semi-structured interviews and a literature review to analyse the crisis management of projects during the Russian-Ukrainian conflict alongside project managers' challenges and approaches. Despite limitations, the study used thematic analysis, transcription cross-checking, and data triangulation with secondary research to ensure accuracy and strengthen the interpretation of its results.

Investigation into project management in the Russian-Ukrainian War highlights decision-making, communication, and team motivation as essential in crisis scenarios. It stresses the need for emotional intelligence, risk-aware decision-making, and training in understanding culturally sensitive communication. The importance of leadership for increasing team morale and flexibility is also emphasised. The research also identifies the need for flexible resource management and the value of recognising diverse crisis perceptions to be able to create new and flexible management approaches required to navigate complex crisis contexts successfully.

SANTRAUKA

VILNIAUS UNIVERSITETAS VERSLO MOKYKLA
TARPTAUTINĖS PROJEKTŲ VADYBOS PROGRAMA

ALINA PANASIUK

KRIZIŲ VALDYMAS PROJEKTUOSE: GALIMI IŠŠŪKIŲ SPRENDIMAI RUSIJOS-
UKRAINOS KARO METU

Magistro darbo vadovas – Partnership Assoc. Prof. Romualda Stragienė

Darbas paruoštas – Vilnius 2023

Darbo apimtis – 91 puslapiai

Lentelių skaičius – 5

Iliustracijų skaičius – 7

Informacijos šaltinių skaičius – 142

Šiais laikais daugelis šalių yra įsitraukusios į krizes ir konfliktus visame pasaulyje, vienas iš jų yra Rusijos ir Ukrainos karas. Tokios geopolitinės krizės daro įtaką pasaulinei finansų ir saugumo situacijai, taip pat pasaulinei verslo praktikai ir rinkos dinamikai. Dėl šių aplinkybių taip pat reikėjo peržiūrėti krizių valdymo metodus, ypač projektų valdymo srityje. Šis ypatingas poreikis pabrėžia krizių valdymo metodų tyrimų ir žinių perdavimo svarbą, atsižvelgiant į dabartinius geopolitinius pokyčius, siekiant išlaikyti projekto atsparumą, be tvarumo greitai besikeičiančiame pasaulyje.

Šiame tiriamajame tyrime naudojami pusiau struktūruoti interviu ir literatūros apžvalga, siekiant analizuoti projektų krizių valdymą Rusijos ir Ukrainos konflikto metu kartu su projektų vadovų iššūkiais ir požiūriais. Nepaisant apribojimų, tyrime buvo naudojama teminė analizė, transkripcijos kryžminis patikrinimas ir duomenų trianguliacija su antriniu tyrimu, siekiant užtikrinti tikslumą ir sustiprinti jo rezultatų aiškinimą.

Tyrimas apie projektų valdymą Rusijos ir Ukrainos kare išryškina sprendimų priėmimą, bendravimą ir komandos motyvaciją kaip esminius krizių scenarijus. Jame pabrėžiamas emocinio intelekto, rizikos suvokimo sprendimų priėmimo ir kultūriškai jautraus bendravimo supratimo poreikis. Taip pat pabrėžiama lyderystės svarba didinant komandos moralę ir lankstumą. Tyrime taip pat nustatomas lankstaus išteklių valdymo poreikis ir įvairių krizių suvokimo atpažinimo vertė, kad būtų galima sukurti naujus ir lanksčius valdymo metodus, reikalingus sėkmingai naršyti sudėtingose krizių situacijose.

TABLE OF CONTENTS

INTRODUCTION.....	7
1. THEORETICAL ASPECTS OF CRISIS AND CRISIS MANAGEMENT IN PROJECTS.....	10
1.1 Defining crisis, its typology and intersection with risk management	10
1.2 Crisis management and its approaches	13
1.3. Crisis resilience factors	17
1.4 Crisis management in projects	27
2. RESEARCH METHODOLOGY	35
3. RESEARCH RESULTS.....	43
3.1 Interview process and general overview of the topic.....	43
3.2 Crisis management approaches amid Russian-Ukrainian War	46
3.3 Resource management	48
3.4 Leadership Style.....	50
3.5 Communication style	52
3.6 Decision-making process	53
3.7 Motivation and team dynamics	55
3.8 Learning and adaptability.....	56
3.9 Project success factors and the impact of crisis	58
3.9 Summarising part	59
CONCLUSIONS AND RECOMMENDATIONS	62
BIBLIOGRAPHY AND A LIST OF REFERENCES.....	66
ANNEXES	80

LIST OF TABLES AND FIGURES

Table 1. Project success criteria.....	32
Table 2. Impact of Russian-Ukrainian War on global economy and organisations.....	33
Table 3. Analysis by research methodology.....	36
Table 4. Semi-structured Interview Script.....	40
Table 5. Impact assessment of the Russian-Ukrainian War on project management components...61	
Figure 1. Crisis management stages and activities.....	15
Figure 2. Crisis management approach model by Spillan.....	16
Figure 3. Crisis Resource Management key points.....	25
Figure 4. The intersection between crisis management and risk management in projects.....	31
Figure 5. Conceptual framework.....	35
Figure 6. Crisis management tools	48
Figure 7. Crisis perceptions by respondents	60

LIST OF ABBREVIATIONS

CERC – Crisis and Emergency Risk Communication

CRM – Crisis Resource Management

CSCW – Computer Supported Cooperative Work

ICB4 – Individual Competence Baseline, version 4.

PM – Project Manager

PMA – International Project Management Association

PMO – Project Management Office

SCCT – Situational Crisis Communication Theory

SMCC – Social-Mediated Crisis Communication

INTRODUCTION

According to the International Crisis Group, as of September 2023, over 75 countries are suffering from various conflicts and crises (International Crisis Group, 2023). We also live in a time when multiple global crises are overlapping with the COVID-19 pandemic still ongoing, Russia started a full-scale invasion of Ukraine. According to the IMF, these events dramatically affected the world's recovery and made inflation a real danger for many countries (International Monetary Fund Research Dept., 2023). Additionally, Hamas's attack on Israel resulted in new challenges in the energy-producing region, contributing towards the worsening of the global economic situation (Daoud et al., 2023).

Whenever a critical event occurs, it causes more uncertainty and threat to organisations. It disturbs business processes, harms company values, and is disruptive (Ashraf et al., 2021). Firms employ a set of strategies to control or even mitigate all the influence. Companies must understand crisis management to navigate and reduce the harmful effects of crises. It enhances reputational protection, stakeholder trust, and cost reduction (Coombs & Laufer, 2018). Additionally, crisis management allows firms to master and alter their tactics and plans to adjust to new events (Cleeren et al., 2017).

Unlike organisations, projects are temporary endeavours. Consequently, a crisis threatens the realisation and execution of all the planned activities inside its range. Nearly all of them nowadays are in crisis in their different interpretations, and managers should catch a problem early for effective change implementation (Goździewska-Nowicka et al., 2017). While a crisis presents a project death risk, practitioners and researchers often fail to consider it in their research. Instead, they concentrate on risk management, which cannot be a fully developed crisis approach (Pheng, 2017; Bugarová & Šimíčková, 2019). This results in the need to recognise and examine crisis management of projects.

Being the biggest crisis affecting the future generation in 75 years, COVID-19 became the subject of numerous research papers (UNICEF, 2022; Harper et al., 2020). It changed how businesses operate and even put organisations under a survival question (Abed, 2021). On the 5th of May 2023, the WHO Director-General claimed COVID-19 to be over as a global health emergency (World Health Organisation [WHO], 2023). Nevertheless, it does not mean a crisis

itself has passed. The entire world continues fighting the effects and consequences caused by the disease.

While the world struggled to recover from the pandemic, the Russian Federation attacked Ukraine in a significant breakthrough in the Russian-Ukrainian War. This was a turning point in the invasion, which started in 2014 (The International Monetary Fund [IMF], 2023). The effect of unjustified and unprovoked aggression first affected energy prices and supplies, but also worldwide security (General Secretariat of the Council, 2023).

Since the war continues, it remains challenging to properly evaluate its complete global economic impact (Markus, 2022). However, it has already changed businesses, not just in Ukraine and Russia but also in some other indirectly affected nations. Numerous companies stopped or perhaps limited their cooperation with the firms in Russia and temporarily left the Russian markets. It creates pressure on the market but also forms a reputation (Balyuk & Fedyk, 2023).

Projects are also facing crisis. In reaction to the new reality, managers are reorganising procedures, redefining goals and increasing support for the team. However, most importantly, they often need to determine if the project can be continued (Hunko, 2023).

Regardless of the continuous nature of the war, there are currently developing scientific reports on its effects on economies and also businesses across the globe (Alwan & Hammadi, 2023; Liakhovych, 2022; Vynnychuk, 2023; Ardan et al., 2023). Because of this specificity, crisis management of projects in the Russian-Ukrainian War has received very little attention. Nevertheless, Ukraine is increasingly serving as a testing ground for many new methods, technologies and developments impacting the neighbouring nations (Horobets & Motuzka, 2023). Consequently, it calls for initiating research and sharing practices.

The relevance of this particular investigation is based on the crucial intersection of crisis management and project management, especially in the context of the continuing Russian-Ukrainian war. The novelty of this work is established through a few essential aspects. To start with, it addresses a much less researched problem question: How can global crises, such as the Russian-Ukrainian war, impact crisis management in projects, which includes the problems experienced as well as the tactics used?

Even though crisis management is a discipline properly studied on its own merit, its application in the particular context of project environments in worldwide crises must be investigated. Hence, this particular research examines how the ongoing Russian-Ukrainian war

has influenced crisis management practices and approaches in a project, identifying its issues and approaches to attain effective results.

To achieve this aim, the following objectives were developed:

- to prepare a scientific outline for crisis and crisis management on organisational and project levels;
- to identify the challenges faced by project managers in the war crisis situation;
- to compile the insights from project managers, highlighting diverse approaches and successful strategies utilised in crisis management within the context of the ongoing conflict;
- to create a structured presentation of the collected experiences, emphasising practical lessons learned and best practices in crisis management for projects operating amid geopolitical conflicts.

Since we are looking for an understanding of the problem and experiences, a qualitative method of research should be applied, an interview in particular. It will provide a comprehensive view of the subject matter.

This exploratory paper employs semi-structured interviews to explore crisis management practices in projects during the Russian-Ukrainian war to identify project managers' challenges and methods in this complicated environment. Along with interviews, a literature review and secondary research were undertaken to help establish a scientific framework and determine important crisis-related factors. The study had limitations, especially in getting a representative sample of encounters, as some project managers had been hesitant to record interviews because of reputational considerations. Strategies including thematic analysis of pattern identification and cross-checking of transcription and interviewer training were employed to relieve these problems and to improve data accuracy and reliability. Data triangulation also confirmed findings by comparing interview information with literature and secondary research. Regardless of these initiatives, the danger of unrecorded interviews being omitted or misinterpreted was recognised, and corrective measures have been initiated to enhance study validity and reliability.

1. THEORETICAL ASPECTS OF CRISIS AND CRISIS MANAGEMENT IN PROJECTS

1.1 Defining crisis, its typology and intersection with risk management

In recent years, a greater focus has been placed on crisis in academic literature. What is interesting is the fact that completing any research on this topic is a theoretical challenge. Using “crisis” as a term to describe a severe impact brings a risk because it lacks a unified definition and is applied generically (Oscarsson, 2021). Thus, any research must start by explaining a crisis and identifying its characteristics – this way, it will be possible to proceed with further classification.

First, it is essential to find the most common definition of crisis, or in other words, the meaning of crisis that is used generically in everyday life. For instance, from a sociological point of view, a crisis is explained as a shift in family dynamics, social inequality, and disrespect of authority. In psychology, this term describes a disruption of someone’s identity by specific factors, while in history, a crisis is considered to be a consequence of rapid technological advancements or the breakdown of social life (Dafermos, 2022). At the same time, in political science, crisis is associated with political leadership errors and failure to overcome governance challenges (Torfing & Ansell, 2016). Finally, in the business sector, a crisis is connected to a reputational threat, shifting markets, fraud, product recalls, and other adverse events that endanger the firm’s profitability (Boin & Hart, 2017). What unites these definitions is the fact that a crisis is typically characterised by a rapid change in the environment with a negative outcome, along with a high degree of uncertainty about the future. This concludes a disruption concept of crisis, which will be used as a fundamental one in this research.

There is another concept of defining crisis, paradoxically different and more positive than a classic one. Wei-ji, or the concept of crisis as an opportunity, combines two opposites. The term Wei symbolises “danger”, while Ji means “opportunity”. This fusion emphasises the idea that two opposites coexist in a crisis (“Crisis as Opportunity”, 2023). Despite criticism from linguists, the concept itself has become more popular and studied thanks to COVID-19. The pandemic has been a real-life example, demonstrating how crises provide opportunities for innovation, adaptation and positive change. Wei-ji challenges the traditional view of crises as purely negative occasions and encourages a more constructive perspective. It shows that despite threats, there are often hidden paths to growth and transformation.

The third way of defining a crisis offers a certain neutrality compared to the previous two ways. This assumes that a crisis is some exposure. A situation of increased visibility is created to highlight the negative and positive aspects of any phenomenon (Gkeredakis et al., 2021). From this perspective, it promotes transparency and encourages creative problem-solving as well as proactive responses and constructive change. Understanding crisis as a form of revelation encourages organisations and individuals not only to respond to challenges but also to embrace the potential for growth and change. This approach is consistent with the idea that, despite their complexity, crises can act as catalysts for innovation and growth, thereby contributing to the resilience and development of individuals, businesses and society.

According to Grundel (2005), ignoring crises is fatal for the world, and their typology is the first step to taking them under control. Thus, he developed a crisis matrix that claims that those events might range from “...conventional (predictable, easy to influence), unexpected (unpredictable, easy to influence), intractable (predictable, hard to influence) and fundamental (unpredictable, hard to influence)...” Coombs (2021), in turn, suggests his own classification using a hierarchy where crisis is a starting point, followed by disasters, public health crises, and organisational crises. The benefit of this approach is the structure it brings, allowing for precise further analysis. Additionally, the hierarchical nature of this classification system helps us prioritise our actions and use resources effectively to mitigate complex challenges.

Another significant classification type was developed by Doern et al. (2018). It categorises crises by predictability (sudden or gradual), scale (minor, major), origin (internal or external), nature (technical and economic), and centrality (people/social/organisational centric). Considering predictability, this system helps with tailoring the preparedness and response actions. If unexpected events require immediate action, gradual ones allow for more proactive planning and mitigation strategies. Depending on size, crises will require different amounts of resources, while knowing the root, nature, and centrality helps with targeting a response.

From the corporate point of view, it is possible to distinguish four main types of crises: financial, personnel, organisational, and technological (Coccia, 2020). Mitroff (2004), in turn, broadens this list and identifies seven groups of significant crisis events, “...economic-related (labour problems, stock market falls, economic downturns, changes in trade policy, sharp declines in profitability), informational (loss of data, data tampering, loss of records, etc.), physical (loss of critical plant and facilities – loss and long-term breakdown, product failures, plant explosions,

long-term quality problems), human resources (death of crucial personnel, in-company vandalism, corruption, resignations), reputation-related (adverse rumours, loss of reputation, tampering with corporate logos and websites, etc.), psychopathic acts (product tampering, terrorism, criminal acts, kidnapping, etc.), natural disasters (fire, flood, gale damage, earthquakes)...". Provided classification advances those that were developed before. It is essential for any company to assess the factors listed above within their environment and make sure to perform a risk assessment and appropriate level of attention.

Some people might find it hard to differentiate between the concepts of crisis and risk. Thus, defining crisis-risk relationships is necessary to prevent misunderstandings. Such belief exists that the best way to differentiate two definitions is to combine them. A Crisis and Emergency Risk Communication (CERC) model is a comprehensive and integrated crisis, risk, and emergency response communication method. "The five-stage CERC model assumes that crises will develop in largely predictable and systematic ways: from risk to eruption to clean-up and recovery on into evaluation" (Reynolds & Seeger, 2005). CERC recognises the unpredictable nature of crises and the immediate response they demand. While emergencies, disasters, and crises share common characteristics, they can be distinguished based on the parties involved, the event's magnitude, and the current situation. In the CERC model, "risk" refers to negative consequences and the probability of those outcomes appearing in the future. Risk communication within CERC aims to inform the public about the expected nature and extent of potential outcomes. Overall, CERC offers a structured and practical approach to crisis communication, focusing on the community's needs during crises, helping ensure effective responses to safeguard well-being. CERC has been presented to practitioners as an instruction published by the U.S. Department of HHS (U.S. Department of Health and Human Services and CDC [HHS], 2018).

As Lerbinger (2012) claims, crisis management starts with a risk management plan and reviewing all possible scenarios that might happen with an organisation in a specific environment. There are similarities with a CERC model from an aims perspective. Similarly, risk management aims to assess and address potential sources of conflict or confrontation, while crisis management specialises in formulating response strategies when such vulnerabilities top in a crisis scenario.

1.2 Crisis management and its approaches

Modern business environment conditions can be described as highly dynamic and complex, which might contribute to a crisis development. In this context, the affected side needs to define all the obstacles, closely monitor them in alliance with their internal environment and implement all the necessary measures for upcoming crises (Sumić & Labaš, 2019). Thus, understanding the definition of crisis management is the initial step in this process.

The majority of researchers reached a consensus on the exact definition of crisis management, which fundamentally lies in a thorough plan of minimisation, managing and prevention of a crisis when it appears (John-Eke & Eke, 2020). However, it is worth mentioning that some scholars also broaden the definition by incorporating a process of recovery from the damaging consequences along with learning and reflection on these events (Abdalla et al., 2021; Jahantigh et al., 2018).

Additionally, a slightly different point of view was presented by Vašíčková (2020), who sees crisis management as a complex of methods, approaches and actions used in case managerial skills are no longer sufficient to reduce the impact of a crisis or avoid potential problems. Furthermore, it is crucial to differentiate crisis management from contingency planning since the latter is an essential component of the former (Karhankova et al., 2022).

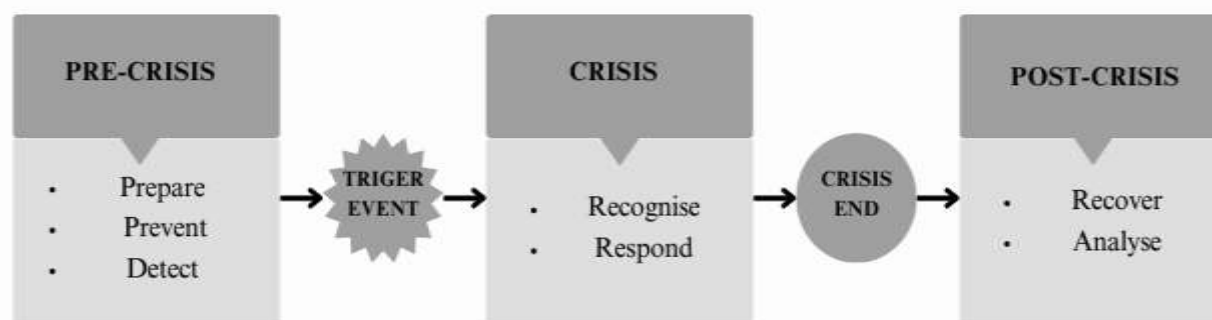
Its stages should be defined to understand the crisis management process further. All the approaches are based on one model, which includes three parts: before, during, and after the event (Romano et al., 2022). The first phase, which is also referred to as pre-crisis, aims first of all to detect the upcoming event. An organisation must prepare for an upcoming crisis and prevent it if the possibility occurs. It is crucial for the company to be constantly updating its crisis plan and have a dedicated team in order to do that. When the trigger event occurs, decision-makers should state a crisis situation to begin the response. At this point, the human factor plays a significant role in crisis management efficiency. The “after” phase is characterised by organisation recovery and analysis of a crisis experience. Likewise, the decision-making team is supposed to report on crisis resolution and begin operating in the usual condition. It is followed by documenting learning to ensure better experiences in the future (Figure 1).

Tokakis et al. (2019) analysed various factors affecting a crisis management cycle in their study. It was reported that the “before phase” has a significant influence on two others. This result

highlights the importance of crisis recognition and preparation, which a company might often neglect.

Figure 1

Crisis management stages and activities



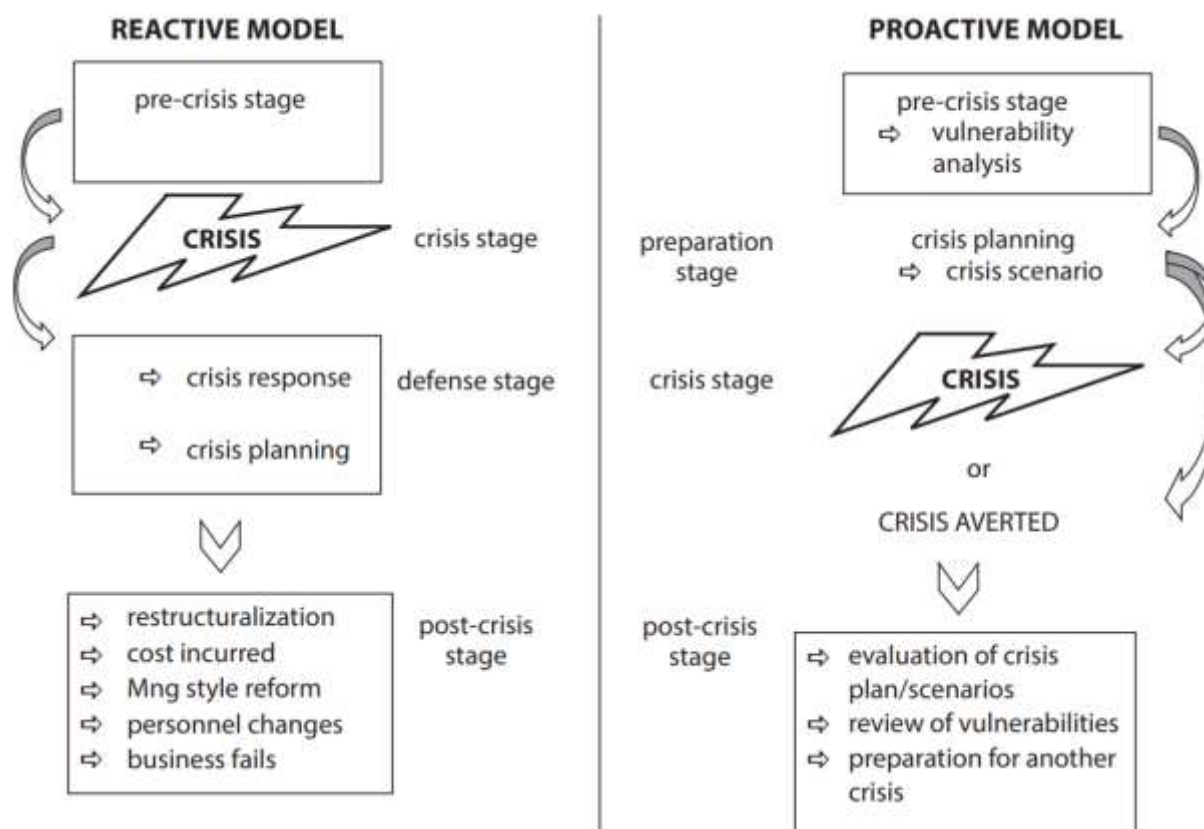
Source: compiled by the author based on Romano et al., 2022.

Again, some studies present a broader classification of crisis management. As support to the previous research result, Pedersen et al. (2020) claim that it is vital to pay more attention to the time just before a crisis occurs since it provides a possibility to react to symptoms at the very root. Similarly, the stage right after the event requires more research since the recovery and preparation for new normal conditions should be appropriately handled. That said, another cycle would consist of pre-crisis normality, emergence, occurrence, aftermath, and post-crisis normality. The author also emphasises dividing each crisis event into parts that are specifically relevant to this event to ensure smoother responses.

Spillan (2000) believes that managers approach crises in two different ways: reactively or proactively. The first way of crisis management involves not taking notice of signals and making decisions after the trigger event has already happened. In this way, all the resources are allocated towards minimising the consequences. In contrast, a proactive approach concentrates more on preventive measures, sometimes even avoidance of a crisis. Thus, the main task while choosing this method is to identify the first crisis symptoms on time. The author emphasises that the choice of method depends on the ratio of the planning investments and future financial losses due to a crisis (Figure 2).

Figure 2

The crisis management approach model by Spillan



Source: compiled by Vašíčková according to Spillan (2000).

Sahin et al. (2015) broaden the list of approaches by adding escaping, solving and interactive types. Using the escaping type, management should continuously monitor the internal and external environment. It improves forecasting and gives a chance to minimise or avoid the consequences. The solving approach focuses on both predicting conditions before a trigger event and on-time problem resolution during a crisis and relies on realistic, systematic and patient analysis. Regarding the interactive approach, it covers all three stages. This crisis management approach involves evaluating the entire crisis process, fostering non-stop learning and communication. While applying this method, the company must be transparent, share crisis effects honestly, and establish a unified policy, leveraging stakeholder contributions for survival.

Choosing a similar approach, Caldeira et al. (2022) presented a crisis readiness definition contributing to Computer Supported Cooperative Work (CSCW) research. This new framework is explained by the company's capacity to anticipate, prepare, and respond to a sudden event that

completely changes the working conditions. The paper also had several interesting outcomes. A crisis, in this case – COVID-19, contributed to adaptability, efficiency, and collaboration. If a company was prepared for the event, it led to the improvement of these criteria.

Thakur and Hale (2022) conducted research on a different perspective of crisis management that is based on a response strategy. This way could be used in case the company confirmed a crisis event. Findings show that within a short period of time, a crisis management team should identify effective activities in an organisation that are working well in the current situation and make adjustments if necessary. Additionally, research highlighted the importance of speed and flexibility as well as technology investments. What is interesting is the fact that forming partnerships with, for instance, delivery companies and collaborating with local communities also helps with crisis management. From the financial point of view, it is beneficial to diversify revenue streams in the opportunity presented.

A different way to manage crises is by using a recovery approach that allows organisations to restore normal operations flow. In their paper, Fabeil et al.(2020) reviewed micro-enterprises and their experience of crisis survival. They implemented some key strategies, including shortening supply chains through centralised distributors, limiting production to products of high demand, digitalising sales, and exploring multi-channel sales strategies. Additionally, they proposed the concept of “centralised wholesale marts” for essential perishable products, suggesting innovation in distribution methods. The study also advised micro-enterprises to consider developing crisis management plans incorporating these strategies to respond more effectively to future crises, ensuring their survival and recovery.

In contrast to previously discussed studies, Eismann et al. (2021) discussed learning management methods from social networks during and after a crisis. The research results suggest three opportunities offered by online networks: “internalising, externalising, and collaboration.” It was also claimed that social media plays an important role in crisis management by providing organisations with various opportunities. It allows organisations to share an understanding of a crisis and coordinate crisis mitigation. Social media helps organisations increase operational crisis response and build trust with an audience as well. To exploit these benefits, organisations must leverage the capabilities offered by online networks and establish open processes for learning and adaptation in crisis management.

1.3. Crisis resilience factors

Different kinds of crises affect different parts of a company, causing problems and making it hard to succeed. Thus, companies are supposed to implement changes in their processes, mechanisms and approaches. There are various studies explaining what exactly is affected and what should be amended in order to overcome a crisis. Undoubtedly, there is no universal decision and one area that can solve the problem. Most often, authors emphasise a group of things, and they usually overlap (Mahmoud, 2023; Buhagiar & Anand, 2021; London Premier Centre, 2023; Riggio & Newstead, 2023; Leigh & Emergency Planning College, 2019; IsoTalent, Inc., 2023; Opany, 2020). It is essential to note that only the areas that can be influenced by organisational management will be under consideration. Therefore, the most common ones to be affected by a crisis are:

- Communication;
- Leadership;
- Decision-making;
- Resource management;
- Motivation;
- Learning and adaptability.

Effective crisis management is based on the optimisation of these critical mechanisms, allowing organisations to navigate through challenging periods and emerge more resilient. Based on that, the overview of each category in times of crisis should be presented.

Communication in crisis management is the exchange of information between an organisation and its stakeholders during and after a crisis event (Zimal & Aysar, 2021). Despite timely and accurate information transfer, Matias and Cardoso (2023) identify three more functions of crisis communication. One of them is stakeholder engagement, which ensures providing reassurance and addressing their concerns. Another function is reputation management. In the empirical research, Dwiedienawati et al. (2021) proved the indirect influence of the quality of communication on a company's reputation. Legal and ethical compliance is also among other functions of crisis communication. It includes ensuring that an organisation's actions and communications align with applicable laws and ethical standards. Ways to do that are providing accurate information, protecting privacy, adhering to regulations, and upholding moral principles while addressing and managing a crisis.

In times of crisis, effective communication is vital for organisations, both internally with employees and externally with the public. Internal stakeholders, in particular, share a closer bond with the organisation. Thus, their psychological experiences during a crisis are more complex. Internal crisis communication includes various scenarios where employees interact within the organisation, communicating with each other or with management. They often play the roles of message senders and recipients (Frandsen & Johansen 2011).

However, a common mistake is the tendency of managers to choose the approach of developing similar strategies of information for both sides, which results in the unsatisfied needs of one group. Internal stakeholders should be familiar with crisis management conditions to avoid creating their own interpretation of the incident and rumours. Managers, in turn, should concentrate on sensemaking during crisis events (Strandberg & Vigsø, 2016).

In terms of external stakeholders, Van Der Meer et al. (2017) divide them into media and interested citizens. In the context of organisational crises, media plays a crucial role in creating initial awareness and framing a crisis. Media coverage is driven by news, and failing to respond effectively to media can lead to the escalation of a crisis. Journalists demand detailed and timely information, especially in the initial phase, so companies should collaborate with them to limit reputation damage. Interested citizens, including consumers, crisis victims, and the public engaged in online discussions about the organisation, have become significant stakeholders due to the growth of social media. Their online communication can have a significant impact on organisations during crises. These stakeholders also seek quick and accurate crisis information, often not readily available to PR professionals. The absence of official information can lead to the spread of misinformation, increased uncertainty, and the potential worsening of the situation.

In the overview of crisis communication, Coombs and Holladay (2009) divide it into pre-crisis and crisis response. The first type is focused on risk prevention using an anticipatory model, which requires extra attention for early crisis detection. Preparation also involves spokesperson training, team decision-making, and exercises to improve crisis management skills. Furthermore, risk communication is also included in this phase. It can enhance community members' understanding of crisis plans and efficacy, which improves crisis response. For the next phase, the authors mentioned Sturges' (1994) framework of crisis categorisation. It divides crisis responses into instructing information (safety-related), adjusting information (empathy and corrective

action), and reputation repair. Instructing and adjusting information during crisis response contributes to a firm's reputation but is often overlooked.

The Situational Crisis Communication Theory is a fundamental research that plays a significant role in the crisis communication field. Coombs (2007) believes that not all crises are the same in the way stakeholders see and react to them since they are affected by the specifications of each event. He also proposes the gradation of crises based on organisational responsibility: victim (an organisation is not responsible), accidental (an organisation is partially a cause), and intentional (an organisation is responsible for crisis). Every type requires a tailored communication strategy so as not to affect the company's reputation. In practice, it means that managers should pay more attention to the organisation's crisis history and typology while creating a response strategy.

Since Coombs mentions media as a valuable factor connected to reputation in his theory, it is essential to consider social media as a modern analogue. Zhao et al. (2020) investigated crisis communication in social media, Twitter in particular, from the perspective of organisation responses' influence on people in different crisis clusters. The study shows the importance of crisis responses that translate sympathy, instructions, constant learning and effective organisational rhetoric for positive public opinion. It was also highlighted that the social media audience reacts more positively to accidental and ambiguous crises rather than to preventable ones. Surprisingly, the research results on diminishing and rebuilding strategies' effect on sentiments did not confirm the traditional SCCT theory. They did not affect people's sentiments during preventable and accidental crises.

This leads to one more crisis communication theory developed by Austin, Liu, and Jin. Social-Mediated Crisis Communication (SMCC) is a modernised approach that highlights the valuable impact of social media on formulating public thought during a crisis. It draws attention to a balanced usage of traditional and social media during crisis communication (Austin et al., 2012). Companies should closely monitor third-party influence and remember that when information about crisis events is published by the organisation itself, people are less likely to research the topic further. Mak and Song (2019) contribute to the topic by differentiating self-involved influencers from typical social media creators. Influencers or leaders of thoughts are a source of strategically valuable insights that have an impact on other users. Their word power can cause extensive debates, potentially escalating crises. Additionally, their followers are resistant to

being pursued by the organisation involved in a crisis, which contributes to possible reputational damage.

In their study, Jaaffar et al. (2023) view the effectiveness of leadership as the most essential topic for organisations during operations in normal conditions as well as during crisis. It was claimed that during challenging events, public motivation rises, and mutual trust is especially entitled (Fener & Cevik, 2015). This happens to be a desired condition that leaders try to create in everyday life. It might seem that leadership in a crisis is a thing of an autocratic nature, but Hertelendy et al. (2022) explain it as a collaborative process. Recognising the authority, capacity and opportunities of specific individuals is another thing crisis management includes. In essence, crisis leadership is about using the strengths and resources of diverse stakeholder groups, fostering collaboration, and navigating the complexity of a crisis to get the best outcomes. De Lacerda (2019) proposes a behavioural frame to be used by leaders during a crisis. Besides embracing a collaborative approach and motivation, a crucial task is minimising mistrust. An effective crisis manager must demonstrate confidence and emotional control. To be a positive influence, a leader must make the team comfortable and communicate effectively. These measures serve to create a barrier against harmful emotions that can tie up effective crisis management. Trust in leadership and emotional stability give organisations confidence and direction, reducing fear and panic among employees.

The executive perspective introduces optimism as a previously overlooked but important contingency dimension of crisis leadership (Monehin & Diers-Lawson, 2022). Optimism is not seen as a flaw but as an essential trait. This allows leaders to take initiative-taking action early in a crisis, recognise opportunities amidst challenges, and use the consequences of a crisis, whether positive or negative, as opportunities for development. If some companies lack such an optimistic perspective, it may explain why they find it challenging to learn from a crisis. Additionally, optimism was constantly defined by successful crisis management as a trait that contributed to their success.

Purnomo et al. (2021) recognise transformational leadership as the best fit to use during a crisis. Referring to this style, Kim et al. (2021) recognise its critical role in performance and facilitating successful change in times of crisis. During a crisis, transformational leadership benefits employees' work-life quality. The study discovered the positive influence of transformational leadership on employees' level of continuance commitment to change. This

highlights the importance of leaders who motivate and inspire their teams during difficult times, which leads to a more profound commitment to organisational change. It was also shown that employees who support change based on their beliefs have a better corporate experience. In contrast, those who feel obligated to support change do not necessarily do so. This factor shows how important it is to have inner motivation and belief in change: being truly committed brings better outcomes for employees in crisis.

Transactional leadership is marked as an unsuitable style to use during a crisis (Bowers et al., 2017). These leaders strictly obey the rules and regulations, and it does not allow them to meet the level of flexibility required for a dynamic and constantly changing crisis environment. In contrast, Bhaduri (2019) states that this leadership style will be the most effective to use in the pre-crisis stage. Similarly, Krause et al. do not recommend using directive leadership during a crisis. It is seen as too autocratic, which might lead to limited responsiveness to dynamic challenges. Even in the case of normal operation, directive leadership is most effective when used by the board members, not CEO managers. Post et al. (2022) recognise the discussed leadership style as helpful in terms of problem resolution. However, by doing this, teams might decrease decision quality, especially while dealing with unfamiliar tasks.

Leadership and decision-making are two intersecting parts of crisis response (Chaskar & Upadhyay, 2023). The latter is supposed to be complementary towards the former in order to achieve strategic goals set by the organisation. They should be context-specific depending on the crisis situation the company faces.

It is known that a crisis brings changes into a decision-making process in comparison with a normal operations situation. It affects people's behaviour by altering the costs associated with it, influencing individuals' attitudes or motivations related to the behaviour, and moderating the relationship between attitude and actual behaviour and decision-making (Urban & Kohlová, 2022). In a state of crisis, there are three decision-making groups: crisis experts, organisations themselves and people affected by the event (Paulus et al., 2022).

Al-Dabbagh (2020) sees the decision-making process through five essential stages. It begins with defining and diagnosing the problem in a very careful way, as this step lays the foundation for all subsequent actions. Accurate problem identification is crucial, as it directly impacts the effectiveness of the following stages. Secondly, once the problem is clearly defined, the process moves on to generating alternative solutions. This phase involves gathering

comprehensive information and data related to potential solutions, evaluating their pros and cons, and assessing the expected outcomes of each option. The next step involves a thorough assessment of these options, where strengths and weaknesses are weighed, ensuring at least two alternatives are compared to make a logical decision that maximises benefits and minimises drawbacks. It is followed by selecting the appropriate alternative. This decision should align with the requirements for resolving the problem while maximising benefits and minimising drawbacks.

Once the selected option is put into action, its consequences start to appear. Decision-making authorities are supposed to closely observe and assess these outcomes, taking into account both favourable and unfavourable results. In cases where the set objectives are not met, it may become necessary to make modifications and adjustments. This cyclical method allows ongoing enhancements and guarantees that the decision-making process remains efficient and flexible in response to evolving crisis conditions.

Decision-making is influenced by how individuals process information and make choices. Two key factors affecting information processing are cognitive capacity limitations and conflicting goals. People have a limited capacity for processing information, so they must carefully select which information to focus on. Additionally, individuals may have competing goals that influence their decision-making depending on their situation and self-awareness (Walumbwa et al., 2014).

Ahmad et al. (2022) state that managers are often exposed to cognitive heuristics in crisis management, such as lack of confidence, self-attribution, and the disposition effect when making decisions. Unfortunately, these heuristics lead to mistakes. In crisis conditions, managers are likely to become too conservative. They start relying on heuristics that impact their judgment and reasoning, resulting in irrational decisions. There is a significant impact of socio-economic backgrounds, which are also affected by a crisis, on strategic decision-making, which

Tabesh and Vera (2020) emphasise the importance of improvisation as a form of decision-making for modern managers facing crisis. The success depends on managers' ability to use both intuitive and comprehensive decision processes effectively. Furthermore, the study highlights the value of knowledge in comprehensive decision-making. People tend to think that improvisation is closely related to spontaneous and instant action. In reality, it is a combination of intuition, complex approach and paradoxical thinking. Organisations can support executive development and training programs to improve expertise in these diverse decision-making approaches, enhancing crisis management capabilities.

Naturally, many people try not to take responsibility for making a decision in order to avoid blame. That, in turn, is triggered by factors like urgency and threat. The time pressure explains the first factor and may result in a lack of certainty in a particular choice. The second one is characterised by crisis consequences that are connected to a negative response. Thus, responsibility pressure is another factor stopping the person (Qin, 2022).

With the development of AI, companies started its implementation in decision-making processes. Practice shows that only a combination of human and algorithmic approaches can fully use the strengths of both methods, potentially leading to better decisions. However, this integration should be implemented with caution and careful consideration. Using AI introduces new challenges and risks. There is a concern about new regulations and auditing procedures. Transparency and interpretability of AI decisions are essential, and organisations must stay updated on interpretable AI developments (Shrestha et al., 2019).

According to Ebrahimi-Sadrabadi et al. (2023), resource management plays a significant role, with resource allocation becoming a critical challenge that directly impacts efficiency and effectiveness. Human resources stand out as the most valuable asset, particularly in service-oriented organisations. Optimal allocation of resources becomes crucial for maintaining resource status, eliminating excess or deficits in different sectors and achieving a balanced resource portfolio.

The effective management of crises relies heavily on the importance of both internal and external resources. The accessibility and sufficiency of these resources play an essential role in sustaining administrative flexibility. Challenges such as budget deficits, stretched personnel, and financial constraints present significant barriers for organisations during crisis management. It is crucial to carefully assess organisational resources, especially in financial, staff, and time areas, to ensure effective crisis management and strengthen organisational resilience (Park et al., 2022).

Fanning et al. (2013) define Crisis Resource Management (CRM) as a structured method for handling resources and decision-making in situations that are both highly stressful and complex. Originating in the aviation industry, this approach is especially applicable in fields where safety and teamwork are of utmost importance, including business. Crisis Resource Management encompasses eleven overlapping principles, as shown in Figure 3.

Figure 3*Crisis Resource Management key points*

Source: Fanning et al., 2013, based on S. Goldhaber-Fiebert, K. McCowan, K. Harrison, R. Fanning, S.Howard, D. Gaba

They can be grouped into four categories crucial for effective responses in critical situations:

- Team Management focuses on the dynamics of leadership and followership during crises, highlighting the importance of role clarity, equitable workload distribution, and prompt requests for assistance.

- Resource Allocation and Environmental Awareness stress the significance of comprehensive knowledge about the clinical environment like understanding critical equipment operations, resource locations, and proactive planning for potential challenges;

- Dynamic Decision-Making is a crucial aspect of crisis situations, acknowledging the challenges posed by making decisions under dynamic and uncertain conditions;

- Effective Communication is recognised as a transfer of information, exploring how social, relational, and organisational structures contribute to communication failures.

Since human resources are often defined as the most valuable ones, it is worth mentioning the team's motivation. Motivation is the driving force behind goal-setting and behaviour selection. It typically stems from an individual's needs and manifests through specific goals (Dweck et al., 2023).

Tao et al. (2022) review three theories: motivational language theory (MLT), self-determination theory (SDT) and the transactional model of coping and stress. The first one provides a language-based framework to boost employee motivation through leaders' strategic speech. MLT identifies three primary forms of motivational language in leader-employee communication: direction-giving, empathy, and sensemaking. These forms work most effectively when used together, aligning with consistent leader behaviour.

At the core of Self-Determination Theory (SDT), a meta-theory of motivation, lies the idea that optimal human functioning relies on meeting three universal psychological needs: autonomy, competence, and relatedness. These needs, crucial to employees' intrinsic motivation and overall well-being, form the foundation of SDT. Within the suggested conceptual framework, it is posited that leaders' motivational language plays a pivotal role as a contextual factor in enhancing employees' satisfaction with psychological needs, especially in challenging times like crises (Deci et al., 2017)⁰. Both Motivational Language Theory (MLT) and SDT converge on underlining the significance of motivational states and sources in elevating intrinsic motivation, thereby impacting outcomes such as job satisfaction and organisational commitment.

A crisis situation causes a reassessment of the fundamental principles of motivational policies, along with the formation of a flexible motivational strategy (Ivanova & Rykun, 2022). Improving the employee motivation system involves addressing all its essential elements. The primary goal is establishing a safe work environment, minimising health risks, and ensuring job stability by offering remote work options, flexible schedules, and financial incentives. Neglecting the non-material aspects of motivation is not acceptable. This includes prioritising a positive psychological state, actively preventing feelings of depression and burnout, and creating an environment that fosters team spirit and a unique work style.

Regarding the third one, there is a direct correlation between an individual's stress level and their confidence in overseeing a threat. To illustrate, a person could perceive spilling coffee as

a minor inconvenience, promptly clean it up, and continue their day. At the same time, another might become upset, allowing it to overshadow their entire day. The interpretation or response to an event frequently holds more influence over our stress level than the event itself. In response to this insight, they introduced a framework known as the Transactional Model of Stress and Coping, designed to assist individuals in navigating stressful situations through objective appraisal and coping strategies (Lim et al., 2023).

The final aspect worth mentioning while discussing a crisis is learning and adaptability. Learning is “a process in which organisations make inferences from the external environment and process the information to transform the organisations according to the demands of the external environment” (Inthavong et al., 2023).

Chen and Lin (2023) believe that when organisations navigate the ever-changing environment around them, they often rely on two key strategies: exploitation and exploration. Exploitation means making the most of what they already know and can do, extending their capabilities to strengthen their position in the market. In contrast, exploration is all about seeking new possibilities, adapting to change, and venturing into new territories, whether with fresh products or entering different markets.

Navigating the complexities of maintaining stability and driving innovation can be overwhelming for organisations. Striking a balance between these two seemingly opposing strategies is crucial for long-term success. Imagine organisations constantly striving to optimise their current operations while simultaneously venturing into uncharted territories to secure their future. Organisational ambidexterity plays a pivotal role in this intersection between efficiency and exploration. It allows organisations to seamlessly shift gears, adapting to ever-changing environments and seizing emerging opportunities. Luger et al. (2018) believe that being adaptable, or “ambidextrous,” positively affects performance. However, it is worth noting that previous research has pointed out the challenges that come with actually developing and implementing ambidexterity.

Achieving ambidexterity in a company can happen in different ways – either by leveraging internal resources or teaming up with external players like suppliers and customers, Gastaldi et al. (2022) believe. In the academic conversation, there is a split: one side focuses on behavioural, cognitive, and social methods (contextual approach) to integrate different activities, while the other side emphasises using the organisation's structure and strategy (structural approach) to differentiate

among units. Contextual approaches encourage behavioural and cognitive shifts, like in manufacturing, where managers might promote lean production practices to explore new ways of creating value while optimising existing assets. On the other hand, structural approaches, like having separate departments for innovation and operations, aim to excel in exploring new ideas or maximising efficiency. Scholars are also exploring hybrid models that blend aspects from both approaches.

In today's dynamic workplaces, standout performers are those who can foresee upcoming needs and seamlessly adjust to evolving job demands. Organisations increasingly seek adaptive performance from their employees, a trait that goes beyond the ability to adapt and extends to actively showcasing this adaptability through one's actual work. Adaptive performance involves a range of behaviours, emphasising the demonstration of adaptability rather than just possessing the capability or intention to adapt. It is recognised as a validated dimension of job performance in broader terms (Loughlin & Priyadarshini, 2021).

Orkibi (2021) sees the connection between adaptability and creativity as complex. They share common ground with the concept of psychological flexibility, which involves adeptly responding to life's changes. Creativity, in simpler terms, is about thinking originally and flexibly, a valuable skill for solving real-world problems.

Mature creativity goes beyond generating ideas. It involves a personal transformation, requiring heightened self-awareness, openness to new perspectives, and a proactive willingness to adjust one's current thinking. This adaptability includes actively changing how one perceives things and developing a mindset comfortable with uncertainty.

1.4 Crisis management in projects

The definition of a project has evolved through the contributions of numerous researchers. Different authors explain it as an endeavour, a task, an organisational structure or a set of related activities (Coemans et al., 2018c, p. 36; European Commission, 2021, p. 5; Fangel, 2018, pp. 24–25; Hedeman et al., 2023, pp. 13-14; Hedeman & Seegers, 2020, p. 3; Zandhuis et al., 2019, pp. 19–20). Nevertheless, they all agree on its temporary nature and its capacity to deliver unique value to an organisation. Some scholars expand the meaning by adding the limitations: company's environment, requirements, budget, time and quality (Coemans et al., 2018c, p. 36; European Commission, 2021, p. 5; Hedeman et al., 2023, pp. 13-14).

Projects are initiated to implement changes, which are categorised into planned, transitional or transformational. If projects can contribute to the first type, another two are the tasks for a programme (Coemans et al., 2018b, p. 36). In turn, a portfolio is a group of projects or programs or its combination that might be unrelated but should be implemented to achieve strategic goals set by an organisation (Coemans et al., 2018a, p. 36).

Project management is the usage of various competencies, tools, techniques and methods throughout all the project phases in the best way possible to achieve the goals (European Commission, 2021, p. 5; Hedeman & Seegers, 2020, pp. 4-5; Fangel, 2018, pp. 24–25). Hedeman et al. (2023, pp. 13–14) broaden the definition by including the aspect of leading and motivating the team members.

The project lifecycle traditionally consists of idea development, identification, definition, delivery and closure phasis (Jones, 2018, pp. 20–26). Hedeman et al. (2023, p. 20) group them into pre-project and project and add the past-project stage. Authors have also developed different interpretations. According to them, the lifecycle includes initiation, planning, executing, closure and monitoring (European Commission, 2021, pp. 13–16). The first four occur sequentially, and the fifth is a continuous process running throughout the project. It is worth noting that a common mistake is to locate monitoring inside the sequence and perform it after the execution phase. Zandhuis et al. (2019, pp. 44–48) argue that the mentioned set of 5 phases should be identified as process groups. The difference between them is the fact that process groups are iterative. Wessels (2019, pp. 14–16) highlights the importance of evaluation conducted at the end of every phase. This process, also known as a milestone, evaluates the correctness of every stage output – deliverable.

In the context of project management, two fundamental approaches, Agile and Waterfall, stand out. The former is characterised by result achievement in iterative and incremental ways – in cycles. The latter is linear, and the result can be seen only at the end of the project (Jones, 2018, pp. 22–23). Combining elements of these approaches can result in a hybrid method.

Various groups of individuals play distinct roles in a project, including governance (typically represented by a sponsor or client), directing (involving a sponsor and a project board), managing (comprising the project manager and the team), and delivery (encompassing the project team and its individual members) (Hedeman et al., 2023, pp. 44-45). Effective collaboration among

these groups is essential for project success, as they collectively contribute to the project's goals and objectives (Hedeman et al., 2023, pp. 44-45).

Wang's (2019) research underscores the vulnerability of projects to crises due to complex interconnections and cascade effects. Typically, project managers approach problems one by one without considering how they might be connected and lead to more significant issues. Instead, they rely on traditional risk management methods and their past experiences when dealing with unexpected events. In contrast, Wied et al. (2021) present two different theories of crises happening in projects. Biased decision-making, inaccurate predictions, and inadequate planning are the reasons why crises happen, according to the anticipatory paradigm. In contrast, the resilience paradigm recognises that unexpected events are meant to happen and do not depend on other factors. However, specific projects are designed in a way that allows them not to suffer from crisis. It might be done on purpose or be completely random.

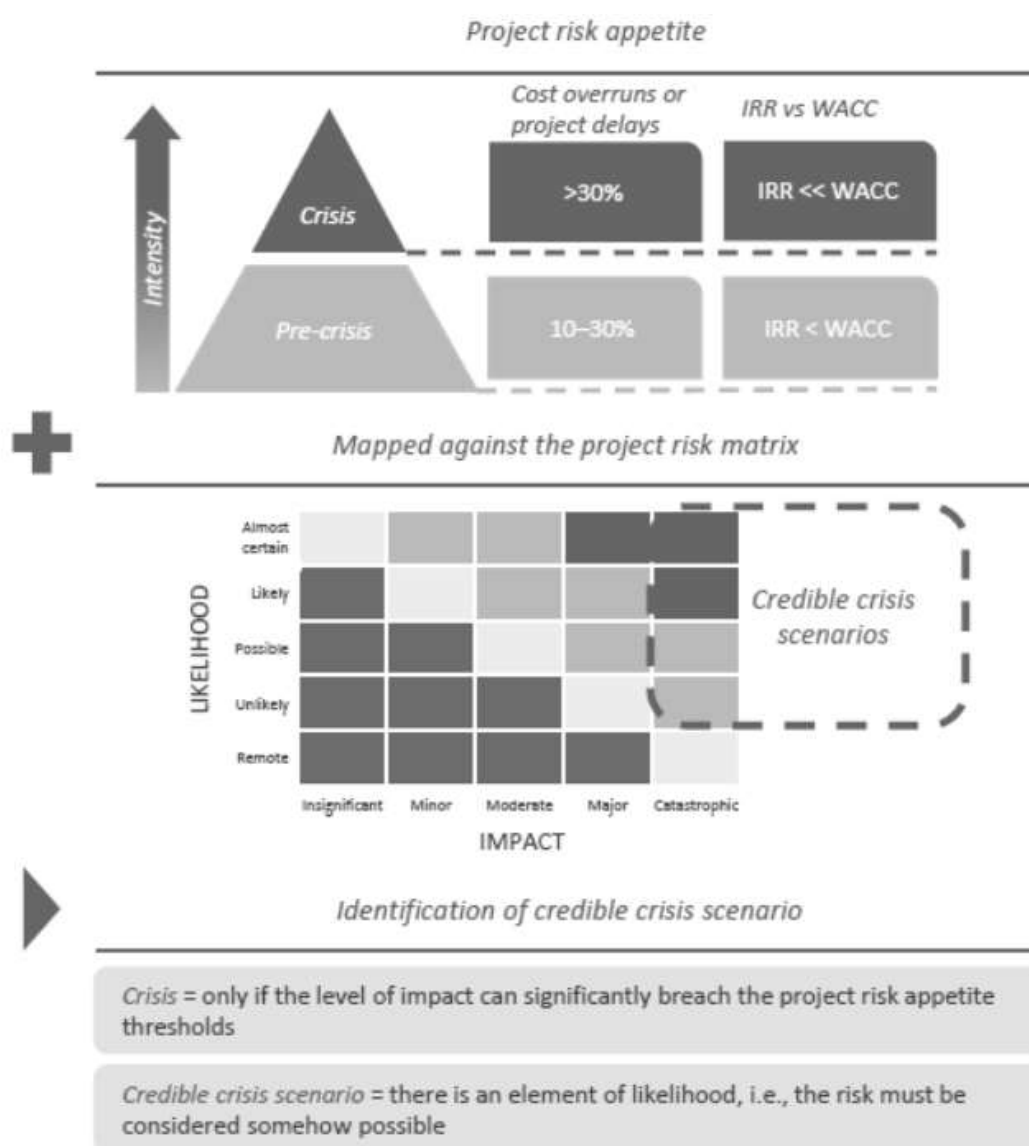
Just like from the organisational point of view, project risk management and project crisis management are closely linked but distinct aspects, according to Watson (2020). Project risk management primarily deals with identifying and mitigating potential risks throughout a project's life, focusing on issues like delays and cost overruns. However, traditional risk management might not be sufficient to avert crises that threaten project success. Project crisis management comes into play when a situation threatens the success or continuation of a specific project (Figure 4).

The connection between the two lies in the understanding that poorly managed risks, such as overly optimistic estimations and inadequate risk analysis, can escalate into crises. An integrated approach is crucial, where organisations not only handle risks to prevent deviations but also establish contingency plans for potential crises, ensuring a strategic response to maintain project viability.

As mentioned before, a crisis can be a threat to a project's success. Zid et al. (2020) claim that project success is achieved when project management efforts effectively align with the established cost, time and quality criteria, resulting in satisfaction and meeting stakeholder expectations. However, IPMA claims this definition might be incomplete (Hedeman et al., 2023, p. 86). According to their ICB4, a project can be recognised as successful when relevant stakeholders are satisfied, and all the project success criteria are accomplished. It is usually the end user who has the most power to recognise success, and he also can influence other stakeholders.

Figure 4

The intersection between crisis management and risk management in projects



Source: Watson, 2020

Adding to the previous point, it is worth mentioning that project success is not merely about meeting deadlines and staying on budget; it is about achieving long-term objectives and delivering lasting benefits (Williams et al., 2022). While practitioners often prioritise efficiency over effectiveness, this tendency can lead to projects falling short of their true potential. The focus on tangible outputs can overshadow strategic aims, and defining and quantifying these goals can be challenging due to stakeholder diversity and the evolving nature of project benefits. It is crucial to

reassess the project's front-end phase regularly and acknowledge the turbulent environments in which many projects operate.

Albert et al. (2018) believe that assessing project success can be approached using hard and soft criteria. Hard criteria, such as adherence to time, budget, and performance goals, are objective and measurable. On the other hand, soft criteria are subjective and difficult to measure, often related to stakeholder satisfaction, organisational learning, and the project's broader impact. While complex criteria provide a clear indication of project completion, soft criteria determine the project's actual value and long-term impact.

Since success criteria are the standards or measures that determine whether a project has been successful, success factors, on the other hand, are the underlying conditions or actions that contribute to achieving those criteria (Hedeman et al., 2023, p. 86). While specific success criteria may be shared across different projects, it is crucial to recognise that each project has its unique context and needs. Some common ones have been listed in the table below.

Table 1

Project success criteria

Criteria	Definition	Significance
1	2	3
Time	The degree to which a project meets its scheduled completion date.	Time is crucial since it measures just how closely the project is working alongside its regular schedule, and this might influence project efficiency and stakeholder satisfaction.
Cost	The effectiveness of the project in staying within the allocated budget.	Cost is a vital criterion as it reflects the financial performance and also the deliverables inside the budget, which is crucial for project viability.
Quality	The level at which the project meets the required standards and specifications.	Quality is crucial to ensure the project outputs meet the specifications and standards essential to stakeholder acceptance.
Project Scope	The clarity and definition of project goals and objectives and their fulfilment.	The scope is crucial since the project goals and objectives are essential for the project.
Stakeholders' Satisfaction	The extent to which the project meets or exceeds the expectations of its stakeholders.	Stakeholder satisfaction is crucial because it determines if the project meets or exceeds the expectations of all those involved or influenced by the project, therefore evaluating its overall success.

Continuation of Table 1

1	2	3
Top Management Support	The level of support and involvement provided by top management for the project.	Support from the top management is crucial for affecting project success in terms of alignment, direction, and resources, especially in IT projects.
Resources Availability	The adequacy and efficient use of resources (both material and human) for the project.	Resource availability is crucial for ensuring the project has sufficient and appropriate resources for completion.
Project Risk Management	The ability to find, assess, and mitigate risks throughout the project.	Risk management is crucial for determining, evaluating and minimising the risks to ensure the project continues and meets the preferred objectives.

Source: compiled by the author based on Hedeman et al., 2023; Santos et al., 2020; Al-Shaaby and Ahmed, 2018

Crean (2023) highlighted an interesting connection between crisis management and project management in his research. Apparently, proficiency in project management is crucial for effective crisis response in organisations. This aligns with project management principles, emphasising scope definition, strategic resource allocation, and strong leadership. Organisations perceive crises differently, either as significant operational impacts or deviations from project expectations. The Project Management Office (PMO) handles crisis management when it aligns with project issues, while a crisis control manager, similar to a project manager, addresses business-wide crises. Both disciplines prioritise task efficiency and resource allocation, making project management skills seamlessly transferable to crisis management for enhanced resilience and agility.

In turn, Simard and Laberge (2018) proved that the approaches, methods, and experiences from organisational crisis management can also be used in project management. This knowledge will be especially valuable for a deeper understanding of the pre-crisis phase. Hence, exploring communication, leadership, decision-making, resource management, motivation, learning, and adaptability in crisis management within projects would be beneficial as well.

To add context to the research, it is essential to concentrate on the specific crisis. Nowadays, the Russian war against Ukraine is named to be “the biggest war in Europe since 1945” (BBC News, 2022). Undoubtedly, it has affected the economy, companies and projects. Its impact on the global economy and its intersection with its effect on organisations is provided in Table 2.

Table 2*Impact of Russian-Ukrainian War on global economy and organisations*

Category	Explanation of Disruption
1	2
Supply chains	War has destroyed worldwide supply chains, triggering shortages of raw materials, components and finished products. This has made it more challenging for organisations to obtain the required materials to produce their products, resulting in manufacturing delays, increased costs and lost sales.
Energy markets	Energy prices have jumped because of the war, with Russia and Ukraine leading exporters of oil, coal and gas. This has driven up energy bills for organisations, straining their margins and requiring them to pass some costs onto customers.
Financial markets	The financial markets have been volatile because of the war - with investors attempting to assess the potential financial and political fallout. This has resulted in declining stock prices, thereby reducing organisations' investment value and rising bond yields, thereby increasing the cost of borrowing funds for organisations.
Currency markets	The war has pulled the Russian ruble lower as investors have left the country, searching for more secure areas. This has made it costlier for companies to trade with Russian suppliers and clients and also made it more challenging for organisations to recover profits from Russia.
Political stability	The war has destabilised the area, and its chances of further instability and conflict are greater. Organisations have struggled to be competitive in the region on account of increasing political and regulatory risk.
Humanitarian crisis	Humanitarian catastrophe: Millions are evacuated from their homes because of the war, and millions more face food insecurity along with other plights. This has damaged organisations operating in the area, who are usually asked in order to help with humanitarian aid efforts or even to assist employees and their loved ones impacted by the crisis.
Cybersecurity	Along with the direct risk of war itself, cyberattacks are an expanding risk due to both state-sponsored and non-state actors looking to monetise the battle for their very own agendas. This has necessitated organisations to invest in cybersecurity measures, driving up costs and also diverting IT resources from various other tasks.
International cooperation	The war has complicated global cooperation, placing pressure on nations to work in concert on everyday issues, including pandemics and climate change. This might hinder organisations' attempts to penetrate new markets or even to collaborate with partners on cross-border projects.

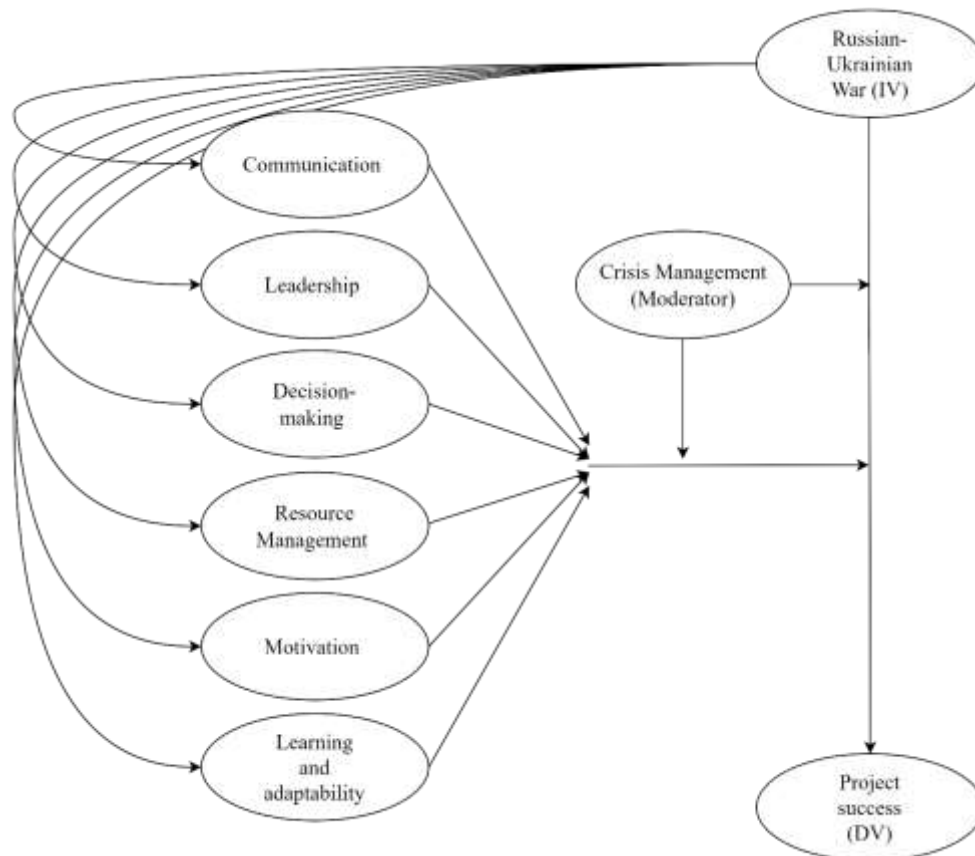
Source: compiled by the author based on White et al., 2023; Jorgensen et al., 2023; Yong Rhee et al., 2022

After identifying the impact on the macro and micro level, it is worth analysing the impact of the Russian-Ukrainian War on projects and the ways management coped with it. Based on the conducted theoretical review, the conceptual framework model was developed (Figure 5), where:

- The Russian-Ukrainian War is an Independent Variable (IV), and Project success is a Dependent Variable (DV). There is a direct cause-and-effect relationship between the Russian-Ukrainian War and the ability to deliver a successful project;
- Also, there is an indirect influence of the War on the Project's success through 6 different factors: communication, leadership, decision-making, resource management, motivation, learning, and adaptability;
- Crisis Management is identified as a Moderator variable since it can change both direct and indirect impact.

Figure 5

Conceptual framework



Source: compiled by the author

2. RESEARCH METHODOLOGY

Researchers have come up with a wide range of approaches to study the complexities of crises and crisis management since this topic has been relevant for quite some time. Wut et al. (2021) emphasised that scholars have utilised various approaches. In order to better understand crises and crisis management, he analysed the most popular research methodologies. Their results are shown in Table 3.

Table 3

Analysis by research methodology (N = 512)

Type/design	Frequency	Percentage (%)
1	2	3
<i>Research type</i>		
Quantitative	215	42
Qualitative	174	34
Conceptual	99	19.3
Mixed method (Quantitative + Qualitative)	24	4.7
<i>Research design</i>		
Exploratory design (qualitative)	159	31.1
Survey	139	27.1
Conceptual/Others	116	22.7
Secondary data	74	14.5
Mixed method	24	4.7
<i>Statistical/analysis method</i>		
Case study	85	16.6
Content analysis	81	15.8
Descriptive analysis	54	10.5
Regression analysis	40	7.8
Structural equation modelling	30	5.9
Mixed	22	4.3
Factor analysis	16	3.1
Analysis of Variance	13	2.5
Time Series	13	2.5
Correlation analysis	8	1.6
Chi-square test	6	1.2

Continuation of Table 3

1	2	3
Cluster analysis	6	1.2
T-test/Mann-Whitney test	5	1.0
Qualitative comparative analysis	3	0.6
Conjoint analysis	1	0.2
<i>Not applicable/Other</i>	129	25.2
<i>Total</i>	512	100

Source: Wut et al., 2021

In support of the previous research, Baškarada and Koronios (2018) are discussing an ongoing debate in “crisis literature”. Scientists are prone to agree that the methodology should be based on the aim of the paper and the personal preference of the author. Additionally, it was highlighted that scientific works in social sciences are highly context-based and more often associated with qualitative research.

According to Tohen et al. (2015), qualitative research “typically seeks to answer questions about the ‘what’, ‘how’, and ‘why’ of phenomena, and its common distinguishing feature is that studies often aim to explore and understand, rather than measure phenomena and behaviours”. The aim of the research is to investigate the impact of the ongoing Russian-Ukrainian war on crisis management practices and strategies within a project, focusing on understanding the challenges faced and the approaches used to ensure its effective outcomes. Thus, a qualitative method of research was chosen. According to the aim, thesis tasks were formulated as well:

1. To prepare a scientific outline for crisis and crisis management on organisational and project levels;
2. To identify the challenges faced by project managers in the war crisis situation;
3. To compile the insights from project managers, highlighting diverse approaches and successful strategies utilised in crisis management within the context of the ongoing conflict;
4. To create a structured presentation of the collected experiences, emphasising practical lessons learned and best practices in crisis management for projects operating amid geopolitical conflicts.

An exploratory design is especially suitable for this particular study since it aims to collect preliminary information and data about an unexplored or new area of research. Using the aim as a starting point, exploratory design is going to help the researcher understand much more about the

issues and strategies of project managers in this particular setting. All data collection will be done via semi-structured interviews to facilitate flexibility and get as much supplemental information as possible. The research also included a literature review along with secondary research. This allowed to achieve Aim 1 - creating a scientific framework. Definitions of crisis and crisis management and approaches were presented. Also, six factors impacted by a crisis were determined: communications, leadership, decision-making, resource control, motivation, adaptability and learning.

Thematic analysis was selected as the type of analysis. It is a better methodology for this study since it offers a systematic framework for analysing qualitative details such as for instance, textual information (notes) or interview transcripts. This way, the researcher can identify patterns, themes and trends within the data. It helps the extraction of information on the more significant effect of the war on project management practices and strategies.

Purposive sampling is the optimal sampling technique for this research. Purposive sampling selects participants based on criteria related to the research question. In this particular regard, project managers ought to have firsthand experience managing crises in the context of geopolitical crises such as, for instance, the Russian-Ukrainian conflict.

The minimum criteria for purposive sampling in this study:

- Project managers who have managed projects directly affected by the Russian-Ukrainian war;
- Project managers with varying levels of experience, from junior to senior level;
- Project managers with diverse industry experience (at least two industries).

By selecting participants according to these criteria, the researcher can ensure that various experiences and perspectives are recorded, resulting in even more robust and generalisable findings.

In most cases, semi-structured interviews were conducted through Microsoft Teams, Zoom platforms, and some messengers like Telegram. To begin with, the researcher contacted participants through social media: LinkedIn, Telegram, and Messenger. A first contact message was sent to confirm whether the potential respondent was interested (Annex 1). If an answer was positive, an informative e-mail was delivered to every participant a week before the meeting outlining the research and the interview's objectives (Annex 2). It was also requested for the

meeting to be recorded. This would help to facilitate a quicker and more thorough information-gathering procedure. The example of the interview held is available in Annex 3.

The study had some limitations despite the well-structured methodology and selection criteria. The analysis's focus on project managers with first-hand experience managing crises in the context of geopolitical war is one of its limitations. Given that the topic includes project problems and challenges, several PMs decided not to discuss all of them. Several of these people stated the risk of reputational damage as an explanation.

Semi-structured interviews may also restrict the potential for insights. These interviews offer flexibility and depth but do not capture all the facts and experiences involved in managing the Russia - Ukraine crisis. This could result in valuable feedback being left out from people with different backgrounds, perspectives, and life experiences.

Additionally, with the non-recorded interviews, some valuable information can be skipped or not noted down. This led to a lack of accuracy. Furthermore, the note-taking process contributed to the meeting duration, leaving less time for a discussion.

Several strategies were employed to address these limitations to enhance the reliability of the research. First, a training interview was held for the interviewer to practice conducting semi-structured interviews reliably. This ensures the process is standardised and follows a defined set of guidelines. Second, the interview transcripts (if applicable) are transcribed by software and an independent transcriber to ensure accuracy. This cross-checking process minimises transcription errors and reinforces the reliability of the transcribed data. The researcher also employs strategies to strengthen the validity of the findings. Thematic analysis, the chosen method of data analysis, is a systematic and rigorous approach to identifying patterns, themes, and trends within qualitative data. This method helps to ensure that the findings are grounded in the data and are not simply the researcher's interpretations. Moreover, the anonymity of the interview and its publication process were further explained to avoid trust and confidentiality uncertainty.

Finally, triangulation is employed to cross-validate the findings using multiple data sources. This involves comparing the findings from the interviews with the literature review and secondary research. This multi-faceted approach enhances the validity of the findings by ensuring that they are consistent across different sources of data.

By employing these strategies, the researcher aims to minimise the limitations of the study and maximise the reliability and validity of the findings. The qualitative approach, with semi-

structured interviews and thematic analysis, provides a valuable tool for investigating the impact of the Russian-Ukrainian war on crisis management practices and strategies within projects. However, it is essential to acknowledge the potential limitations and adopt strategies to enhance the robustness of the study.

The interview script (Table 4) consisted of 4 parts, 9 subparts, each addressing the specific aim of the research. 11 core questions (a) were supplemented by follow-up questions (b., c.) in particular cases due to the semi-structured nature of the interview. Additionally, the order of questions and topics might vary depending on the respondent. The participants were encouraged to share their firsthand experiences without involving a third party.

Table 4

Semi-structured Interview Script

Part	Subpart	Question(s)	Relevance to Aims
1	2	3	4
Introduction	PMs' Personal Information	“Name: Position/Title: Years of Experience in Project Management: Industry/Field:”	N/A
	War Impact Assessment	a. “How has the ongoing war in Ukraine directly affected your current or past projects? Please rate the impact from 0 to 5, where 0 would be “no impact” and 5 – “dramatic impact.” b. Can you identify specific challenges or disruptions caused by the war that impacted project timelines or goals, etc.? c. Share any instances where the war has led to changes in stakeholder expectations or project priorities for projects in your industry or field.”	Aim 3 - Examining firsthand experiences with crisis management: These questions directly address the impact of the war on projects, challenges faced, and changes in stakeholder expectations, contributing to understanding the challenges faced by project managers.

Continuation of Table 4

1	2	3	4
The Impact of War on Project Aspects	Crisis Management Approach	<p>a. “How has your organisation adapted its crisis management framework or methodology to address the industry-specific challenges posed by the war?</p> <p>b. Specify the crisis management tools or methodologies employed to manage project risks and uncertainties arising from the war effectively.</p> <p>c. Describe the mechanisms in place for identifying, assessing, and prioritising risks related to industry-specific disruptions, supply chain bottlenecks, or specialised labour shortages.”</p>	Aim 1 - Preparing a scientific outline for crisis and crisis management on organisational and project levels: These questions focus on how organisations have adapted their crisis management to address war-related challenges, contributing to the overall understanding of crisis management approaches.
	Resource Management	<p>a. “How has resource allocation and utilisation changed in response to the war?</p> <p>b. Can you provide examples of resource management decisions that influenced project outcomes during the crisis?”</p>	Aim 1 and 3 - Preparing a scientific outline for crisis and crisis management; compiling insights and highlighting diverse approaches and successful strategies in crisis management: These questions provide insights into resource management decisions during the crisis, contributing to the understanding of effective resource utilisation and decision-making.
	Leadership Style	<p>a. “How has your leadership style evolved or adapted during the war to lead your project team effectively in your specific industry or field?</p> <p>b. How do you maintain team morale despite the challenges presented by the war?”</p>	Aims 1 and 5 – Preparing a scientific outline for crisis and crisis management; examining firsthand experiences with crisis management: These questions explore the adaptive leadership style during the war and strategies for maintaining team morale, contributing to understanding effective leadership in crisis situations.

Continuation of Table 4

1	2	3	4
The Impact of War on Project Aspects	Communication Strategies	<p>a. “Describe the communication strategies employed to keep stakeholders informed and aligned during the war.</p> <p>b. How do you address communication challenges arising from the war, such as disruptions in regular channels?”</p>	<p>Aims 1 and 3 - Preparing a scientific outline for crisis and crisis management; compiling insights and highlighting diverse approaches and successful strategies in crisis management: These questions delve into communication strategies during the war, contributing to the understanding of effective communication in crisis management.</p>
	Decision-Making Processes	<p>a. “How has the decision-making process been influenced by the uncertainties and challenges brought about by the war?</p> <p>b. Can you share an example of a critical decision made during the war and its impact on the project?”</p>	<p>Aim 1 - Preparing a scientific outline for crisis and crisis management on organisational and project levels: These questions focus on the impact of uncertainties on decision-making and provide examples, contributing to understanding decision-making processes during the war.</p>
	Motivation and Team Dynamics	<p>a. “How do you foster and maintain team motivation in the face of adversities caused by the war?</p> <p>b. Are there specific team-building activities or approaches you find effective during times of crisis?”</p>	<p>Aims 1 and 3 - Preparing a scientific outline for crisis and crisis management; examining firsthand experiences with crisis management: These questions explore motivation and team dynamics during the war, contributing to understanding effective strategies for fostering team morale in crisis situations.</p>
	Learning and Adaptability	<p>a. “Which 'lessons learned' will you incorporate and insights from previous projects to enhance your crisis management capabilities in the future?</p> <p>b. Describe the mechanisms in place for continuous adaptation to effectively navigate the uncertainties and challenges posed by the war.”</p>	<p>Aims 3 and 4 - Compiling insights and highlighting diverse approaches and successful strategies in crisis management; creating a structured presentation of collected experiences: These questions explore the learning and adaptability aspects, contributing to understanding how organisations enhance crisis management capabilities.</p>

Continuation of Table 4

1	3	4
Project Success Indicators	<p>a. “How do you define and measure project success, especially considering the unique challenges posed by the war?”</p> <p>b. Can you share a project success story that emerged despite the adversities of the war?”</p>	<p>Aim 3 - Compiling insights and highlighting diverse approaches and successful strategies in crisis management: These questions focus on defining project success and provide examples, contributing to the identification of success indicators during the war.</p>
Summarising part	<p>“a. Did you see the crisis caused by the war as a negative phenomenon, an opportunity or a “spotlight?”</p> <p>b. Summarise your key takeaways from this experience of managing projects during the ongoing Russian-Ukrainian war.</p> <p>c. Rate the impact of the war on a project's success through six factors: communication, leadership, decision-making, resource management, motivation, and learning and adaptability. The rating scale is from 1 (minimal impact) to 5 (significant impact), focusing on areas where crisis management was most needed due to the war.”</p>	<p>Aims 3 and 4 - Compiling insights and highlighting diverse approaches and successful strategies in crisis management: These questions aim to summarise key takeaways and lessons learned, contributing to the identification of strategies and recommendations for project managers in crisis situations.</p>

Source: compiled by the author

3. RESEARCH RESULTS

3.1 Interview process and general overview of the topic

According to Hennink and Kaiser (2022), in order for research to assess saturation using the interview methodology, a narrow range of interviews should be set on 9–17 respondents. Thus, the number of qualified participants is 12 people. The interview process was stopped since the needed saturation level was reached, i.e. the information from the respondents started becoming repetitive. The average duration of the interview was 40 minutes. During the meeting process, one interview was identified as unqualified because of a misunderstanding of the criteria. Since not a large number of people approved the recording request (two respondents), the author was noting down the most essential takeaways during the interview.

To start with, general professional data about the interviewees was gathered. Since the interview is anonymous, only a position, experience, and sector will be provided in the list:

- Project Manager 1: PM, 3 years of experience, current sector – software development for education, worked IT;
- Project Manager 2: PM. 2 years of experience, current sector – charity organisations, worked in non-profit and governmental organisations;
- Project Manager 3: Product Owner, 13 years of experience, current sector – software development, worked in the military, aviation, IT and consulting;
- Project Manager 4: HR PM, 12 years of experience, current sector – HR, worked in consulting and education;
- Project Manager 5: Sales PM, 9 years of experience, current sector – sales, worked in aviation, consulting, marketing, and engineering;
- Project Manager 6: PM, 3 years of experience, current sector – psychology, worked in IT and software development;
- Project Manager 7: PM, 4 years of experience, current sector – IT and software development, worked in finance, marketing;
- Project Manager 8: PM, 2 years of experience, current sector – software development for education, worked in banking;
- Project Manager 9: PM, 4 years of experience, current sector – translation and localisation;

- Project Manager 10: Team Manager, 13 years of experience, current sector – banking, worked in HR;
- Project Manager 11: CEO, 7 years of experience, current sector – IT and software development;
- Project Manager 12: Senior PM, 7 years of experience, current sector – IT, worked in entertainment and automation;

It is important to note that 50% of respondents (Project Manager 1, Project Manager 4 (partially), Project Manager 6, Project Manager 8, Project Manager 11 and Project Manager 12) were located in Ukraine throughout their project(s) duration. All twelve PMs had stakeholders from Ukraine with different impact levels. This factor also affected their experiences and answers, which will be highlighted in the following subparts.

Following the conceptual framework (Figure 4), the direct impact of the Russian-Ukrainian War on project success was investigated. Also, indirect impact through the project aspects such as communication, leadership, decision-making, resource management, motivation, learning, and adaptability were also defined. Except for challenges, strategies and coping mechanisms used by project managers were collected.

Russian invasion presented multiple risks to various projects. In the theoretical part, it was defined that unmanaged risks can transform into a crisis. Thus, with war as a global crisis, smaller ones can appear, which can also be dangerous to the project's success. The most common risks caused by the war were defined by interviewees:

- personal security risks;
- call for the military service;
- blackouts;
- supply chain disruptions;
- cybersecurity threats;
- overcomplicated regulatory process;
- talent shortages;
- employees' mental unrest.

Additionally, all twelve respondents confirmed that the time frame of their projects was affected by the crisis. It was caused by multiple reasons: increased number of regulations and bureaucracy, change of the project team, low productivity, change in project goals and re-planning,

blackouts and unsafe work environments, logistic issues, and format change (offline to online). In turn, project duration prolongation became one of the reasons for the budget change. The financial part of the projects was also affected by resource prices, logistics, increased funding opportunities (for the charity sector), decreased taxes in Ukraine, and insurance expenses. Additionally, in the charity and HR sectors, the war provoked the initiation of new projects.

Regarding the goals, only 25% of the respondents claimed that the crisis provoked some changes. There are two main reasons why projects experience this. The first one would be the initial complexity of goals: in crisis situations, they become unrealistic, and it can be agreed to make them more achievable. What is interesting is the fact that, for instance, in the charity industry, goal correction might bring more complexity. PMs and sponsors can make this decision based on additional funding or end users' feedback, for instance. Thus, a project becomes more complex and brings more value at the same time.

Stakeholders' expectations changed mainly for projects with a PM or a project team located in Ukraine. Otherwise, even the direct impact of war could be treated as a "global crisis", not the one happening in a project. Furthermore, even in the first situation, there is a tendency to come back to the "pre-war" scenario. As Project Manager 3 mentioned, the end-users were understandable and supportive of the development team located in Ukraine. They appreciated the fact that the people were working despite the blackouts and air raids. Later on, with the start of military actions in Israel and the Gaza Strip, the company management itself returned to the "normal life" expectations.

In conclusion, the research involved interviewing 12 project managers to examine the direct and indirect consequences of the Russian-Ukrainian War on project success. Representatives from various sectors, including software development, charity, HR, sales, psychology, translation, and banking, offered valuable insights into the challenges, strategies, and coping mechanisms employed during the crisis. Notably, 50% of the respondents were situated in Ukraine, which significantly impacted their experiences and responses. The war-induced risks contained concerns about personal security, military service call-ups, blackouts, supply chain disruptions, cybersecurity threats, regulatory complexities, talent shortages, and employee mental unrest. The crisis resulted in extended project timelines due to increased regulations, team changes, reduced productivity, blackouts, unsafe work environments, logistical challenges, and transitions from offline to online formats. Budget modifications were attributed to changing resource prices,

logistics, increased funding opportunities (particularly in the charity sector), reduced taxes in Ukraine, and insurance expenses. While some projects adapted their objectives to align with the crisis reality, stakeholder expectations changed, particularly for projects with teams based in Ukraine. The findings highlight the necessity of adaptable strategies and resilience in project management to navigate the complex and evolving challenges posed by geopolitical crises.

3.2 Crisis management approaches amid Russian-Ukrainian War

According to the theoretical part of the review, organisational crisis management approaches can also be utilised in projects. Thus, using the model provided by Vašíčková (2022) (Figure 2), it can be concluded that crisis management approaches in projects can also be divided into reactive and proactive. It is worth noting that a project, by its nature, is a temporary endeavour. In the situation of a long-lasting and ongoing global crisis, it is possible that the completion of a project may occur before the resolution or conclusion of the crisis itself. This is the case of a global crisis only. Nevertheless, as was mentioned before, projects also faced crises on a smaller scale.

The interview process proved that 9 out of 12 respondents used a proactive crisis management approach. In other words, they started planning how to deal with a crisis before it occurred. For instance, Project Manager 1 developed only a risk registry to prevent crises, which is “longer than it has ever been” due to unpredictable outcomes. Additionally, the PM described a situation of risk becoming a crisis: his core team member was called to the army service, and a replacement was needed. “Before the project started, I made a list of potential team members, so when one person left, I could find someone else in a short term” – he claimed. Without a backup, the project would result in a significant delay or even closure since it was the loss of a senior specialist, a key knowledge holder. Hence, it is seen how the pre-crisis phase can affect the rest 2 of them. The case from Interviewee 2 was about mental help for the project managers themselves. Because of the industry specifics, it is compulsory for PMs to have therapy sessions throughout the project to prevent burnout. Significant resources have been allocated to prevent the development of internal crises.

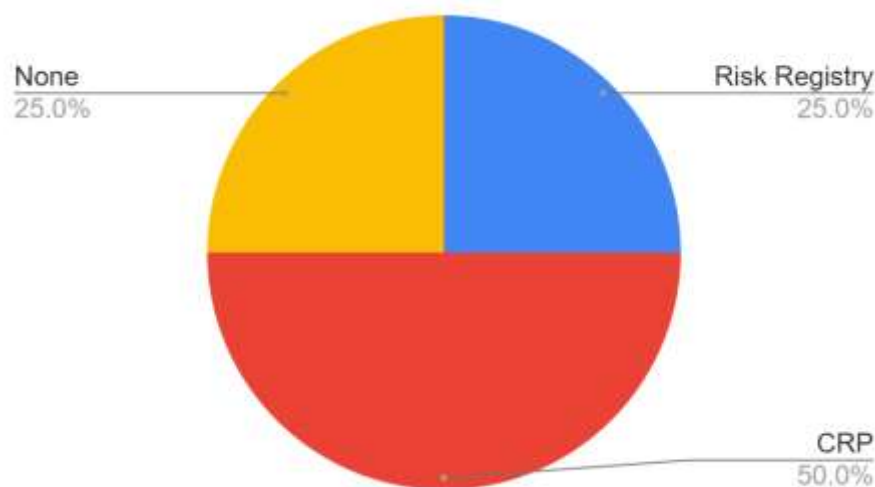
On the other hand, there are instances where a reactive crisis management approach is a more reasonable choice. For instance, Project Managers 6 and 11 were not able to complete any prevention plan because of a lack of resources, which in one case ended with a project closure. In

the case of Interviewee 9, the cost of preventive measures was higher than the loss. Thus, the decision was made not to try to mitigate a potential crisis.

Additionally, depending on the scope and complexity of the project, different tools can be used to manage a crisis (Figure 6).

Figure 6

Crisis management tools



Source: compiled by the author

Some managers may stick to basic risk assessments without specialised tools for projects with straightforward and predictable risks. On the other hand, complex projects with higher uncertainty might benefit from using a detailed risk registry to address risks throughout the project's life proactively. Getting a specialised crisis response strategy in place is crucial in case of high crisis likelihood or maybe unexpected obstacles. This program details specific jobs, duties, and communication approaches to assist the project team in overcoming obstacles and maintaining the emphasis on the project's goals.

As a conclusion, the investigation of project crisis management techniques displays a "competition" between proactive and reactive approaches. Using the points of view of twelve project managers, it is clear that a proactive approach and tools such as comprehensive risk registries and preventive measures are often preferred. Project Manager 1 's strategy for swiftly changing a staff member and Interviewee 2 's industry-specific mental health assistance are two good examples of the proactive steps utilised to avoid crises. As revealed in the cases of reactive crisis management in Project Managers 6 and 11, the possibility of such methods is contingent

upon things such as the accessibility of resources. As observed, Interviewee 9's choice was not to ease a future crisis because preventive steps are much more costly. Hence, the cost-benefit analysis is a crucial element in decision-making. The use of crisis management tools, shown in Figure 6, underscores the adaptability required in project settings. It ranges from basic risk assessments to detailed risk registries and dedicated crisis response plans based on project complexity. This dynamic approach aligns with the temporary nature of projects. It also emphasises the need for flexible strategies to navigate uncertainties effectively.

3.3 Resource management

During a theoretical analysis, it was concluded that the most important categories of resources in terms of crisis management are people, time and finances. The respondents clearly supported this statement.

Despite that, not all of them could provide some strategies they use for managing those resources. The majority of project managers elaborated on this fact with a “learning from previous crises” approach. The standard strategy is applying so-called “buffers” for resources. Interviewee 9 claimed that since his projects are usually of small scope, he uses that method to request the most significant possible buffer and then deliver a project earlier. The concept of incorporating buffers, or reserves, in resource management strategies stems from the principles of risk mitigation and contingency planning. This approach involves allocating additional resources, in the form of time, budget, or personnel, over the initial project estimates to provide a margin of flexibility for unexpected delays or disruptions.

Intersecting with a problem, Project Manager 1 faced – the absence of his core team member, there was a need for additional human resources. The respondent shared an interesting insight into the increased supply of human resources in the Ukrainian IT industry. Since male employees are now associated with a risk of being called for military service, fewer employers are willing to hire them. Hence, they are agreeing to take a role that is not suitable for their experience. For instance, a development team lead could agree on taking a mid-developer position. PM 4 has the same experience and noted that it might be beneficial for the short-term project but affects employees' motivation.

Global supply chains felt the aftereffects of the conflict, posing challenges for projects dependent on external resources. PM 11, who is a CEO, explained, "Materials that were available

before became scarce. We had to diversify our suppliers and also change project timelines to account for potential delays." This highlighted the importance of building flexibility into project timelines and constant research of external stakeholders.

At the same time, Respondent 2 highlighted the increased financial investments in charity. It allowed the foundation to start new projects and diversify the old ones. Except for the positive moments, it brought difficulties with allocating financial resources inside the program. Complex industry regulations, as well as the ones inside the foundation, created conflicts between the project team and the financial department, which are still to be solved.

The trend of remote work, accelerated by the pandemic, overlapped with challenges posed by the war. Project Manager 10 highlighted, "Managing a globally dispersed team became more complicated. It requires a reassessment of our remote work strategies." Communication gaps, time zone differences, delays and the emotional impact of the conflict all played a role in reshaping work dynamics. The respondent noted, "Working online became a challenge and an opportunity at the same time. We invested in our virtual collaboration tools and started fostering a more supportive team culture to mitigate the impact of the war on our work dynamics. Still, the company is looking into changing the remote work policy."

Following the theoretical part of the research, PMs were asked to define Crisis Resource Management. Only two respondents with experience in aviation could recognise the definition, even though they have never used this model from a project perspective. Surprisingly, when respondents were told about the principles, most accepted it as a good baseline for research management. A theory on this matter was shared with 2 PMs.

Summing up, project managers' perceptions of people, time, along with finances as primary resources were consistent across respondents, during crisis management. Specific strategies concerning resource management varied, but there was a recurring theme: operating based on the "lessons learned from last crises" model. Utilising resource buffers was seen as an adaptable strategy for completing projects on time, particularly Interviewee 9's proactive approach of guaranteeing reserves for smaller projects. Adaptive resource management is necessary in light of issues brought on by global supply chain disruptions and post-conflict changes in the dynamics of remote work. Notably, recognition and acceptance of Crisis Resource Management principles despite initial newness indicates openness to new methods. This particular people-centric approach

points out that continual learning and adaptability are crucial to resource management in dynamic project environments.

3.4 Leadership Style

According to the theoretical review, scholars claim that effective leadership plays a crucial role in crisis management in projects. Thus, this narrative needed confirmation from a practical point of view. During the interview, respondents reacted positively, agreeing with the statement, emphasising that it has even more value during unpredicted events.

Regarding the leadership approach change, only one-third of respondents claimed they did not notice the difference between it and pre-crisis times. These PMs had common factors that, in their opinion, could influence their answer: a small team, where they did not always feel like leaders; low crisis impact on the project, lack of team communication, better connection with other stakeholders than with a team and high level of team self-management. PM 9 claimed that his team is an ever-changing factor and the best way to receive a good performance is to set clear goals, expectations and “motivational rewards”.

In contrast, another 67% of respondents confirmed that they noticed the difference between pre-crisis and crisis leadership styles. As interviewee 8 noted, “...I tried to be an example for my team, but now I want them to know that I am just there for them...”. PM 3 also confirmed that he is “looking in the way of servant leadership now”, which is a common practice, as the research has shown. Respondents shared pretty similar opinions of building better trust, prioritising the team’s mental health, promoting psychological care and providing support. Hence, there is a mismatch with theory: while researchers claim transformational leadership to be the best fit for crisis situations, more practitioners prefer servant leadership as a solution.

Additionally, scholars argue that crisis leadership is not essentially autocratic but, rather, a collaborative process. This collaborative approach resonates with the responses of Project Manager 3, who emphasised using the strengths and resources of diverse stakeholder groups. Collaborative crisis leadership involves recognising specific individuals' authority, capacity, and opportunities. Project Manager 6, who has a background in psychology, resonated with this sentiment. She emphasised the importance of understanding the human factor and addressing the emotional needs of team members. It truly helps to sustain team morale during challenging periods.

The theory also proposes a behavioural frame for crisis leadership, emphasising the need for leaders to demonstrate confidence, emotional control, and effective communication. This aligns

with the experiences of various project managers who stressed the importance of maintaining a positive mindset, instilling resilience, and addressing the well-being of team members during crises.

Additionally, it was also mentioned that optimism emerges as a previously overlooked but crucial contingency dimension of crisis leadership. Project Manager 5, with a background in education, spoke of maintaining a positive mindset to keep team morale high despite external challenges. This aligns with the executive perspective that introduces optimism as an essential trait, allowing leaders to take proactive action early in a crisis and recognise opportunities amid challenges.

Directive leadership, viewed as too autocratic during a crisis, corresponds with the responses of project managers who stressed the importance of a collaborative and adaptable leadership style. The recommendation to use directive leadership for problem resolution aligns with the notion that certain leadership styles may be effective at specific stages of crisis management.

Leadership and decision-making are identified as intersecting parts of crisis response, supporting the notion that effective crisis leadership involves making context-specific decisions. This aligns with the experiences of project managers who emphasised the importance of adapting leadership styles based on the unique challenges presented by a crisis situation.

Summing up, the theoretical framework, based on effective communication, collaborative approaches, behavioural frameworks, optimism, and human-centred leadership, is consistent with the practical insights shared by project managers. Respondents constantly emphasise that these shared principles are the foundation for effective crisis leadership. Key points are:

- Servant leadership is increasingly favoured over transformational leadership in crisis situations, focusing on supporting and prioritising team needs.
- A significant shift towards more empathetic and supportive leadership styles is observed during crises to better address team well-being.
- Many leaders adopt a more human-centred approach, emphasising psychological care and emotional support for team members.
- Crisis leadership often involves leveraging the strengths and resources of diverse stakeholder groups for more effective collaboration.

- A behavioural framework in leadership, highlighting confidence, emotional control, and resilience, is crucial during crisis management.
- Optimism is recognised as a key trait in crisis leadership, helping to maintain team morale and spotting opportunities in challenging times.
- The practical application of crisis leadership shows a blend of various styles tailored to the specific needs and dynamics of the team and project.

3.5 Communication style

In terms of crisis communication in projects, theories propose structured approaches to information spreading, stakeholder engagement, and reputation management, the real-world experiences of project managers paint a picture of the nuanced, often unpredictable nature of crisis communication.

To begin with, Project Manager 12 points out a crucial aspect often overlooked in theory: "...in crises, it is not just about the accuracy of information but how it is understood by different groups..." This comment underscores the need for communication that is not only accurate but also accessible to a wide range of stakeholders, highlighting a gap in many theoretical models. Especially in groups of people with different cultural backgrounds, a PM should moderate the transparent flow of information.

Project Manager 3 brings a human element into the equation, stressing the importance of empathy in stakeholder engagement. This insight goes beyond the typical theoretical focus, suggesting that communication's emotional and cultural aspects are as important as the informational content. The respondent shared a story of end-users lowering their expectations after they discovered that the development team is located in Ukraine.

Some interviewees confirmed they took psychological or coaching training in order to adjust their communication skills and strategies. They emphasised the importance of supportive communication in the team as well as spreading mental health awareness.

The experience of Project Manager 5 reflects the dynamic nature of crises, especially when dealing with external stakeholders. He notes that adapting the communication strategy quickly is key in a crisis since "...what works one moment might not the next..." This observation challenges the static nature of some theoretical approaches, advocating for more unstable and responsive communication strategies that can keep pace with the evolving crisis landscape.

The majority of the respondents highlighted the need for different crisis communication strategies for internal and external stakeholders. Both of them should be based on trust and timelines, but in order to keep the reputation untouched, some regulation should be provided.

Additionally, in the context of social media, Project Manager 11 comments on the unpredictability of this channel during crises: "Social media can be wild in crisis situations; its impact is often hard to predict." This observation underscores the challenge of applying structured theoretical approaches to the fast-paced, often chaotic world of social media. Several more respondents mentioned that these communication channels are applicable only for more substantial projects.

The analysis of crisis communication in project management reveals several key trends that diverge from traditional theoretical frameworks. Firstly, there is a significant emphasis on the need for clear and accessible communication that resonates with diverse stakeholder groups. This highlights a gap in many theoretical models, which tend to focus primarily on the accuracy of information. Thus, they often overlook how it is interpreted by different audiences, especially in culturally diverse settings. Another emerging trend is the increasing importance of empathy and emotional intelligence in stakeholder engagement. This goes beyond the typical informational focus of theoretical models, suggesting that the emotional and cultural aspects of communication are as crucial as the content itself. The trend towards integrating psychological insights and mental health awareness into communication strategies reflects a shift towards more supportive and human-centric communication approaches.

3.6 Decision-making process

Exploring crisis decision-making reveals a complex picture where established theories and the actual experiences of project managers both contrast and match each other. Theoretical models suggest that crises fundamentally alter decision-making processes, impacting behaviours and attitudes. This idea resonated with the experiences of some project managers. For example, Project Manager 3, with a military and aviation background, shares, "In a crisis, our decision-making has to be more precise and risk-aware. It is all about getting the problem defined correctly from the start."

The concept of a structured, five-stage decision-making process finds practical application in the approaches of Project Managers 4 and 5. Project Manager 4 remarks, "When we are in a

crisis, it is crucial to weigh our options carefully, thinking about both the immediate and long-term effects on our team." Similarly, Project Manager 5, from a sales perspective, notes that each decision in a project can significantly shift a company's position in the market during a crisis. Thus, it is essential to take great care in evaluating all possible scenarios.

However, the real-world application of decision-making styles sometimes diverges from what theory might predict. While theories often discuss the influence of cognitive biases in crisis decision-making, Project Manager 6, who specialises in psychology, takes a different approach: "During crises, I find leaning on emotional intelligence more effective than relying on typical algorithms. It helps in understanding and addressing the team's concerns more deeply."

The role of improvisation in decision-making, a key aspect in some theoretical models, is practically demonstrated in the approach of Project Manager 12. With experience in entertainment and automation, PM 12 points out that in a crisis, people often have to think "out of the box", combining intuition with innovative thinking.

Contrasting with the theoretical view that decision-making responsibility is often avoided in crises, Project Manager 4 claims: "In my experience, making a decisive call, even with limited information, is often better than not making any decision in a crisis. Your team is expecting you to be there and take the responsibility. It also makes you drop the burden you often feel while the decision is still pending."

No respondent mentioned the integration of AI in decision-making. Hesse, they tend to rely only on their own experience as well as sometimes the experience of the team.

Overall, while there are precise alignments between theoretical frameworks and practical insights, especially regarding the structured decision-making process and AI integration, notable differences also emerge. These include a stronger emphasis on emotional intelligence and improvisation in practice, highlighting the dynamic and complex nature of crisis decision-making and the need for adaptable approaches.

In conclusion, the exploration of crisis decision-making in projects underscores the balance between theory and practice. Not every respondent's answers align with a theory. They tend to prioritise emotional intelligence and improvisation, adapting to the unique challenges of each situation. This separation from theory, particularly in the smaller reliance on cognitive biases and the absence of AI integration in their responses, reflects the dynamic and human-centric nature of

decision-making in real-world crisis scenarios. It underscores the importance of flexibility, empathy, and creative thinking in effectively navigating the complexities of crisis management.

3.7 Motivation and team dynamics

In comparing the theories of motivation with the experiences shared by project managers, there is an interesting mix of overlaps and gaps between academic concepts and their real-world applications.

When examining the application of Motivational Language Theory (MLT) in the real world, it is interesting to see how project managers like PM6 and PM10 integrate only certain aspects of the theory into their leadership styles. MLT outlines three key communication strategies for leaders: giving direction, showing empathy, and creating a sense of purpose. In the case of PM6 and PM10, their approach leans heavily towards empathy and sensemaking.

PM6, for instance, is particularly good at using empathetic language. They focus on understanding and addressing the emotional needs of their team members, creating a supportive and understanding work environment. This approach aligns well with the empathy aspect of MLT, demonstrating how leaders can connect with their teams on a deeper level to boost motivation.

On the other hand, PM10 excels in sensemaking. He often engages in conversations that help team members see the bigger picture and understand the broader impact of their work. PM10 effectively uses motivational language to instil a sense of purpose and belonging among the team members by linking individual tasks to the overall mission and goals of the project.

However, both PM2 and PM10 seem to use the directive aspect of MLT less frequently. This part of the theory, which involves giving clear instructions and guidance, does not appear to be a dominant feature in their management style. It is not that they avoid entirely giving direction, but their emphasis is more on fostering empathy and purpose rather than constantly directing or instructing their teams.

The Transactional Model of Stress and Coping is also tested in real-life conditions. The model suggests that how individuals perceive and cope with crisis is vital. The insights of the majority of managers reflect this – they understand the importance of recognising how each team member views challenges. However, as the model suggests, not all of them necessarily follow a structured framework for assessing stress and coping. Project Manager 8, for example, adopts a

more intuitive approach, which might be more practical and responsive in the fast-paced environments they work in.

In managing crises, both PM6 and PM11 effectively embody the theoretical guidance that stresses reviewing motivational strategies focusing on safety, stability, and psychological well-being. PM6, drawing from their psychology background, addresses the emotional needs of their team, aligning with the theory's emphasis during tough times. Meanwhile, PM11, in their role as CEO, adapts their leadership to be more supportive, fostering a culture of empathy and open communication. This approach not only offers immediate coping mechanisms but also resonates with the broader theoretical advice of repairing motivational strategies. It helps to maintain morale and motivation in crisis situations. Their practices reflect a practical application of the theory, highlighting how understanding and supporting the emotional well-being of team members is crucial in navigating through challenging periods.

In general, when considering how motivation theories are used in real work situations, it becomes clear that they are often adapted to fit the specific needs of a team. Leaders tend to focus more on understanding and empathy, helping their team members feel valued and connected to the work they do. Direct instructions are also a part of these theories and are not always the main focus. When it comes to handling stress, leaders often trust their instincts rather than strictly following theoretical models. This shows that good leadership involves modifying these theories to better deal with the challenges of everyday work. Especially in difficult times, the emphasis on caring for the team's emotional well-being and keeping open lines of communication highlights that effective leadership is as much about being flexible and responsive as it is about sticking to a set plan.

3.8 Learning and adaptability

In the realm of crisis management, the insights from various project managers offer a comprehensive understanding of the importance of learning and adaptability, reflecting key theoretical concepts in a practical context.

In the field of crisis management, a closer examination shows that practitioners could greatly benefit from integrating more of the structured approaches found in theoretical models. These models provide a comprehensive framework that can enhance the effectiveness of management strategies during crises.

Take, for instance, the concept of learning as a transformative process. Theoretical models suggest a systematic approach, emphasising its role in organisational transformation. However, in practice, this often appears more reactive. Project Manager 1 mentioned, “We are always adapting, but it is usually on the fly rather than through a planned process.” Interviewee 7 mentioned the same scheme during the meeting. This reactive approach contrasts with the systematic and transformative learning proposed in theory, indicating areas where practitioners could improve.

Similarly, when it comes to balancing exploitation and exploration – using existing capabilities while seeking new opportunities – theory clearly separates these strategies. In the real world, however, project managers tend to use just exploitation during times of crisis. As Project Manager 5 claimed, they try to use their existing powers as much as possible to keep the position of the projects and the company. That is because being aggressive with changes during difficult times is difficult. Adopting a more structured approach, as suggested by theory, could lead to more effective strategic planning.

Adaptive performance is also viewed differently in theory and practice. Theoretical models define it comprehensively, covering a range of behaviours, but practitioners often have a narrower focus. Project Manager 8 noted, that he himself and a project team undoubtedly adapt to changes in the projects. However, their approach is usually focused on immediate solutions rather than a long-term strategy for adaptability. This suggests that practitioners might benefit from a broader application of adaptive performance as outlined in theoretical frameworks.

Lastly, though recognised in practice, the relationship between creativity and adaptability does not fully exploit the depth found in theoretical models. Project Manager 9 observed that they “...try to be creative within the existing frameworks, but it is challenging to step outside of them during a crisis.” This situation highlights an opportunity for practitioners to consider changes, which could provide them with the tools and perspectives necessary to break standard frameworks and embrace more innovative approaches during challenging times.

The feedback from project managers in crisis management reveals an apparent disconnect between academic theories and on-the-ground practices, especially in learning, adaptability, and strategic decision-making. Theoretical models advocate for a structured, forward-thinking approach, but in reality, managers often find themselves reacting to situations as they arise, primarily leaning on existing strengths and capabilities. This reliance on known strategies, particularly noticeable during crises, tends to overshadow the potential gains from a more balanced

approach that includes exploring new avenues and fostering creativity alongside adaptability. The experiences shared by these managers highlight a valuable opportunity: There is much to be gained from weaving more of these theoretical insights into everyday practice. Doing so could not only improve strategic planning but also broaden the scope of adaptability and innovation, ultimately leading to more effective and resilient management when facing challenging situations.

3.9 Project success factors and the impact of crisis

A discrepancy becomes apparent when looking at the theoretical models of project success and comparing them with the real-world experiences of project managers. Practitioners might be more analytical and simplified, with emphasis on three criteria: time, finances, and objectives. This particular inclination shows a pragmatic, outcome-oriented approach towards project management, which is very distinct from the more general criteria proposed by academic theories.

One noticeable trend is the increasing use of time as a key indicator of success. Project Manager 1 emphasises this, stating, "...in our project executions, meeting the established deadlines is our top measure of success." This focus on time underscores a preference for measurable and straightforward metrics that are easily communicated and assessed. It reflects a practical approach where immediate and tangible results are prioritised.

Similarly, sticking to the budget becomes another critical measure of success. As Project Manager 7 points out, budget control correlates with the quality of project management. This perspective goes beyond mere financial management; it encompasses resource allocation, cost control, and overall project economy. Thus, how the project's financial components are managed reveals a very analytical attitude.

The achievement of specific project goals also holds top importance. Many project managers align with this approach, viewing the attainment of clearly defined objectives as the ultimate standard of a project's success. This goal-oriented perspective resonates with the practical nature of project management. In other words, tangible results are highly valued and serve as the primary indicators of success.

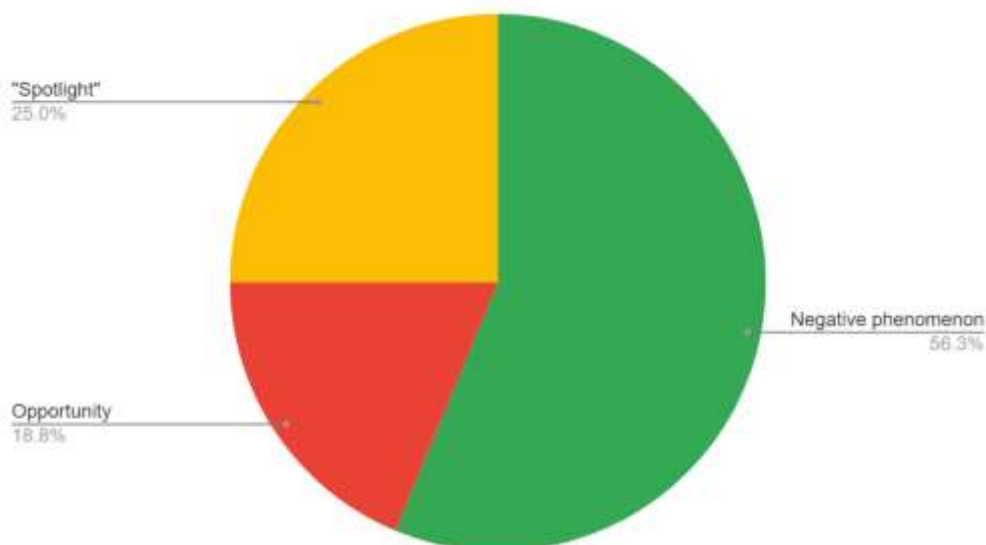
In contrast, aspects like project scope, stakeholder satisfaction, and resource availability, frequently emphasised in theoretical frameworks, often receive less focus in practical scenarios. This observation might be due to the inherent challenges in measuring these softer aspects and the immediate pressure project managers face to deliver concrete results.

In conclusion, the gap between theory and practice in project management is strikingly evident in the way success is measured. Practitioners lean towards a more analytical, simplified approach, heavily prioritising time, budget, and specific goals as their primary success metrics. This pragmatic focus stands in stark contrast to theoretical models that advocate for a broader, more nuanced set of success criteria. The practical realities of project management require managers to prioritise quantifiable, immediate results, often relegating softer, less tangible aspects like team cohesion and stakeholder satisfaction to secondary importance. This difference underscores the adaptability and result-focused nature of project managers, who must navigate the often challenging and dynamic landscape of real-world project execution.

3.9 Summarising part

At the end of the conversation, participants were asked to choose the definition of crisis that could describe the impact of the Russian-Ukrainian War on their projects. This perception might be a key point to build crisis management around. The approach depends on the way a PM sees the threat. The results are presented below:

Figure 7



Crisis perceptions by respondents

Source: compiled by the author

Things that can be learned about project managers' crisis management skills from their perspectives on the Russian-Ukrainian War are profound. With nine out of twelve respondents describing it as primarily negative, the majority see the conflict as a major disaster. Plans are primarily focused on minimising risks and coping with emergencies since these prevalent attitudes emphasise the challenges and risks that the war entails.

However, a small percentage of people view the situation differently. They perceive it as having positive and negative features, acting as a spotlight that reveals previously hidden issues or opportunities for growth. This means some managers see the war as an opportunity to innovate or shift focus rather than merely a problem.

This variety of views highlights the complexity of project management during a crisis. Evidently, there is not a single correct approach. From taking it easy to looking for the bright side, a manager's perspective on the issue determines their strategy. The Russian-Ukrainian War is an illustrative example of how important it is to be adaptable and tailor your approach to each unique crisis.

In order to figure out how the war has changed project management, it is essential to know how different parts of the process have changed. Project managers were asked to rank the war's effect on six critical aspects of project management: leadership, motivation, learning and adaptability, decision-making, and resource management. More serious crisis management needs were indicated by higher ratings, which ranged from 1 (no impact) to 5 (huge impact). Table 5 shows the areas needing immediate attention to handle the situation efficiently.

Table 5

Impact assessment of the Russian-Ukrainian War on project management components

Project Manager	Communication	Leadership	Decision-Making	Resource Management	Motivation	Learning and Adaptability
1	2	3	4	5	6	7
PM 1	5	4	5	4	5	1
PM 2	4	1	5	2	4	2
PM 3	4	1	5	2	5	2
PM 4	2	3	3	3	4	5
PM 5	1	4	3	1	2	5
PM 6	5	2	5	2	2	3

Continuation of Table 5

1	2	3	4	5	6	7
PM 7	2	1	5	3	4	5
PM 8	2	1	5	5	1	1
PM 9	4	3	3	5	4	3
PM 10	2	3	4	3	5	4
PM 11	5	1	5	4	2	1
PM 12	5	2	3	2	2	3
Total	41	26	51	36	40	35

Source: compiled by the author

The total scores show that several areas of management were affected to different degrees:

- Communication (Total Score: 41): The need for improved crisis management tactics to address issues with information flow and team collaboration is emphasised by high scores in communication, which indicate a significant impact of the war.

- Leadership (Total Score: 26): There is a lesser but still existing requirement for crisis management, as indicated by the relatively lower ratings. The results show room for development in leading teams and making strategic decisions in times of crisis.

- Decision-making (total score: 51): The highest scores highlight the critical requirement of crisis management. The war's complexity and ambiguity necessitate quick and flexible decision-making.

- Resource Management (Total Score: 36): Scores ranging from moderate to high suggest great difficulties with resource management, highlighting the need for solid crisis management skills, especially when dealing with interruptions in the supply chain and limited funds.

- Motivation (Total Score: 40): Due to the significant effect on motivation, crisis management initiatives must centre on preserving or improving team engagement and morale to ensure the project's smooth continuation.

- Adaptability and Learning (Total Score: 35): The mixed ratings indicate different levels of influence, but they nonetheless reveal that crisis management solutions are needed to foster a culture of learning and be flexible in the face of changing situations.

In order to maximise the efficacy of crisis management initiatives, this data-driven research gives a thorough picture of the sectors most affected by the Russian-Ukrainian War in project management.

CONCLUSIONS AND RECOMMENDATIONS

Russian-Ukrainian war as a global crisis has been significantly influencing various industries and processes. The effects are widespread, impacting activities on different scales, from the global economy to project management.

The research has effectively achieved its aim and objectives through a thorough examination of the effects that the Russian-Ukrainian war has on the management of crises in project environments:

- Scientific outline was prepared: it was discovered that crisis brings changes on both organisational and project levels. However, the latter is much more sensitive due to its temporary nature. Regarding crisis management, it was established that the approaches used by the management in the organisation can be used by PMs as well. Similarly, because of the temporality of an endeavour, the implementation should be comparatively quicker. An exciting fact coming from the theoretical part is that both scholars and practitioners outline three main definitions of crisis: a negative occurrence, a “spotlight”, and an opportunity. Still, most see crisis events as issues interrupting a normal operation flow.

- Talking about challenges faced by PMs, they tend to identify them as risks that can become project problems in the future. Among the most common ones are personal security risks, calls for military service, blackouts, supply chain disruptions, cybersecurity threats, overcomplicated regulatory processes, talent shortages, and employees’ mental unrest. This completes the second objective of the study.

- In order to overcome challenges presented by a crisis situation or use the opportunities it presents, project managers implement crisis management on different levels. It is perceived as a moderator which is supposed to regulate the direct and indirect influence of crisis on projects’ success. The latter is identified with the help of six factors: communication, leadership, decision-making, resource management, motivation, learning, and adaptability. Since crisis affects project success through these mechanisms, each of them has response strategies to implement depending on the character and intensity of the impact.

Integrating the insights from the research on project management in the context of the Russian-Ukrainian War, each key conclusion is provided, incorporating respondents' scoring and choices where applicable. 6 factors are sorted by the level of war impact:

1. Decision-Making in Uncertain Times: Balancing emotional intelligence with risk-aware decision-making was crucial during the crisis. This balance was reflected in the high scores in decision-making challenges faced by respondents, highlighting the need for swift yet well-considered decisions in uncertain environments.

2. Communication in Crisis: Effective communication is also essential in crisis management, as underscored by the scores from respondents in communication challenges. Project managers faced the need to navigate cultural sensitivities and maintain clarity, emphasising the importance of dynamic and responsive communication strategies.

3. Motivation and Team Dynamics: As reflected in respondents' marks, the crisis's high impact on motivation underscored the importance of empathetic and purpose-driven leadership. Project managers who focused on team cohesion and morale were more successful in maintaining productivity and team spirit.

4. Resource Management: Flexible and adaptive resource management strategies were less essential, as indicated by moderate scores in resource management challenges. Still, using buffers and diversifying supply chains helped mitigate crisis impacts, underlining the importance of resource adaptability.

5. Learning and Adaptability: A gap in proactive learning and adaptability strategies was evident, with mixed learning and adaptability impact ratings. The predominantly reactive approach limited the ability to anticipate challenges and adapt effectively to changing project requirements.

6. Leadership Style and Crisis Management: The shift towards servant leadership reflects a focus on team support and prioritisation of needs, particularly in crisis situations. This shift highlights a move away from traditional leadership models towards a more empathetic and supportive approach, recognising the unique challenges posed by the crisis. Despite that, this factor was recognised as the least crisis-affected.

Since all these factors affect the project's success, its criteria were also defined. It was primarily measured in time, budget, and specific goals in real-life situations. While practical, this focus may overlook the long-term benefits of holistic project success evaluation, including project scope and stakeholder satisfaction, highlighted in the theoretical review.

Based on the conclusions and lessons learned, a set of recommendations was developed in order to share the best practices in crisis management in projects during the war conflicts:

1. *Enhance Decision-Making Skills*: Develop the capability to make fast but, at the same time, thoughtful choices under challenging conditions. This leads to balancing emotional intelligence with risk-sensitive decision-making. Potential for training in risk assessment and contingency planning would be advantageous.
2. *Enhance Communication Methods*: Prioritize excellent communication, particularly during a crisis. This includes having the ability to navigate cultural sensitivity and communicate clearly. Project managers should concentrate on responsive and dynamic communication techniques, perhaps through frequent drills or simulations.
3. *Concentrate on Motivation and Team Dynamics*: Keep team cohesiveness and morale high by demonstrating purposeful and empathic leadership. Frequent team-building activities and open communication channels can inspire and operationalise the team.
4. *Adaptive Resource Management*: Create adaptive and flexible management of resources. This includes establishing resource buffers and also rebalancing supply chains to mitigate crisis impacts. It is suggested that the allocation and availability of resources be reviewed periodically.
5. *Foster Learning and Adaptability*: Encourage an active approach to adaptability and learning. This may include creating a periodic review process to anticipate challenges and efficiently respond to changing project needs. It may be helpful to train in adaptive project management methods.
6. *Be a Servant Leader*: Shift to a servant leadership model where team support will be the focus and needs are met first, particularly during a crisis. It is an approach which is more sympathetic and helpful and recognises the specificities of crises.
7. *Holistic Assessment of Project Success*: Expand the criteria for project success beyond time, budget and goals. Insert qualitative measures of project scope, stakeholder satisfaction, and team wellness to produce a holistic view of achievement.
8. *Annual Crisis Management Course*: Conduct regular crisis management training using scenarios that reflect the research challenges. This could help prepare the team for unexpected circumstances.

These recommendations can help project managers handle crises and adapt to challenging situations like the Russian-Ukrainian war. This concludes the last two objectives established at the beginning of the research.

Summing up, the brand-new focus on servant leadership emphasises empathy and adaptability, highlighting the necessity for particular training in these areas. Communication becomes a crucial tool that demands culturally empathetic and dynamically sensitive strategies. Scenario-based training is required to balance emotional intelligence with analytical risk assessment for decision-making in a crisis. Diversification and contingency planning would be a requirement for adaptive and flexible resource planning. It is also crucial to maintain motivation and cohesive teams together, requiring emotional leadership and purpose-driven leadership. The study also identifies a deficiency in proactive learning and adaptability, indicating the need for a continual learning culture. Lastly, differing opinions on crisis impact management techniques highlight the need for training to bridge these distinct viewpoints to allow innovation and flexibility in crisis management.

The research also highlighted several possibilities for future exploration. Among the most important research fields is comparative studies in various crises, for example, analysing project management methods in natural disasters, economic recessions or epidemics such as COVID-19. Such studies would offer insights into the general principles and particular crisis management issues. Another method may be the long-range impact analysis of crisis management choices, concentrating on project sustainability and its effect on team culture and stakeholder interactions. Moreover, investigating cultural influences in crisis management might allow an understanding of cultural influences on approaches to crises.

Also interesting will be the psychological effect of the crisis on project teams: team spirit, emotional well-being and resilience. Such research might eventually result in practices which help team members cope with their affective and mental health. These studies are able to help determine best practices and core competencies which allow teams to flourish in a crisis and also provide a more comprehensive picture of crisis management in projects of various industries. As a whole, these research directions ought to bring about strengthening the knowledge base with robust tools for project management in a more uncertain global context.

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ANNEXES

Annex 1

First Contact Message

Hello! My name is Alina, and I am a project management student at Vilnius University Business School. I am currently researching crisis management in projects and the impact of the war on it for my thesis.

I would like to talk to you about your perspective and experience on this matter! Would you be up for having a conversation about it? Please let me know, and I will share more information!

Thank you, and have a nice day 😊

Annex 2

Pre-interview Informational Message

Crisis Management in Projects Amid the Russian-Ukrainian War

Dear Participant,

I am conducting a study focused on the challenges and strategies of crisis management in project environments, particularly in the context of the ongoing Russian-Ukrainian war. This research seeks to gather insights from experienced professionals like yourself who are navigating the complexities of project management amidst a global crisis.

What Is Needed From You:

- **Your Experience:** Share your firsthand experiences and perspectives related to crisis management in projects.
- **Honest Insights:** Offer candid responses based on what you have encountered and observed.
- **Specific Examples:** If possible, provide specific instances or scenarios that illustrate your points.

Project Description:

This research aims to explore the dynamic field of crisis management in projects within the ongoing Russian invasion. The study seeks to understand how project managers and leaders adapt and respond to crises, focusing on their strategies, challenges, and learning experiences. It delves into the practical aspects of managing projects during such unprecedented times, including:

- Communication;
- Leadership;
- Decision-making;
- Resource management;
- Motivation;
- Learning and adaptability.

The project is driven by the need to comprehend how global crises like the Russian-Ukrainian war influence project management practices and the role of leadership in navigating these challenges.

Procedure:

I want to conduct a semi-structured interview with you for this study. With your consent, the interview will be recorded to ensure accuracy in capturing your insights. Your anonymity will be strictly maintained; no personal identifiers will be used during the interview. You have the freedom to share as much or as little as you wish, can choose not to answer any question, and may stop the interview at any point. A transcript of the interview will be created, and all recordings and transcripts will remain anonymous without any reference to your identity. I, the supervisor and the board will restrict access to these materials.

Confidentiality:

All information shared during the interview will be treated with the utmost confidentiality. Your identity will not be linked to the research materials, and you will not be identifiable in any reports resulting from this research.

Thank you for considering participation in this study. Your experiences and insights are invaluable in enriching our understanding of crisis management in project environments during global crises.

Best Regards,

Alina Panasiuk

Annex 3

Interview transcript (example)

Interview Transcript*

Interviewer: Alina Panasiuk

Interviewee: Inna Gromyko

Date: 04.12.2023

Location: online

Tools used: Zoom, Microsoft Word

Record: not allowed

Pre-interview steps: On November 21st, the initial contact was made to determine if the potential respondent was eligible for the interview. Since no introduction was needed, Pre-interview Informational Message was sent. The interviewee reviewed the information and confirmed a desire to participate in the research. Then, the time and location were agreed on, and a meeting was scheduled. After the successful interview, the respondent was provided with a transcript for review and approval.

Introductory part: The interviewer reminded the aim, scope and interview plan and prepared for simultaneous noting.

Interviewer: Please introduce yourself: your name, position, company and work experience.

Respondent: My name is Inna Gromyko, I am a Project Manager at SOS vaikų kaimai Lietuvoje / SOS Children's Villages Lithuania. Before that, I worked in governmental institutions.

Interviewer: And how many years of experience in project management do you have?

Respondent: I have two years of experience.

Interviewer: Okay. Then, I wanted to draw attention to the fact that we will not talk about the impact of the war on the organisation, for example, not that your organisation has changed its activities, but specifically on the crisis impact on projects and how you deal with it.

Respondent: What happened inside the project?

Interviewer: Yes, yes.

Respondent: Well, I understand.

Interviewer: So, how has the ongoing war in Ukraine directly affected current and past projects?

Respondent: Well, the war was the actual reason why the project was initiated in the first place. We help refugees fleeing Ukraine to get everything they need to live in a foreign country.

Interviewer: Can you give any examples of the impact of the general war on projects?

Respondent: As for the current projects, everything is constantly changing since our project is focused on helping Ukrainian refugees who come from Ukraine. We are directly connected with the events taking place there. As soon as something happens in the country, we urgently start revising the budget and scope, approaches and well “end users”, if I can say that.

Interviewer: Can you tell me about such situations? Maybe you can give one practical example.

Respondent: We had a situation with the Kakhovka HPP...And when Russians blew the dam up, Lithuania was expecting an influx of refugees who suffered from an environmental disaster. Thus, we started looking for additional accommodation and costs. We have another location, it is in a tourist place (another city), in fact, it is a summer camp, and these are summer houses for recreation. i

Interviewer: I understand.

Respondent: Since it is a popular location near the sea, locals reserved lots of houses in advance and began booking vacations in winter. So, the budget was urgently reviewed when the situation in Ukraine happened. The issue of increasing the volume of assistance to Ukrainians needed to be resolved, and obviously, an increase in the number of project participants, who basically are our end-users.

Interviewer: And how did you deal with the issues?

Respondent: The matter was addressed concerning the provision of compensation for individuals unable to use their reservations. However, the expenses involved not only the reimbursement of money incurred for the bookings but also additional financial support to cover the accommodation costs of Ukrainians for an initial period of three months.

Interviewer: That is, did you return the money to the Lithuanians who booked that accommodation?

Respondent: We did not return, we considered the possibility of revising the budget.

Interviewer: Okay.

Respondent: We considered the possibility of attracting additional funds for the following actions.

Interviewer: OK, I understand.

Respondent: But after a week, we observed the migration for a week and a half, and we did not see the influx of Ukrainian refugees for a week and a half. There was no external migration.

Interviewer: What do you mean?

Respondent: People who left the Kherson region became internally displaced persons. There was no external migration, at least to Lithuania, so we did not actually take these additional measures. But the fact that there was a review, and the review was directly related to the events in Ukraine, is true.

Interviewer: Noted. Could you also tell me if there was a problem or disruption caused by the war that affected the timelines or the project goals, be any, or the project?

Respondent: Well, instead of providing practical assistance to those project participants that we already have, the project goal was changed to attract new participants and increase the amount of assistance to victims of the war in Ukraine.

Interviewer: I understand. Then, were there any issues that were a reason why, for example, the project was rejected or cancelled?

Respondent: The project was extended due to the fact that we had, for one and a half years, spent the funds provided to us by the central corps, the Austrian branch. They gave us a certain amount of money to help Ukrainian refugees. When the project funds ran out, which was after 18 months, we basically did not achieve the final result. The final result was to make vulnerable categories of the population under our care more independent. We decided to extend the project for another six months. I mean, the war in Ukraine has not ended, and people who needed help, lots of families with severe disabilities, and families with lots of children, i.e., foster families, did not become independent. Recognising that people who have come from Ukraine's occupied areas are finding it hard to afford housing in Lithuania, and to make sure they are not left without a place to stay, we have decided to keep our support project going. This helps ensure they have a safe place to live, given that returning to their homes in Ukraine is not an option right now.

Interviewer: How did the project proceed?

Respondent: The project was continued at the expense of charitable organisations, which are non-governmental organisations. There are such departments, they are called fundraising, do you know those?

Interviewer: Yes, yes.

Respondent: Fundraising departments communicate with external potential donors or interested persons who can provide material or non-material support for the realisation of the goals of the charitable organisation.

Interviewer:

Respondent: Sometimes, fundraising takes an active position when they actively ask, but, for example, before the holidays or at the donor's request, he finds fundraising himself, and they communicate independently about the possibility of giving them something. For example, we have one of our female patients who has to do her surgery in some other country. Great Britain accepted the offer through the Austrian central office. The girl was taken to London, and the operation was performed there. All these funds were collected by fundraising, do you understand?

Interviewer: Yes.

Respondent: Our project received essential support from an external department within our organisation, which we refer to as organisational support. This department played a crucial role in securing additional funding, enabling us to achieve our project goals without straining the main budget. Their contribution was key to the successful realisation of our objectives.

Interviewer: All right, I understand. Now, regarding the strategies for managing crisis situations...

Respondent: Well, once more, it involves the participation of external organisational support. It depends on what aspect we are focusing on – be it budgetary measures, resolution strategies, goal achievement, timing, or managing emotional fluctuations during a crisis.

Interviewer: Actually, I was referring to a broader perspective, meaning proactive and reactive approaches. For instance, in the case of the Kherson Hydroelectric Power Plant, your organisation seemed to have anticipated the crisis. This foresight appears to be linked to the Ukrainian authorities discussing the situation at the Kherson HPP for about six months before it happened. Am I correct?

Respondent: Actually, no.

Interviewer: Were you just waiting for the crisis to happen?

Respondent: We waited for the crisis to happen. For a long time, we did not plan, we do not plan, we react to the state institutions of Lithuania.

Interviewer: Please elaborate.

Respondent: If the state institution of Lithuania begins to react and reports that a change is clearly taking place in Ukraine, and they predict that there will be an influx of Ukrainian refugees, then we begin to react and revise the budget.

Interviewer: I understand. Then, can you tell me why you decided to act according to the forecasts of the (Lithuanian) government, and not private firms, or maybe the Ukrainian government, and not the EU, but the Lithuanian government?

Respondent: Because, actually, our collaboration with the Ministry of Social Policy is integral to our operations. In general, the way a charitable organisation works, the principle of a charitable organisation, is like surfing. Unfortunately, it works when there is human grief. And, when Lithuania in its news covers certain events that they predicted, for example, demographic or socio-economic changes, it begins to affect society. Fundraising efforts capitalise on human empathy and the impact of news stories. These campaigns harness the power of compassion, drawing on people's responses to events and narratives presented in the media. This approach transforms public empathy into financial support, fuelling our mission and enabling us to make a difference in the lives of those we serve.

Interviewer: Okay, but what about the Internet? People get news from there as well.

Respondent: World news does not affect us until the society of the state considers it a threat or a problem until they become active in fundraising. The mediators that initiate changes are the local mass media and the government.

Interviewer: Noted, thank you. Then, let us talk about your leadership style. How has your leadership style changed?

Respondent: Well, it has not changed. We have a very small team and there are not a lot of people to lead, you know what I mean?

Interviewer: Well, you can be a despotic leader even with four people, can't you? How would you describe your leadership at the moment, then?

Respondent: No, it is democratic, I believe.

Interviewer: Good. How do you maintain strong team morale, then?

Respondent: Our organisation supports us, which is important, our project gets a lot of help from the organisation that started it. They give us access to psychological services, both inside and outside our organisation, to make sure our team is doing well. Also, we have team-building activities that we must do, as our rules say. We do these fun activities every six months to help our

team work well together. Plus, our HR department and the support team check “how happy we are” with our jobs every six months. They use special methods for this. All these things – making sure we're okay and working well together – are a big part of how our organisation runs well.

Interviewer: Then what about the communication with different stakeholders?

Respondent: Well, with a team a least an hour a day is spent discussing issues. There is constant change in the projects, and the project is very sensitive to the decisions of the organisation. The instability of the organisation's decisions affects the emotional state of the project team.

Interviewer: So the issue of communication is problematic?

Respondent: It is problematic.

Interviewer: But this is a question from the stakeholders board. And how is communication in your team?

Respondent: Everything is excellent in the communication team; communication is 24/7.

Interviewer: How do you solve communication problems with the stakeholders board? Is it the essence of the situation?

Respondent: When it comes to handling crises, it really hinges on who controls the project's resources, finances in particular, whether it is us or an external company. If the project is managed externally, a law firm along with the accounting department oversees the finances. Sometimes, managers might make mistakes with financial management, so communication and resource management should be improved.

Interviewer: How is such a situation addressed?

Respondent: Unfortunately, we cannot directly resolve these issues because they are overseen by the board manager.

Interviewer: So, are these issues primarily due to misunderstandings by the board manager?

Respondent: It is more about a lack of communication, an insufficient grasp of the project's importance, and a general unawareness of the project among other members of the organisation.

Interviewer: Addressing resource management, have you used or heard about Crisis Resource Management (CRM) key points?

Respondent: No, I am not familiar with that. Could you share that after the interview with me? I cannot really add something on that topic except for the finances.

Interviewer: Sure, no problem. Can we now talk about decision-making? How do crises influence your process?

Respondent: Crises have a direct impact. When one arises, we evaluate the project's feasibility and scope.

Interviewer: Does decision-making primarily depend on the board manager and your colleagues, or do you have more autonomy?

Respondent: It varies depending on the type of decision. For participant services, we categorise them as either hard (like accommodation) or soft (such as clothing, food, etc.). We make independent decisions about the latter, while decisions about hard services depend on the board.

Interviewer: Could you give an example of an independent decision you made that had a significant impact on the project, either positively or negatively?

Respondent: When the funding from Austria ended, it was necessary to decide how to proceed with the project and its participants. We made a decision that we would accompany only critical categories of the population, and the number of participants was reduced by three times.

Interviewer: So, did it have a positive effect on the project?

Respondent: Let us put it this way: it made it possible to continue the project, albeit on different terms.

Interviewer: What are your project success indicators? Budget, deadlines, goals?

Respondent: Goals. As a humanitarian project, we are working to reduce volumes. The goals are achieved when the number of participants decreases due to the chosen path of the project. We do not abandon them, we make them independent.

Interviewer: Was there a goal that you achieved, or do you have one global goal?

Respondent: When our project was initially registered, and we secured our first funding, it was intended to serve only 250 participants. However, after 18 months, we expanded our services to accommodate 2,600 participants. This significant growth has led to Lithuania, and particularly our organisation, being recognised as one of the leading entities in providing aid to refugees.

Interviewer: Were there any factors other than the war that influenced the project?

Respondent: No, the war is the main one because our project was created in connection with the war.

Interviewer: Regarding the company's adaptation to factors, lessons learned, and learning in general, how do they work?

Respondent: I and my team are learning all the time. There are many opportunities presented by the main office, and we use them. Regarding adaptation and lessons learned, there is no procedure

as such. We accept the conclusions for ourselves, but it all depends very much on future circumstances. From the side of the management, it has no effect, but this is our own experience.

Interviewer: Okay, thank you! Summing up, could you please tell me your key takeaways for crisis management in projects? Also, was the crisis a negative phenomenon, an opportunity or a “spotlight” for your projects?

Respondent: Alright...Talking about managing crises, we have to be quick in making decisions and clear in our communication. We also have to be ready to change our plans fast when things come up. Also, I will be more particular about resource management for my future projects.

The war was actually the main reason our project started. It was a big opportunity for us to help lots of people who needed it. Also, the crisis was like a spotlight for our project, but in a different way. It helped us see what was wrong or what we needed to improve in our own project. It was about us learning and getting better at what we do. The crisis showed us the real challenges and helped us understand how to fix them and do our work better.

Interviewer: Now, could you rate the indirect influence of the War on the project's success through 6 different factors: communication, leadership, decision-making, resource management, motivation, learning and adaptability? Rate where you implemented the most changes (used crisis management) because of the war (mini-crisis caused by war), where 1 has almost no impact, and 5 is significant.

Respondent: Hm, Communication: I would rate this a 2. We have seen some changes due to the war, but in general, I would say we have already had good communication going, so not that much of an impact. Leadership is a 1. As I mentioned before, the war has not really impacted my leadership approach or effectiveness.

But decision-making is a 5. The war has had a major effect here. I needed to make quick, adaptive decisions in response to ever-changing situations. What were the rest of the factors?

Interviewer: 3 more: resource management, motivation, learning and adaptability.

Respondent: Resource Management...I guess it should be a 3. I have not made all the necessary adjustments, but the influence was there.

About motivation: I would say 4. The war significantly influenced our team’s motivation, but it was properly held.

Learning and Adaptability: a clear 5. Adapting to new challenges and learning quickly has been our major focus.

Interviewer: This has been really informative, thank you. Before we finish, is there anything else you would like to say about running this project during such a tough time?

Respondent: Well, it has been quite a challenge, honestly. We have had to learn and adapt on the fly because of the war. What really stood out for me is how resilient our team has been and how much support we have given each other. Also, please manage the resources properly in the future, it is very important!

Interviewer: That is a solid point. It sounds like you and your team have done a fantastic job under much pressure. Thanks so much for talking to me about it.

Respondent: Thanks for giving me the chance to talk about our work. I hope it will help with your research and encourage others to keep pushing forward, even when things seem complicated.

Interviewer: I am sure it will. Your dedication and ability to adapt are truly inspiring. Good luck with everything moving forward, and thanks again for your time.

Respondent: Thanks, and all the best to you too!

* The interview was translated into English from Ukrainian.