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Bridging the Strategic Operational Gap

A matter of perception

W.L. (Wouter) Bolderman

UNIVERSITY OF TWENTE

DRIENERLOLAAN 5

7522 NB ENSCHEDE

053 489 9111

info@utwente.nl

FACULTY OF BEHAVIOURAL, MANAGEMENT & SOCIAL SCIENCES

Master (MSc)	Public Administration
Specialisation:	Public Management
First Supervisor:	Dr. P.J. Klok
Second Supervisor:	Prof. dr. R. Torenvlied

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Preface

In front of you, you will find the thesis *"Bridging the strategic operational gap: a matter of perception."* This research project studies the influence of different backgrounds of actors and the influences of specific institutions on the congruence of perceptions of actors regarding strategic policy advising in the context of crisis management in The Netherlands. This thesis was written as final piece of my graduation course at University of Twente concerning the master degree Public Administration with the specialization Public Management.

The completion of this research paper marks a period I initiated roughly a year ago. At that moment, I started looking for a suitable research topic. My daily job as an officer in the Royal Netherlands Army brought me into contact with the Dutch crisis management organizations, specifically the safety regions. I noticed that the issues these organizations encounter in their interactions between the operational and strategic levels during the "hot" phase of a crisis, show similarities with challenges that are typical for the organization I work with. This inspired me to study the problem of strategic policy advising within the context of crisis management. Both this thesis and the master program have broadened my perceptions on both professional and personal levels. They provided me with valuable insights, which I can use in my day-to-day business. These insights regard the different perceptions people have who work in different organizations at different levels and how the institutional context facilitates or hampers interactions between people with converging perceptions. Moreover, they provided me with tools to prevent, cope or mitigate problems related to these differences. I hope that you, as a reader of, will enjoy the same pleasure of gaining these insights as well.

In this foreword, I would also like to take the opportunity of thanking those who have helped me realizing this thesis. First, I would like to thank the persons from the Safety Regions of Groningen, Drenthe and Utrecht that I have interviewed for this research and the people from the municipalities related to these safety regions. These persons hold important offices as high-level public administrators in their municipality or region, including (deputy) mayors, municipality secretaries and directors of safety regions. Others carry out essential roles in the Dutch crisis management organization such as the Regional Operational Leaders. The fact that these persons were willing to cooperate, occasionally even during actual events or incidents, showed their interest and willingness to help shed light on the problem at hand. This in turn motivated me to keep on going. Without the help of these people, there would have been no data to analyse and hence no research to perform.

Second, I would like to thank Colonel drs. ing. P. J.T.M. Hagenaars and dr. P.L.J. Bos for offering the research topic and providing me with information about the issues at hand on which the research questions have been based.

Third, I would like to thank the University of Twente for providing me with the opportunity to graduate, in particular my supervisors, dr. Pieter-Jan Klok and prof. dr. René Torenvlied. Their input has given me directions to develop the research design and research methodology. This has been of great value because of the complexity of the topic and concepts used. Thank you for the substantial discussions, interest shown and the trust in me to bring this research to a good end.

Last, but not least, I would like to thank my relatives for providing a listening ear, opportunities to spar and for providing critical notes. Above all, I would like to thank Daphne, Elena and Hugo for their patience, trust and at times providing the necessary distractions. This motivated me to keep on going, while at times they have made me mark time realizing what issues are really important to life…

To all, thank you for everything!

Wouter Bolderman

Hoogeveen, 1 March 2019

Front page picture: The Dutch Safety Regions, derived from www.regioatlas.nl (31-01-2019)

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Abstract

Crisis management in the Netherlands is organized in so called Safety Regions. In these regions municipalities and relief organizations work together. In case of crisis or disaster, these organizations will form a multidisciplinary organization; operational command will be carried out by a Regional Operational Leader (ROL) as head of a Regional Operational Team (ROT), strategic coordination will be performed at a Municipality or Regional Policy Team (RPT). Since the implementation of this system, the regions have developed it more and more, but there is still room for improvement. One of the issues is the advising about strategic policy issues from the ROT to the PTs ("Staat van de rampenbestrijding 2016: Landelijk beeld," 2016). This study analyses this problem in order to gain a better insight and to make recommendations of how to improve strategic policy advising. This has been done using crisis management and institutional (network) theories. Based on these theories, the following research question has been developed:

> "Do different backgrounds of actors in a Policy Team (PT) and a Regional Operational Team (ROT), and institutional arrangements regarding strategic policy advising in use in a safety region, influence the congruence of perception of these actors regarding strategic policy advising?"

The congruence of perceptions is the dependent variable in this study. Perceptions form an important element in all crisis definitions (Drennan et al., 2014, p. 17; Eijk et al., 2013; Rosenthal et al., 1991). Differences in perception can result in miscommunication, asymmetrical debates and stagnation or blockages of processes (Klijn & Koppenjan, 2004). Furthermore, the crisis characteristic threats, uncertainties and urgency are a matter of perceptions (Rosenthal, Hart, & Kouzmin, 1991) as is the term 'strategic' (Ferlie & Ongaro, 2015; Hart, Rosenthal, & Kouzmin, 1993). Because the backgrounds of the actors that are involved differ, it is likely that their perception will differ as well. Strategic policy advising is also a social interaction. Interactions are being facilitated and influenced by the institutional context (Klijn & Koppenjan., 2006). It is known that there is too little uniformity concerning the use of definitions and methods in the context of the Dutch Crisis Management Organization (Hoekstra, Berlijn, De Ridder, Smits, & De Vries, 2013, p. 38). Hence the institutional context must be taken into account.

In order to answer the main research question a cross-sectional case study has been applied. From the 25 safety regions in The Netherlands, three regions have been selected. Two specific descriptive research questions regard the congruence of perception and institutional context of the regions. Two specific causal research questions have been used to analyse the influence of backgrounds and institutions on the level of congruence of perception. The data has been collected by means of literature studies and qualitative interviews. The interviewees included public administrators from the strategic level (mayors, deputy mayors and municipal secretary) and of the operational level (ROLs). In order to determine the level of congruence of perception, the interviews have been transcribed and coded. The institutional context of the regions has been analysed using the Institutional Analysis and Development (IAD) Framework developed by Elinor Ostrom (Ostrom, 2011). Data regarding the institutional context has been derived by analysing the regions' crisis plans, the interviews held with the ROLs and by analysing other documents if the ROLs indicated that these contained rules or protocols regarding strategic policy advising. The influence of the backgrounds of actors on the congruence of perceptions has been analysed by comparing the results of the levels of congruence of perception between the levels of the regions and between the regions. Latent coding of the interviews has been used to analyse the time-order and non-spuriousness criteria of a causal relation (Babbie, 2009, p. 106). The influence of the institutional context on the level of congruence of perceptions has been measured in a similar manner.

The following has been concluded regarding the congruence of perception: in all cases the ROLs showed a higher level of congruence than the actors at the strategic level. Moreover, the congruence between the levels is generally lower than the level of congruence within the levels themselves. Furthermore, the levels of congruence differ between the regions.

The institutional analysis of the cases showed that the rules prescribed by the national laws and directives have been implemented in all regions studied. The crisis plans of the regions primarily focus on the separate teams. The rules that shape the interactions between the teams have been less formalized. Some actors appeared to be unaware of the rules that are in place, other stated that their region did not have any specific agreements regarding strategic policy advising. The cases differ in how they have shaped their institutional context regarding strategic policy advising. Even within regions,

there appeared to be differences in the interaction between the municipalities and the ROT. Institutional uncertainty seems to characterize the safety regions' institutional context.

Regarding the causal questions the following has been concluded: the different backgrounds of actors (operational or administrative) explain the different levels of congruence of perception between the levels and between the regions. The two regions with specific institutional arrangements scored higher levels of congruence of perception regarding strategic policy advising than the region with fewer institutions implemented. Moreover, the regions with additional institutions show a higher level of congruence of perception at the operational level. Rules can have a positive effect on strategic policy advising, but only when they fit the crisis management context.

The main research question can thus be answered as follows: yes, both similarity of backgrounds of actors and explicit institutional rules influence the level of congruence of perceptions regarding strategic policy advising. This is an important conclusion because of two reasons. First, backgrounds are hard to change. As long as crisis management organizations are organized with actors with an operational or administrative background, differences in perception will remain institutionalized. Second, the congruence of perception can be improved on by applying appropriate institutions that facilitate strategic policy advising. Implementing the application of specific arrangements (institutions) can more easily be carried out than changing of someone's background. This conclusion results in the following recommendations:

1. The safety regions should develop arrangements that shape the strategic policy advising from the ROL to the mayor or head of safety region. These arrangements should match the crisis characteristics, as well as the regional specific context. The IAD framework can be used to specify additional institutional arrangements.
2. Arrangements regarding strategic policy advising must be developed with actors from the strategic level (such as mayors or deputy mayors) and the operational level in order to be effective. The process of developing these rules can be used to exchange perceptions and discuss what strategic policy advising actually is.
3. Arrangements regarding strategic policy advising must be known by all actors that are involved in strategic policy advising. A basic crisis management course would be a good way for mayors, their deputies alike and process guardians, as it is for the ROLs.
4. Process guardians of the different teams should be aware of the rules that apply in the region regarding strategic policy advising and guard them during actual crises and training sessions. This is important because rules need to be confirmed and discussed. In this manner rules need and can be regarded as a form of leadership.
5. Strategic policy advice should be an important element in the evaluations. Rules can only be sustained when they are constantly being discussed and developed in order to fit their specific context.
6. The confirmation and discussing of rules requires frequent interactions, which must be facilitated. At the moment policy teams only train once or twice a year for a day or a half. One mayor interviewed for this research recommended performing more table top training sessions instead, in which several mayors, or deputies, of the region would participate together with the ROLs of that safety region. During these table tops strategic policy issues could be discussed, the mayors could point out their needs and the operational leaders could share the advice they would give in such a situation. In this manner perceptions regarding strategic policy issues can be shared and become more congruent. And most importantly, it will allow the actors involved to meet and get to know each other.

Finally, this research provides a unique insight into the interaction between the main actors at the operational and strategic levels of the Dutch crisis management organization regarding strategic policy advising. It takes up a persistent issue related to the Dutch crisis management context and provides additional insight in the influence of the actors' backgrounds on perceptions and the role of institutions. Furthermore, it provides some practical recommendations to improve strategic policy advising from the operational level to the strategic level. In addition, this research contributes to the theoretical literature of crisis management, especially regarding the Dutch crisis management context, and institutional theoretical frameworks, in particular those describing the concept of Network Adjacent Action situations. Suggestions for future research are defining what strategic policy advising is in the context of the Dutch Safety region, developing appropriate set of arrangements for specific safety regions, the development of institutions over time, the study regarding the problem solving strategies actors use and their influence on outcomes and the effectiveness of the safety regions. Also studying the problem from other theoretical perspectives could provide additional insights such as sociology, psychology or communication.

Table of Contents

List of Figures

List of Tables

List of Abbreviations

Abbreviation	Full (in English)	Full (in Dutch)
ASR	Act Safety Region	Wet Veiligheidsregio
CP	Crisis Plan	Crisisplan
COPI	Command Place of Incident	Commando Plaats Incident
GRIP	Coordinated Regional Incident Response Procedure	Gecoördineerde Regionale Incidentbestrijdingsprocedure
HSR	Head Safety Region	Voorzitter Veiligheidsregio
IAD Framework	Institutional Analysis and Development Framework	Institutioneel Analyse en Ontwikkel Raamwerk
IPV (IFV)	Institute of Physical Safety	Instituut Fysieke Veiligheid
LCMS	National Crisis Management System	Landelijk Crisismanagement Systeem
MPT	Municipal Policy Team	Gemeentelijk Beleidsteam
MROR (GHOR)	Medical Relief Organization in the Region	Geneeskundige Hulpverleningsorganisatie in de Regio
NAAS	Network of Adjacent Action Situations	Netwerk van Aangrenzende Actie Situaties
PA	Public Administrator	Openbaar Bestuur functionaris
PT	Policy Team	Beleidsteam
(R)OL	(Regional) Operational Leader	(Regionaal) Operationeel Leider
ROT	Regional Operational Team	Regionaal Operationeel Team
RPT	Regional Policy Team	Regionaal Beleidsteam
SPA	Strategic Policy Advising	Strategisch Beleidsadvies
SRD	Safety Region Drenthe	Veiligheidsregio Drenthe
SRG	Safety Region Groningen	Veiligheidsregio Groningen
SRU	Safety Region Utrecht	Veiligheidsregio Utrechts

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Chapter 1: Introduction

1.1 Background

Since the first decade of this century there have been a lot of reforms in the Dutch public administration regarding safety and crisis management in The Netherlands. In 2002 the Commission Brouwer (Brouwer, 2002, p. 143) concluded that the local municipalities in The Netherlands had been too small to offer adequate relief in cases of crises and disasters of a certain extent. Also the need to involve other organizations besides the "traditional" emergency response organizations (police, firefighters and the Medical Relief Organisation in the Region) became more important such as public utility companies and the DMoD. In 2003 the Dutch Council for Public Administration recommended to organize the safety and crisis management by means of extended local public administration. This resulted in the Wet Veiligheidsregio´s (Act Safety Regions) in 2010 ("Wet veiligheidsregio's," 2018), which describes the organization of crisis management in the Netherlands by means of so called Safety Regions, in which communities and relief organizations of a region work together.

In 2016 the Dutch Inspectorate of Justice and Security published its report Status of Disaster Management 2016 ("Staat van de rampenbestrijding 2016: Landelijk beeld," 2016). In general, the inspectorate concluded that the Dutch Safety Regions have made a positive development over the last few years. Especially the realization of plans and the cooperation with and between (vital) partners is getting better. However, in the execution of specific tasks regarding the handling of incidents and in training sessions, there is room for improvement. One of these issues is the advising on strategic policy issues from the Regional Operational Teams (ROT) to the Policy Teams (PT) during the "hot" phase of an incident or disaster. The Status of Disaster Management 2016 indicates that 11 of the 25 Safety Regions have issues on this matter. Apparently it is not always clear to the operational teams what their own freedom of decision making is and what decisions have policy or strategic characteristics (Helsloot et al., 2010; Van der Laan & Landman, 2007). As a consequence the ROT makes decisions about issues which the PT wanted to decide on, and PTs have been confronted with an overload of questions from the ROT. In addition, the strategic advice is being accepted without any critical notes from the public administrators, as if they don´t think independently themselves. They do not view problems from their public administrative perspective (Bron & Zannoni, 2010, p. 107) and they do not ask the right questions (Van der Laan & Landman, 2007). The strategic level does not look forward enough in time, because operational issues take too much attention and effort. Furthermore, public administrators have difficulties in determining which information is valid, because they are very dependent on third parties for their information. Due to the hierarchical line, which is organized in three levels, information processing takes time before it reaches the strategic administrative level, which in combination with a periodic meeting rhythm, hinders information sharing (Helsloot et al., 2010, p. 106). It is known that there is too little uniformity concerning the use of definitions and methods in the context of the Dutch Crisis Management Organization (Hoekstra et al., 2013, p. 38). According to Van der Laan and Landman (2007) the strategic operational gap can only be bridged when the operational level is able to estimate what is strategically relevant and when the policy level is able to ask the right questions.

Apparently recognizing strategic policy issues is one part of the problem. In order to be able to give strategic policy advice, one must first know what strategic policy advising is and speak the same strategic language. However, what 'strategic' is, is a matter of perception (Hart et al., 1993); moreover it is context dependent (Ferlie & Ongaro, 2015). It is known that differences in perception can result in miscommunication, asymmetrical debates and stagnation or blockages of processes (Klijn & Koppenjan, 2004). In other words, one must first speak the same language, use the same words and grammar, in order to understand each other. Perceptions are being formed over time through socialization, education and work experience (Klijn & Koppenjan, 2004). Because the backgrounds and experiences of the actors that are involved in the strategic policy advising of the Dutch crisis management organization differ, it is likely that their perception will differ as well. Differences in perception regarding strategic policy advising could explain why advice is not being given, why the wrong advice issues are presented to the PT or why the PT asks for information to tackle operational issues instead of strategic ones.

Perceptions only describe what and why. The meeting culture and the degree of uniformity are examples of institutional issues. Because strategic policy advising is a social interaction between specific actors, the influence of the institutional context must be taken into account. The institutional context provides the social infrastructure that facilitates interactions (Klijn & Koppenjan., 2006). The institutional context can hamper or improve social interactions. An institutional analysis can provide insight in the institutional context in which strategic policy advising takes place and identify institutional misfits (if any) that might explain the strategic operational gap. Furthermore institutions can be used to foster the sharing of perceptions between actors (Klijn & Koppenjan, 2004). By performing an institutional analysis, institutional (system) short comings that hamper strategic policy advising can be recognized.

This research aims to identify and explain differences in perception between the strategic and operational level in the context of Dutch Safety Regions and the influence of the backgrounds of the main actors involved and the influence of the institutional context in these differences. By doing so, this research provides insight in the different perceptions of actors involved in strategic policy advising, and recommendations can be given to make the perception of strategic policy advising at the two levels more congruent. Besides these practical contributions this research also contributes to the literature of crisis management, especially regarding the Dutch crisis management context, and institutions. In particular those describing the concept of Network Adjacent Action situations, which will be introduced in Chapter 2.

Bridging levels of command in the Royal Netherlands Army

The idea to perform an intuitional analysis comes from the Royal Netherlands Army (RNLDA). The army also uses different levels of operation and different levels of command. In addition, the decision-making process in the Royal Netherlands Army has been based on the same model the Dutch Safety regions use: the BOB-model. However, the model of the RNLDA is more elaborate.

The model used by the RNLDA describes which planning steps should be taken and which products should be made at what moment. The formats of the products have been described in the Handbook Staff Technique. In addition, the interaction moments with lower levels after a mission has been assigned, have been described as well. These moments are also known as (commanders) back briefs. Immediately after an order has been issued, the lower commander holds a conformation brief in which his sub commanders repeat their mission and the commander's intent in their own words. By doing so, the higher commander is able to establish if the mission and his intent has been understood correctly by his lower commanders. After the conformation brief the sub commander will start his own decision-making process. During this process, at least one back brief will be held in which the sub commander presents his first mission analyses. Critical issues or request can be made at these moments. The last back brief is known as the final commanders back brief, in which the sub commanders present their final plan to the higher commander for final coordination. During the process a lead planner is assigned to plan and control the process and the quality of the products.

The RNLDA has thus not only institutionalized the decision making model, but also the interaction between the different levels of command.

1.2 Research questions

This research aims to provide an answer to the following main research question:

> "Do different backgrounds of actors in a Policy Team (PT) and a Regional Operational Team (ROT), and institutional arrangements regarding strategic policy advising in use in a safety region, influence the congruence of perception of these actors regarding strategic policy advising?"

In order to answer this research question, the following specific research questions have been used:

1. Are the perceptions regarding strategic policy advising of actors of PTs and ROTs congruent?
2. Do the institutional arrangements between the ROTs and (R)PTs of safety regions regarding strategic policy advising differ?
3. Do different backgrounds of actors in a PT and a ROT influence the level of congruence of perception regarding strategic policy advising?
4. Do institutional arrangements regarding strategic policy advising influence the level of congruence of perception regarding strategic policy advising of the actors involved?

1.3 Research design & strategy

The main purpose of the research is to explain how the independent variables (background and institutional arrangements) influence the congruence of perception of strategic policy advising of a ROT to PT. Because it only focuses on these elements, this research approach can be typified as a nomothetic approach (Babbie, 2009, p. 21). This implies that three criteria need to be met in order to determine a causal relationship: correlation, time order, non-spuriousness (Babbie, 2009, pp. 94-95).

In order to study the problem, a cross-sectional case study has been performed. Cross-sectional case studies enable variable-orientated cross-case analysis (Babbie, 2009, p. 395). On the other hand, cross-sectional case studies also have one serious disadvantage: observations in these kinds of studies are only made at one point in time. This makes it harder to prove the time order criteria necessary to establish a causal relationship (Babbie, 2009, p. 106).

In order to answer the specific research questions the following units of observations have been determined:

- The Regional Operational Leaders of a ROT. These actors are in the formal organizational structure of the safety regions responsible for advising the head of a policy team from the ROT;
- Specific members of the policy teams. Especially the actors responsible for strategic policy issues;
- Regional crisis plans of safety regions, including additional written protocols and procedures regarding strategic policy advising (if any).

The data have been collected by means of literature studies and qualitative interviews. In total 14 interviews have been held for this study. The interviewees included public administrators from the strategic level (mayors, deputy mayors and municipality secretary) and of the operational level (Regional Operational Leaders). Also two preliminary interviews have been held in order to gain a deeper insight in order to determine the research question and research design. The persons interviewed acted at that time as Director of a Safety Region and as a Regional Military Commander (RMC). The latter has been interviewed, because the RMC takes part in the PTs if military support and assistance need to be provided. However, this military region included eight Safety Regions, which gave the RMC a good insight in the actual problems at hand.

1.4 Limitations & delimitations

This research only focusses on strategic policy advising in the context of the Dutch Safety Regions. Because it is not possible to study all of the 25 safety regions due to time constraints, only a limited number of three regions have been selected based on criteria that will be mentioned in Chapter 3. Because of this, the generalizability of the study has decreased. However, when more cases are to be studied, it will be very hard to make good comparisons because the specific regional contexts (socio-economic, political or case-specific events) of the regions will differ more. This would have made it harder to check for confounding factors.

This research has furthermore been delimited to the relation between the (R)PT and ROT during the "hot" phase of a crisis or exercise. The cooperation between partners of a safety region during the "cold" phase, so before a crisis or disaster has actually happened, will not be analysed. Initially the focus had been on crisis situations from GRIP 3 or higher (municipality level or higher). However, these types of crises have not happened a lot and during this research it appeared that strategic policy advice from the operational/tactical level to the strategic level also takes place during GRIP 1 and 2. Therefore this delimitation has been removed. On the other hand, this study has been delimited to the regional level of the safety regions (beyond GRIP 4). Although the national level can be regarded as the strategic level, this study only focusses on the strategic policy advising of the Regional Operational Leader (as head of a ROT), to the head of a Regional or Municipality Policy Team, which is in most cases a mayor or his deputy.

Furthermore, this study does not focus on a specific crisis or disaster. This creates the possibility to ask questions in more general terms. This is necessary in order to get a complete picture about the perceptions of strategic policy advising. However, this also implies delimitation. It is known that typical crisis characteristics, such as time pressure, uncertainty and threat may result in different behaviour than when stated in an interview during the "cold phase". On the other hand, data found by studying actual crises or disasters is often limited usable for general research issues because of the specific context dependent nature of a crisis (social, environment, cultural).

Finally this study is delimited because it only looks at the strategic-operational gap using primarily institutional (network) theories.

1.5 Reading guide

After this introduction, Chapter 2 will describe the results of a literature study aiming to describe the context and theoretical frameworks used for this study. Before focussing on the dependent and independent variables, first a review will be done regarding the international literature about crisis management in order to define a crisis, crisis management and to be able to define the strategic and operational levels. During this process, links will be made to the specific Dutch crisis management context. Subsequently, the focus will be made on perception as the dependent variable, and how these are linked to actors' backgrounds and institutions. In addition, a section will be dedicated to the Institutional Analysis and

Development (IAD) framework, which has been used in order to perform the institutional analysis. The methods for data collection and analysis will be described in Chapter 3. The results of the data collection and the first analysis regarding perceptions and institutions (the descriptive variables) will be presented in Chapter 4. The analysis regarding the causal relationships (research question three and four) will be answered in Chapter 5. And finally the conclusions, recommendations and discussion can be found in Chapter 6. Used lists for interviews and the results of the data gathering regarding perceptions and institutions of the cases studied will be added to the annexes.

Chapter 2: Theoretical Framework

2.1 Crisis management

2.1.1 What is a crisis?

There are a lot of definitions about what a crisis actually is (Drennan, McConnell, & Stark, 2014, p. 15; Helsloot et al., 2010, p. 165). Based on a literature study Drennan et al. (2014) identified three ways to define a crisis. The first way identifies a crisis as a fact based on three conditions: the existence of a severe threat, high levels of uncertainty and the urgent need for action (Drennan et al., 2014, pp. 15-16; Hart et al., 1993; Rosenthal et al., 1991). The second way is defined by Drennan et al. (2014, p. 17) as "crisis as perceptions", which takes into account the manner in which people perceive the world around them. As Drennan et al. (2014, p. 17) put it: "When we feel or belief it is a crisis, then it is a crisis and it is real because we are using language to convey the significance of what is happening". The third way combines these two schools into one definition (Drennan et al., 2014, p. 19):

> Crisis: a set of circumstances in which individuals, institutions or societies face threats beyond the norms of routine, day-to-day functioning, but the significance and impact of these circumstances will vary according to individual perceptions.

According to criticasters to this definition, perceptions are already incorporated in the first 'crisis as a fact' definition, because threats and the urgency of actions may be perceived differently by different agencies, actors and interest groups (Rosenthal et al., 1991).

In The Netherlands, the Act Safety Regions provides more specific definitions. It makes a distinction between crises and disasters. The following definitions are mentioned in article 1 of the Act Safety Regions (translated from Dutch):

> Crisis: a situation in which a vital interest of the society is affected or is likely to be affected.

> Crisis Management: the whole of measures and provisions, including the preparations of these, that the local authorities or the administration of a safety region take during a crisis in order to maintain public order, if applicable in coherence with the measures and provisions taken based on or in accordance with any other authority granted by law and relevant to a crisis.

> Disaster: a heavy accident or other occasion in which the life and health of many persons, the environment or extensive material interests have severely been damaged or threatened and at which a coordinated use of services or organizations of multiple disciplines is needed to remove the threat or limit the harmful effects.

> Disaster control: the whole of measures and provisions, including the preparations of these, that the local authorities or administration of a safety region take relevant to a disaster, or in order to prevent a disaster and to limit the effects of a disaster.

However, in the Dutch crisis management literature we find multiple definitions for crisis. For example Helsloot et al (2010) mention that the definitions mentioned in the Act Safety Regions concern crises of national importance, because these definitions use the term vital interests (Helsloot et al., 2010, p. 166). Also the *Dutch National Handbook of Crisis Decision Making* uses yet again another definition (Hoekstra et al., 2013, p. 38), making defining a crisis in The Netherlands a bit ambiguous.

The "*Referentiekader Regionaal Crisisplan 2016*" (2016, p. 9) mentions that from a legal point of view, it is important that the proper authority qualifies a situation as a disaster or crisis. This is important when they want to make use of emergency authorities in case of a threat to vital interest of society, when the regular authorities or structures appear to be insufficient to prevent this threat or to contain, mitigate or restore the effects of this threat.

In this report the definition of a crisis by Drennan et al. (2014, p. 19) will be used, unless the term will be used in the context of the Act Safety Regions and making distinctions is necessary. The reason for this is that this definition incorporates the concept of perception, which is a core element in this research paper.

2.1.2 What is crisis management?

After deciding what a crisis is in the concept of this study, the next question to answer is what crisis management is. This paragraph will focus on crisis management and its characteristics.

The management of crises and disasters has long been studied in technical-professional terms, as the skilled execution of plans and procedures to bring a situation back to normal. While this perspective is still dominant in the literature on operational disaster management, it is rapidly being replaced by a perspective that emphasizes the political nature of crises and disasters (Boin & Lodge, 2016, p. 293). This perspective regards crises as turning points, potentially undermining legitimate orders as institutions, policies and leaders are seen to be failing to perform the core task of protection (Hart et al., 1993). Reoccurring issues in the crisis management literature can be related to what is known as the "organizational paradox" (Stark, 2014, p. 693; Waugh & Streib, 2006) and the "centralization thesis" (Hart et al., 1993, p. 14).

The "organizational paradox" concerns the usage and effectiveness of detailed plans in crisis management. Uncertainty and emergency response demand predetermined rules, structures, and concrete forms of procedures and protocols and accurate organization and planning (Eijk, Broekema, & Torenvlied, 2013; Stark, 2014; Waugh & Streib, 2006). These plans increase the legitimization of crisis management, and improve the thoroughness of the actions taken by the crisis managers (Eijk et al., 2013). Furthermore, these plans initiate communication between actors and make them think how to respond to a certain situation before a crisis actually takes place (Boin & Bynander, 2015). In addition, Moynihan (2008b) argues that procedures are critical for organizational learning. SOPs encode lessons from history in order to guide organizational behaviour, institutionalizing learning by recording and conserving, and retrieving experience through routines. SOPs hence form an organizational memory. The challenge for established organizations and networks is to keep institutionalized learning from becoming so embedded that it acts as a barrier to new learning (Moynihan, 2008). However, the other side of the paradox is that plans seldom fit a crisis´ specific situation (Stark, 2014; Waugh & Streib, 2006, Rosenthal et al. 1989; Boin et al. 2013). Moreover, the perception that existing structures are perceived to be insufficient is part of crises definitions (Eijk et al., 2013, p. 11). The fast developing and changing characteristics of crisis situations require flexibility, creativity, improvisation, redundancy and the occasional breaking of rules (Boin, 2009; Eijk et al., 2013; Stark, 2014, p. 692). Taking into account that crisis management will continue to be designed, steered, and implemented through public bureaucracies, crisis research should question whether the institutional context provides a suitable environment for crisis management to be effective or if an incongruous fit exists between efficiency, procedural rationality, and the required adaptable modes of crisis management (Stark, 2014). Both Stark (2014, p. 693) and Boin & Bynander (2015, p. 124) conclude that there can be an institutional fit, but only when crisis managers can get the mix right between hierarchal, formalized efforts and organizational procedures to supplement interpersonal skills and their modes of governance and to shape collaboration.

The "centralization paradox" emphasises the importance of central authority and a strong leader to co-ordinate the efforts of crisis response organizations (Hart et al., 1993, p. 14). Centralization can have advantages. In systems that function well, an elite group of decision makers have an inbuilt system of checks and balances to ensure that no particular view prevails (Drennan et al., 2014, p. 164). Also, when multiple decisions makers are involved in the elite group, multiple views will be regarded, but negotiating about solutions and trade-offs are confined to small number of actors. Furthermore, because of their status they are better able to put decisions into actions, so their decisions have a stronger degree of legitimacy (Drennan et al., 2014). However, working in elite decision making groups also has its drawbacks (Drennan et al., 2014). For example, unrealistic demands and responsibilities may rest on a few shoulders. Furthermore, there is the risk of an information overload and the risk of losing vital information when filters are used to prevent an information overload. Centralization can also result in slow decision making (Drennan et al., 2014, p. 165) or decision-making paralyses (Hart et al., 1993). The centralization thesis may also refer to the concentration of decisional power with the central government in relation to regional or local governments (Hart et al., 1993, p. 14). These aspects result in discussions about the relative advantages or disadvantages of centralized, national based response models. The dilemmas surrounding these aspects can be phrased in terms of unrestricted centralization (the dictator model) versus institutionalized constraints on temporarily extended powers (Boin, 2009, p. 547).

The centralisation thesis lost support because extra levels of coordination appeared to add less value to the process, besides facilitating information flows (Boin & Hart, 2010). There is a general consensus that the bureaucratic characteristics of most public administrative systems, such as routine processing of information, compliant behaviour, and functionally divided responsibilities coupled with multi-layered and highly differentiated patterns of decision-making, do not match with the crisis characteristics of serious threat, uncertainty and acute time pressures (Hart et al., 1993; Rosenthal et al., 1991;

Stark, 2014). Furthermore, modern crises are becoming more complex due to technological developments such as increased information and communication capabilities, globalization an deregulation (Boin & Hart, 2003). Nowadays most crises are not confined by boundaries. Multiple problems are often entwined with each other, involving very often several levels of authority from several agencies (Boin, 2009). Most crisis response systems in modern societies compromise a wide variety of response organizations and individual participants that do not usually work together (Boin, 2009; Waugh & Streib, 2006). This requires coordination, but coordination is not easily done during crisis situations (Boin, 2009). In virtually every large-scale crisis and disaster, coordination has been identified as a critical failure factor (Boin & Bynander, 2015, p. 123).

Because of these issues, the network perspective took the upper hand in the literature in the latest part of the 20th century. Nowadays the theory of networks cannot be disregarded when studying crisis management. Since the 1970s network science has developed towards fully-grown theories in both businesses as public administration (Borgatti & Foster, 2003; Kenis & Provan, 2009; E. H. Klijn & Koppenjan, 2012). Governance networks are often being used as an alternative form to exchange resource compared to other exchange mechanisms like markets or hierarchies (Jones, Hesterly, & Borgatti, 1997). This is because in networks social mechanisms, such as restricted access, macro-culture, collective sanctions, and reputation, are used to coordinate and safeguard exchanges (Jones et al 1997, p.924). These mechanisms diffuse values and norms and information about actors' behaviour across the network. In one of the latest reviews on the theory of governance networks conducted by Klijn and Koppenjan (2012) a series of common concepts and assumptions have been identified (p.591):

1. "Policy and service delivery are conceived and implemented in a network of interdependent actors."
2. "Outcomes of policy and public services are a consequence of the interaction of many actors rather than of the action of one single actor."
3. "Interaction patterns result in institutionalisation of relationships between actors. These also involve the emergence of rules that regulate behaviour in networks."
4. "The complexity of processes within networks requires guidance and management of interactions. This is usually referred to as network management."

On the other hand, networks characteristics such as voluntary cooperation, the need for consensus and a reliance on reciprocity norms, sometimes conflict with the need to deliver a rapid, coordinated crisis response (Moynihan, 2008a, p. 210). One could say that apparently the centralization thesis has been replaced by a "network paradox."

2.1.3 What are the levels of crisis management?

The research question is about strategic policy advising from the operational/tactical level to the strategic level. This raises the question what the differences are between these two levels. This paragraph focusses on this topic by describing some important aspects that can be found in the international scientific literature regarding crisis management.

A first finding is that there are multiple ways to make this distinction. Hart et al. (1993, p. 19) mention two ways to define the strategic and operational level. The first way makes a distinction based on the hierarchical and geographic positions of strategic decision makers and scenario policy advisers, whereas the operational level encompasses line managers and field agencies concerned with first-line operations and policy implementation. These levels differ by their physical and social distance to the actual events. As a result, these levels have different perceptions regarding the operational and socio-political context. Although local presence may be key to operational effectiveness, at the strategic level a thorough understanding of the public and political situation is required in order to be effective (Hart et al., 1993, p. 19). Also crisis characteristics are experienced differently at the strategic and operational level, such as time pressures (Hart et al., 1993). Operational time pressures require almost instant responses and are directly unequivocally visible. At the strategic level, perceptions of time are mitigated by a concern for the broader, longer term ramifications of events. Only when actors of the different levels have to cooperate, the strategic levels are exposed to similar pressures (Hart et al., 1993). The second division makes a distinction using a functional approach (Hart et al., 1993, p. 20). This approach classifies choices and decision makers based on the actual importance in shaping the course of events and the general thrust of official crisis responses. In this manner, strategic decision making refers to choices that set the crucial parameters for intervention, whereas operational decisions focus on technical issues and details of implementation. This perspective includes the possibility that major strategic decisions to handle a crisis are made at lower levels of the governmental hierarchy. The fact that there are multiple ways to divide the two levels implies that the distinction is a matter of perspective and is determined by politico-administrative, cultural and social context (Ferlie & Ongaro, 2015, p. 221).

The previous section describes a rather theoretical approach to define the levels. A more practical framework has been developed by Boin and Hart (2010). Their framework has been based on a research of international crisis management literature and describes the tasks and challenges at strategic and operational level (see Table 1). They define the strategic level as the political-administrative executives who carry political responsibility and who are formally charged with providing direction, making decisions with potential long-term consequences, and who are looked upon to provide guidance to the general public and the participants of the response network (explaining what are the causes, expected consequences, and best actions). The operational level is defined as the first responders who are closest to the disaster and use their professional expertise to address the threat, minimise the consequences and provide immediate relief (Boin & Hart, 2010, p. 359).

Table 1: Strategic and operational task & challenges based on *Boin and Hart (2010)*

Strategic Level	Operational Level
Sense-making Diagnosing confusing, contested and often fast-moving situations correctly (with limited and often contradicting information).	*Diagnosing and deciding* Forming an accurate picture of the nature and extent of the threat and/or damage under conditions of time pressure and incomplete information; choosing a sensible and feasible initial response approach; and continuously updating both in light of changing circumstances or additional information becoming available.
Meaning-making Providing persuasive public accounts of what is happening, why it is happening, what can be done about it, how and who is responsible for what.	*Mobilising and organising* Soliciting the types and levels of operational resources necessary to meet the demands of the situation in a speedy yet orderly fashion, and deploying them in a timely and orderly fashion.
Decision-making Making strategic policy judgments under conditions of time pressure, uncertainty and collective stress.	*Containing and mitigating* Using available resources effectively and efficiently to contain (and if possible reduce/eradicate) the agent(s) of threat and destruction so as to minimise the damage to lives and property.
Coordinating Forging effective communication and collaboration among pre-existing and ad hoc networks of public, private and sometimes international actors.	*Informing and empowering* Transmitting accurate, timely and actionable information upward, outward and downward within the crisis response structure, as well as to relevant citizens and communities, designed to enable these actors to make informed crisis response decisions within their respective domains of involvement.
Circumscribing Scoping the nature and duration of crisis support that will be provided and determining principles for targeting and rationing such support among often ill-defined social and territorial 'victim' communities.	*Coordinating and collaborating* Making sure different units, organisations and disciplines involved in front-line crisis responses work together effectively and in a sustainable way, both within and across the public and private/community sectors.
Consolidating Switching government and society back from response mode to recovery and 'business as usual', yet doing so without a loss of attention and momentum in delivering long term services to those who are eligible.	
Account-giving Managing the process of expert, media, legislative and judicial inquiry and debate that tends to follow crises and disasters in such a way that responsibilities are clarified and accepted, destructive blame games are avoided and a degree of catharsis is achieved.	
Learning Making sure that the organisations and systems involved in crisis management engage in critical, non-defensive modes of self-scrutiny and draw evidence based and reflective lessons for their future performance rather than politics-driven and knee-jerk ones	
Remembering: Publicly acknowledging that many crises and disasters are traumatic experiences for victims, responders and the organisations and communities involved, and responsively accommodating their desires that the community should 'never forget'.	

The framework Arjen Boin & t Hart (2010) has been based on an inductive research studying crisis management organizations from different countries, which means that the framework is a result of a generalization. This implies that if one desires to use this framework in a specific situation, the specific context of that situation should be taken into account as well. Because this research is focused on the Dutch crisis management organization, a closer look at the Dutch crisis management context is required in order to determine what is strategic or operational in the Netherlands.

2.1.4 How has crisis management been organized in The Netherlands?

In The Netherlands, the authority to manage a crisis is divided among a general chain and several functional chains. Functional chains concern specific policy areas, such as education, healthcare or water management. The proper authorities in these cases are most often the line ministers or in some cases local authorities. The general chain concerns maintaining public order and crisis and disaster management. This chain can be characterized by measures aimed at the local population. The proper authorities on these policy domains have been decentralised, designated to the mayors of a municipality or, in case of municipal transcending crisis, the Head Safety Region (who is in fact one of the mayors of the communities that form a safety region). This central role of the local authorities in the crisis management organization is very characteristic of the Dutch crisis management context. In other countries the crisis management organizations are in charge during a crisis or disaster (De Regt, 2016).
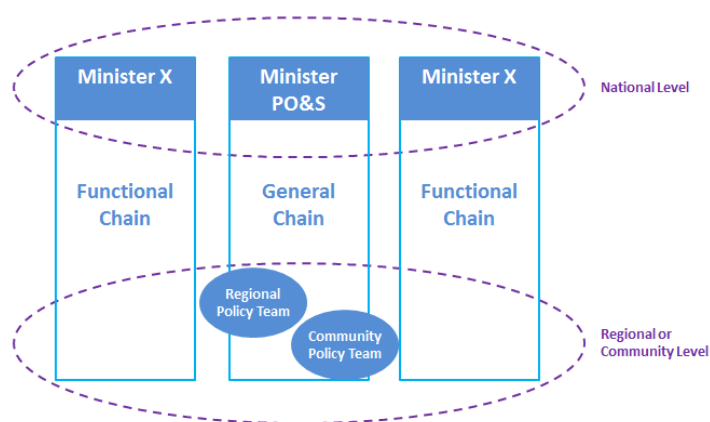
Figure 1: Coordination between the chains, copied from Martens (2012, p. 3)

Since the Act Safety Regions came into force, an important element in the Dutch crisis management organization is the safety regions. The Act Safety Regions ("Wet veiligheidsregio's," 2018) imposes the local municipalities to cooperate in the field of crisis and disaster management at a regional level, forming safety regions (see Figure 2).

Veiligheidsregio´s

1. Groningen
2. Fryslan
3. Drenthe
4. Noord-Holland-Noord
5. Flevoland
6. IJsselland
7. Zaanstreek Waterland
8. Kennemerland
9. Amsterdam-Amstelland
10. Twente
11. Gooi en Vechtstreek
12. Noord- en Oost-Gelderland
13. Utrecht
14. Hollands-midden
15. Haaglanden
16. Gelderland-Midden
17. Gelderland-Zuid
18. Rotterdam-Rijnmond
19. Zuid-Holland-Zuid
20. Brabant-Noord
21. Midden- en West-Brabant
22. Zeeland
23. Brabant-Zuidoost
24. Limburg-Noord
25. Limburg-Zuid

Figure 2: The Dutch safety regions in 2018 (derived from: www.regioatlas.nl, d.d. 31-01-2019)

The "Basisinformatie regionale crisisbeheersing" (Wijkhuijs & Van Duin, 2017, p. 24) describes the safety regions primarily as a network of organizations in which multiple organisations such as the fire services, medical services and community care work together at different levels and have to cooperate with each other. During some occasions other partners will participate like the police, ministry of defence, the water boards or others.

In case of a crisis or disaster, these organizations will form a multidisciplinary organization. This process is called "upscaling", which is better known in The Netherlands as the Coordinated Regional Incident control Procedure (in Dutch: Gecoördineerde Regionale Incidentbestrijdingsprocedure) or GRIP. Although GRIP has been adopted by all safety regions, the detailed interpretation of GRIP is a matter of the regions themselves. GRIP provides a common ground for the operational activities and the coordination with the policy level. The manner in which the multidisciplinary crisis management organization will be organized during the "hot" phase of a crisis, thus when it is scaled up accordingly to the GRIP, appears to be in a hierarchical way. Operational command will be done by a Regional Operational Leader (ROL), who acts as head of a Regional Operational Team (ROT). However, when a disaster or crisis influences a wider area (from GRIP 3 or higher) strategic coordination will take place at a Municipal or Regional Policy Team. The mayor (in case of GRIP 3) or the Head Safety Region (in case of GRIP 4) acts as supreme commander and is allowed to give enforcing directions to the Regional Operational Leader of the ROT and if needed to other functional chains. At the same time, the ROL provides the PT information about the situation and the activities of the crisis respond organizations. During GRIP 3 the mayor is head of a Municipal Policy Team (MPT, in Dutch: Gemeentelijk Beleidsteam or GBT) in which advisors from the municipal crisis response organizations or others participate. In a similar way during GRIP 4, the Head Safety Region (HSR) acts as head of a Regional Policy Team (RPT) for regional coordination, in which the mayors of the municipalities involved participate, as well as advisors from the respond organizations and other organizations involved.
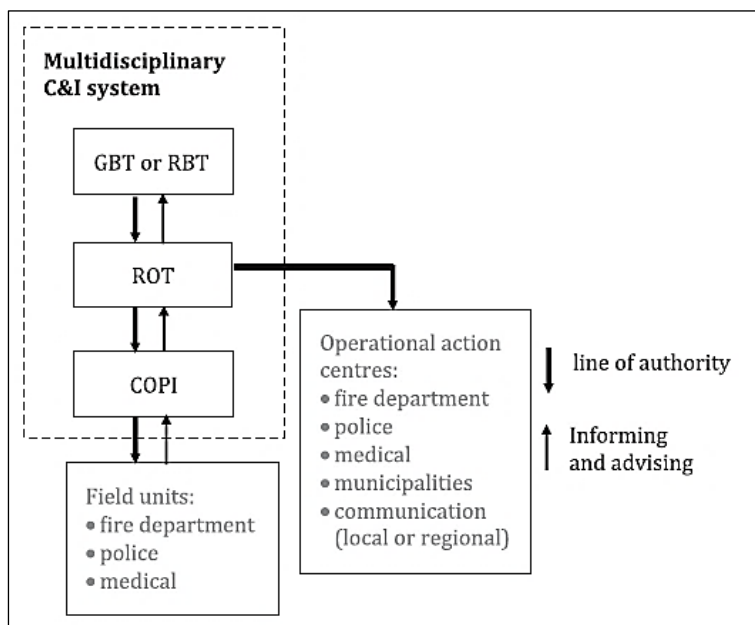
Figure 3: The Dutch multidisciplinary crisis management organization, copied from Scholtens, Jorritsma, and Helsloot (2014, p. 42).

At first sight, this multidisciplinary organization can be regarded as a hierarchy. However, the composition of the teams and the manner in which decisions are being made in the teams, have more characteristics in common with a network organization rather than a hierarchical organization. In a ROT and PT actors of multiple organizations participate, each having their own interests and problems. In a PT it is the mayor or HSR who is expected to set priorities, take important decisions and provide the ROL with the necessary directions, but the ROL is also the one who, after consultation, must resolve any differences of opinion within the disaster policy team (Scholtens, Jorritsma, & Helsloot, 2014, p. 42).

It seems that the organization of the Dutch safety regions has merged elements from the centralization thesis and network theories. One could question if this merging of exchange mechanisms is effective. Both mechanisms work with a different set of "rules", which in some cases are each other's counterparts. For example the need for consensus versus a decisions by one leader (Heffen & Klok, 2000).

Because multiple municipalities work together in one safety region, in practice the ROLs have to be able to work with PTs of different municipalities in case of a GRIP 3 incident, or a RPT during a GRIP 4 incident. This means that the ROL has to cooperate with a great many different actors, such as the mayors of different municipalities and occasionally their deputies (also called Loco Mayor). And to make things even worse, each mayor can have multiple deputy mayors.

2.1.5 What are the levels of crisis management in the Dutch safety regions?

In none of the documents studied a detailed definition has been found of what the strategic policy level is in the Dutch Crisis Management organizations. Most documents mention just strategic and operational/tactical, without further determining it. For example, the *Nationaal Handboek Crisisbesluitvorming* 2016) only mentions the word "strategic" two times without providing any definitions. Apparently it assumes that everybody who reads the book knows what strategic is.

The *"Referentiekader Regionaal Crisisplan 2016"* (2016, p. 61) defines policy administrative coordination as (translated from Dutch):

> "Coordination within or between the general and functional chain, without stepping into each other's functional, legal or geographic authorities."

And it defines operational coordination as (translated from Dutch):

> "Multi headed operational command, where the operational commanders involved do not step into each other's functional, legal or geographic authorities" ("*Referentiekader Regionaal Crisisplan 2016*," 2016, p. 61).

Comparing these two definitions, it can be concluded that these definitions are rather similar to each other, focussing on authorities. The definitions do not make a distinction between the two levels regarding what they should do or what the scope is of the different levels.

Helsloot et al. (2010, p. 109) mention the strategic level as the supreme command. They explain that the policy team is a meeting of strategic advisors who provide the mayor or the HSR with strategic and administrative advice regarding a crisis and regarding the administrative decisions needed for providing safety to the local population (p. 147). From this point of view, it follows that the Dutch crisis management organization uses a hierarchal manner to determine what is strategic and what is operational. Strategic decisions are being made at the Policy Teams, operational and tactical decisions are being made at the operational policy team or the COPI. Although this seems very clear, a hierarchal division does not describe what topics are actual strategic or operational. This requires a further analysis of the context. Unfortunately, the (scientific) literature regarding strategic crisis management is limited (De Regt, 2016). However, a couple of documents have been found that contained several elements regarding this topic in the Dutch context.

De Regt (2016), studying the usage of the BOB-decision making process in the PTs, performed a literature study regarding the tasks of the policy teams. She concluded that the policy team in the Dutch crisis management context has the following tasks:

1. Determining the situation: know what is going on, how the situation or threat develops and which actors are involved.
2. Decision making: making decisions about issues that have important societal impact, or ratifying decisions made at the operational level. These include decisions about issues that are the sole responsibility of the mayor or head of a PT, such as emergency warrants or issues about which there is no consensus in the PT or ROT and the mayor or head has to make a decision.
3. Coordination: this involves coordination between other authorities or organizations and other functional chains. Coordination of the incident control and providing relief is a responsibility of the ROT.
4. Meaning Making: how does the public administrator judge the situation, and what does this implicate for the near and longer future. This also includes communication with the local population.
5. Concluding the crisis and anticipating accountability. This includes the drawing up of time lines of activities taken and decisions taken including the underlying considerations.
6. Accounting: taking responsibility for decisions taken and learn from lessons identified.

As becomes clear from this list, De Regt (2016) used the framework of Boin and Hart (2010) as theoretical framework for her study. Because this framework is a generalization, this outcome could be expected. Unfortunately, this framework is not context specific. For example, important societal impact is being determined by one´s perception about societal

problems and the extent of the impact. Ratifying decisions made at the operational level implies that the strategic decisions are being made at the operational level, causing the level where decisions are being made to blur and diffuse.

Other documents mention more specific tasks to be performed at the strategic level. For example in the "*Bestuurlijke aandachtspunten crisisbeheersing en crisiscommunicatie*", Ten Dam and Regtvoort (2015, p. 7) mention a couple specific tasks that have been identified for the strategic level in the Netherlands:

1. Provide an overview of the effects and side effects with bottlenecks:
    i. What are the main problems and bottlenecks;
    ii. Which sectors or chains are being hit or involved and who is responsible for dealing with it;
    iii. Determine what is the role and tasks of the public administration (including the local municipal council and board).
2. Determine the main goals, priorities and coordinating instructions for crisis response using the following priorities:
    i. Saving and protecting the lives of the population;
    ii. Stabilisation of the crisis and incident source control;
    iii. Protection of the environment and properties;
    iv. Securing evidence;
    v. The continuation of vital processes.
3. Make decisions about proposals presented by the operational level using the priorities mentioned above.
4. Initially do not give the operational management assignments for actions needed to implement the chosen strategy, except when:
    i. A higher level (for example ministerial) issues what or how an assignment needs to be executed;
    ii. When certain measures or actions have great financial or juridical consequences that will (almost certainly) lead to civil unrest;
    iii. When the execution of an assignment rests with the public administrator himself.
5. Provide an overview of mayor issues or problems and their effects, side-effects, and bottlenecks.
6. When taking measures with extensive effects, provide a good substantiation. Are these decisions necessary (proportional and in the alternative).
7. Make sure that extensive decisions are being based on authoritative expertise.
8. Make sure that extensive or controversial decisions have political and administrative support.
9. Make sure that coordination takes place among sectors and organizations involved.
10. Make sure that sectors and organizations involved are included in strategic and operational levels of the municipality or safety region.
11. Know which actors are responsible for what issues, which organization can steer other organizations and whose measures are authoritative and legally binding for others.

What the strategic level does is not the same as what the operational level should advice about. Van der Laan and Landman (2007, p. 21) mention categories of information that are relevant for public administrators. These are:

- Object information: like permits, chemicals, storages, etc. This information can be used to make an administrative risk analysis.
- Effect information: like areas and effects. This information is needed to estimate the kind and size of the incident.
- Action information: like measures taken, which organization is performing what actions. This information is needed to monitor and coordinate the measures taken.
- Predicting information: like the effects in time X, additional capacity requests etc. This is information that allows the commander to think ahead in time and enables him to anticipate what is coming.

Van der Laan and Landman (2007, p. 22) further mention that administrators like to get their advices presented in the form of dilemmas and courses of action, provided with a clear decision request.

The "*Basisboek regionale crisisbeheersing*" by Helsloot et al. (2010, p. 133) offers some more specific indications of how to determine what decisions should be brought before the PT for decision making. These concern decisions about:
1. Requests for personnel or material support from outside the safety region;
2. Warning of the population;

3. The issuance of emergency warrant or emergency ordinance;
4. Decisions about evacuations;
5. The distribution of scarce resources among local communities and safety regions;
6. Determining the public administrative directions for public care;
7. Making a plan for the follow-up phase after a crisis;
8. Provide information about the operations performed at the operational level.

According to (Helsloot et al., 2010, p. 143) policy decisions are needed about issues on which only the mayor (or head of a PT) is authorized to decide on, such as the issuance of emergency warrants or emergency ordinance and requests for personnel or material support from outside the safety region. Also, the provision of information to the local community is a responsibility of the PTs, including informing the local population and media. The authors emphasize the problems ROTs have in determining what is strategic or what is operational. They argue that the PTs know what feelings are present among the local community and hence are able to anticipate on societal consequences. But in order to do so it is important that the ROT provides information about the scenario the ROT is planning on and their expectations regarding the developments of the situation and that they warn the PT when the threat to the local population or the environment is increasing. Furthermore they emphasize the need to inform the PT about civil unrest among different population groups. The ROT should not present decisions to the PT to avoid their own responsibilities regarding the operational management of a crisis. Although the "*Basisboek regionale crisisbeheersing*" provides a more detailed description of what strategic decisions are in the Dutch crisis management organization, it should be noted that parts of this are regarded as outdate by the IFV (this is mentioned on the pages of the book) and it is not a legal, enforcing document.

As can be seen, the tasks mentioned in the "*Bestuurlijke aandachtspunten crisisbeheersing en crisiscommunicatie*" (Ten Dam & Regtvoort, 2015) and the "*Basisboek regionale crisisbeheersing*" by Helsloot et al. (2010) are more specific than De Regt provides. However, what is interesting in De Regts paper is the discussion she found in the literature regarding strategic issues in The Netherlands. For example Van Duin, Tops, Wijkhuijs, Adang, and Kop (2012), argue that the public administrators in fact mainly ratify decisions made at the operational level which had to be made due to urgency or time constraints. In some cases, decisions making authorities have been mandated from the strategic level to the operational level (Duin et al., 2012, p. 186). Hence, they argue that these decisions are in fact operational decisions. Van Duin et al. continue that policy decisions are needed to enforce decisions about issues where consensus is lacking at the operational or strategic level (Duin et al., 2012, p. 58). De Regt (2016) also mentions an incongruence between the findings of Scholtens et al. (2014) and the findings of De Jong (2013). Scholtens et al. (2014) conclude, after studying the crisis plans of Safety Region Drenthe, that crisis decisions are mostly being made within the operation and that the PTs, who do not make that many decisions, should focus itself on the tasks concerning meaning making. However, De Jong (2013, pp. 16-17) concluded, based on interviews held with several mayors, that mayors do take substantial decisions and that their importance is being underestimated. Helsloot et al. (2010, p. 110) conclude that the actual options for a supreme commander to give directions are minimal in the first hours of a crisis. But they continue that the role of the mayor is not less important. His role as a "public father" is maybe the most important "weapon" of the government to persuade to local population of the good intentions of the government.

These discussions illustrate that apparently there is no general consensus about what strategic decisions actually are and how these issues influence the outcome of events. Neither have definitions been found that make a clear distinction in the Dutch context. This is remarkable, because an earlier report, the "*Landelijk beraad crisisbeheersing*" (Van der Laan & Landman, 2007, p. 13), already mentioned that it is not always clear what the freedom of decision making is for administrators and the operational teams and what decisions have administrative or strategic characteristics. Even after the act safety regions came into effect in 2010, the decisional levels remain diffused. No wonder that the PTs and ROTs have trouble identifying them. There are just too many different perceptions about them.

2.2 Perceptions

2.2.1 What are perceptions?
In all crisis definitions perceptions are an important element (Drennan et al., 2014, p. 17; Eijk et al., 2013; Rosenthal et al., 1991). Furthermore, the previous sections showed that perceptions are important in defining the strategic and operational levels. Unfortunately perceptions are also an underexposed aspect in the crisis management literature (Eijk et al., 2013). So what are perceptions, and why are they important?

Perceptions are images of problems, solutions, other actors (objectives, resources, strategies) and of developments in the environment (Klijn & Koppenjan, 2004, p. 48). However, what we see and what we do not see is influenced by our expectations and by what we find relevant and important: our frame of reference (Klijn & Koppenjan, 2004, p. 29). This frame is determined by our identity. Frames of reference are being formed and influenced through socialization, such as friendships, education and work experience. Hence the frames of individuals of the same social group are likely to be more similar than from individuals of different groups (Klijn & Koppenjan, 2004, p. 29-30). Differences in perceptions can result in knowledge conflicts and asymmetrical debates, which are sometimes called "Dialogs of the Deaf". Substantial differences in perceptions can result in blockages in policy processes and lead to stagnation (Klijn & Koppenjan, 2004, p. 31). Perceptions are thus vital for the course and outcomes of policy processes.

Based on this theory, one can notice that the Dutch crisis management organization is very vulnerable for perception incongruence. Most actors at the strategic level, such as the mayors and public administrators, have no experience in crisis response organizations. In addition, most actors from the crisis response organizations at the operational and tactical level have no or little experience in public administration. Their frame of reference is different. This might explain why the wrong questions are being asked and why the operational level has difficulties in identifying strategic issues.

2.2.3. Can problems due to perception incongruence be solved?

Knowing that problems can occur due to perception incongruence, automatically raises the question whether or not these problems are solvable or can be overcome. Fortunately, the literature provides some solutions. Problems of perception incongruence requires the reflection on individual frames, being aware of the plurality of perceptions and of cognitive shortfalls, taking into account problem perceptions of different parties and learning about other actors (Eijk et al., 2013; Klijn & Koppenjan, 2004). Joint image building, intensive interactions, diversity in the decision making team and face-to-face interaction can also result in the convergence of perceptions, making it easier to get consensus (Eijk et al., 2013; Klijn & Koppenjan, 2004, p. 72). However, these solutions require coordination and cooperation and hence involve the use of institutions. Institutional design, or the deliberate attempt to change the set of rules that structures interactions within policy networks, can be used to influence perceptions (Klijn & Koppenjan, 2004; 2006, p. 149). But in order to understand how, more insight is needed in the working of institutions.

2.3 Institutions

2.3.1 What are networks and institutions?

The safety regions have been characterized as network organizations. Therefore this paragraph will broadly describe some relevant network characteristics before focusing on institutions.

The theories of institutions and networks are closely related (Blom-Hansen, 1997; Klijn & Koppenjan, 2004). The (policy) network perspective distinguishes itself from rational approaches to problem solving and uncertainty, because it is founded on problem situations demanding the involvement of multiple actors to solve these problems (Klijn & Koppenjan, 2004). However, when working in networks the actors involved can encounter some uncertainty types that arise due to network characteristics (Klijn & Koppenjan, 2004, pp. 6-7; Moynihan, 2008a):

- *Substantive Uncertainty*
  This type of uncertainty regards the nature of the problem and concerns the availability of information. Besides availability of information and knowledge, it also includes the diverging manners in which information is interpreted by actors because they view and interpreted information based on their own in perspectives and frameworks (Koppenjan & Klijn, 2004, p. 48). Substantive uncertainty during crisis can result in role uncertainty for individual network workers. This is because actors find themselves in an unfamiliar environment, working with individuals they had not met before and being assigned to tasks with which they had little or no experience (Moynihan, 2008b, p. 355).

  A typical reaction to overcome this type of uncertainties is to gather and disseminate more information. However, because of the different interpretations due to diverging perceptions, providing more information might also be counterproductive, because it produces higher levels of ambiguity (Koppenjan & Klijn, 2004, p. 48). This might explain why the strategic policy advising from the ROT to a PT does not improve, despite all the efforts to improve the information sharing in the Dutch safety regions.

- *Institutional Uncertainty*
  Institutional uncertainty occurs due to different institutional backgrounds of actors (Koppenjan & Klijn, 2004, p. 48). Because actors work in different branches, at different administrative levels and very often in different networks, interactions between actors will be difficult because their behaviour is guided by the tasks, rules and language of their own organization, administrative level and network. These differences result in uncertainties about how processes will develop and how interactions will be handled.

- *Strategic Uncertainty regarding problem solving (policy games)*
  Strategic problem solving uncertainty springs from the strategic choices actors make in order to solve problems (note that strategic in this case does not refer to the strategic level of crisis management, but to choices actors make during interactions[2]). Because each actor looks at problems from their own perspective, they will also develop a variety of different problem solving strategies. Sometimes actors are unaware of these strategies. Actors react and respond to each other's activities and strategies. Therefore it is difficult to predict what strategies actors will adopt, how they will alter them during the process and how these manifest themselves in interactions (Klijn & Koppenjan, 2004, p. 7). Only by interactions, actors will gain information about other actors' perceptions, positions and standpoints. By "negotiations" and agreements common actions and joint problem solving will occur (Klijn & Koppenjan, 2004, p. 65). These negotiations are also known as "policy games".

When parties recognize that they depend on other parties for the realization of their objectives, they will adopt strategies in order to influence other parties, the content of problem formulation, the content of the solutions considered or at the development of the problem solving process (Klijn & Koppenjan, 2004). These objectives have been shaped by perceptions, limited information and non-rational elements such as sympathies and antipathies, loyalties, rules, etc. (Klijn & Koppenjan, 2004). In short, strategies regarding problem solving will be chosen based on the perceptions of actors and the institutional arrangements in place. In other words, perceptions and institutions influence how the game is being played, influencing the outcome of the games.

Because actors do not independently achieve cooperation themselves, some form of management is needed to allocate resources and to coordinate and control joint action across the network as a whole (Klijn & Koppenjan, 2004, p. 185; Provan & Kenis, 2008). Network management involves (Klijn & Koppenjan, 2012; Koppenjan & Klijn, 2004):
- Initiating and facilitating interaction processes between actors, including joint image-building and a search for common ground for joint interactions despite recognition of enduring differences;
- Avoidance of early fixations, which furthers awareness of the plurality of perceptions and preferences;
- Creating and changing network arrangements for better coordination, including furthering substantive variety and favourable conditions for learning and intermediate adoptions;
- Creating new content, for example by exploring new ideas, working with scenarios, organising joint research and joint fact finding.

The management of networks is challenging because of the absence of hierarchy and difficulties in getting consensus about problem formulation, rules and rule following behaviour, the formulation of solutions or objectives, strategic choices of actors, (Klijn & Koppenjan, 2004; Provan & Kenis, 2008). Furthermore, working in networks implies dealing with power asymmetries (McGuire & Agranoff, 2011). Power can be seen both as a force to facilitate or to hinder network processes (McGuire & Agranoff, 2011, p. 267). Someone who has a specific, rare resource available can assert power over the other actors in the network by blocking or granting access to this resource. A special kind of power resource possesses the actor who formulates the problem. Problem formulation yields a lot of power, because this automatically limits the scope of possible solutions that are available to solve the determined problems (Koppenjan & Klijn, 2004, pp. 30-31). Provan and Kenis (2008) argue that a focus on governance involves the use of institutions and structures of authority and collaboration. However, institutions play a central role in the organizational paradox. So, what are these institutions and how do they influence interactions?

2.3.2 How do institutions and rules influence perceptions?
Klijn and Koppenjan (2006, p. 144) define institutions as a set of rules that influence, guide and limit the behaviour of actors during social interactions. Institutions form the social infrastructure of the behaviour of actors. The rules, that according to Klijn and Koppenjan (2006, p. 144) form the "heart of these institutions", have been described thoroughly by Elinor Ostrom.

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[2] In this paper the term game strategy or problem solving strategy will be used from now on in order to differentiate between strategy as used in describing the strategic level of crisis management.

Ostrom (2011, pp. 17-18) defines rules as shared understandings among those involved that refer to enforced prescriptions about what actions (or states of the world) are required, prohibited, or permitted, thus creating order and predictability. Rules, in this context, can be represented by formal written documents, by footnotes, by unwritten arrangements between actors or unstated by means of habit (Ostrom, 1986, 2011). The term 'rules' should not be equated with formal laws Ostrom (1986). Formal laws may become rules when participants understand a law, at least tacitly, and are held accountable for breaking a law. Thus, enforcement is necessary for a law to become a rule.

Both Klijn and Koppenjan (2004) and Ostrom (1986) provide some characteristics of rule following behaviour:

- *Rules deal with the competency of actors*
  Rule guided behaviour means that actors know how they are expected to act in certain situations, without determining it completely (Klijn & Koppenjan, 2004, p. 78). Rules determine what topics are important, what categories are significant, prescribe permitted actions, describe which actors can participate and regulate networks opinion about quality of products or services that are produced. This implies that actors need to learn these rules, which they do during social practises requiring repeated interactions (Klijn & Koppenjan, 2004, p. 79).

- *Rules are trans situational and are not actor-bound*
  Rules concern the relation between actors and regulate interactions. If a rule is only relevant to one actor, it is an individual decision rule but not a network rule (Klijn & Koppenjan, 2004, p. 80).

- *Rules must be followed*
  Rules have prescriptive force. Thus rules must be known and accepted by actors and if actors break rules, other actors should hold them accountable. This can be done directly or by means of specialist, referee or judge (Ostrom, 2000, p. 151). By creating official positions for local monitoring, the network does not have to rely on willing "punishers".

- *Rules constitute social practices*
  Rules provide a framework in which interactions take place and are interpreted. Rules must be followed, but can only be sustained if actors choose to do so (Koppenjan & Klijn, 2004, p. 783). Therefore, rules need to be open to critique and be changed when needed. Rules should be explicated when they become controversial or do not provide the desired results for actors (Klijn & Koppenjan, 2004, p. 79). Rules may change due to various conditions: as a result of a conscious action by an actor provided that this intervention is perceived to be legitimate by other actors, as a result of reinterpretation by actors or as a result of non-compliance or even conscious breaking of rules (Klijn & Koppenjan., 2006, p. 145).

In the literature a reoccurring notion is that social practices and interactions are supported by a series of overlapping rules (Klijn & Koppenjan, 2004; Klok & Denters, 2002; Ostrom, 1986, 2011). Rules rarely prescribe only one action or outcome and the operation of one rule depends upon the operation of other rules in order to be effective (Klijn & Koppenjan, 2004; Klok & Denters, 2002; Ostrom, 1986). A good example of this is provided by Klok and Denters (2002, p. 17). They explain that the choice for a system of voting as an aggregation rule has consequences about which actors can come into a position to vote and what this vote stands for. This choice has also implications for the number of alternatives that are available to vote on.

Because rules are formulated in human language, rules share the same problems that typify any language-based phenomenon such as lack of clarity, misunderstanding and change (Ostrom, 2011, p. 19). The stability of rule-ordered actions depends upon the shared meaning assigned to words used to formulate a set of rules. If no shared meaning exists when a rule is first formulated, confusion will exist about what actions are required, permitted or forbidden (Ostrom, 2011, p. 19). Rules can only be sustained when they are constantly being discussed and confirmed, which illustrates the social practices of rules. Because rules have been based on previous interactions, they can also be biased by previous interactions, views and (unequal) power relations (Klijn & Koppenjan., 2006, p. 143). In games that cover more than one network, difficulties are more likely to arise because different rules from these networks can lead to ambiguity about the rules that should be applied and how these rules should be interpreted. In some cases, rule sets of the different networks can even conflict (Klijn & Koppenjan., 2006, p. 144).

What is important for the causal relation for this study is that rules do not directly produce behaviour (Klijn & Koppenjan, 2004, p. 120; Ostrom, 1986, p. 7). Institutions operate through actors' perceptions of the risks and opportunities related to

specific strategies (Klijn & Koppenjan, 2004, p. 120). In fact, a dialectical relationship exists between perceptions and institutions. Changing the institutional context influences the perception of an actor about what is important or what is permitted. However, external variables that cause a radical change of perception, for example due to a crisis, can also result in a need to change the institutional context. Blom-Hansen (1997, pp. 680-688) argue that formal, written, institutions may be created relatively quickly, whereas informal institutions, like means and habits, typically evolve over time. However, changing a formal institution requires a general consensus among the actors involved in order to become an effective rule.
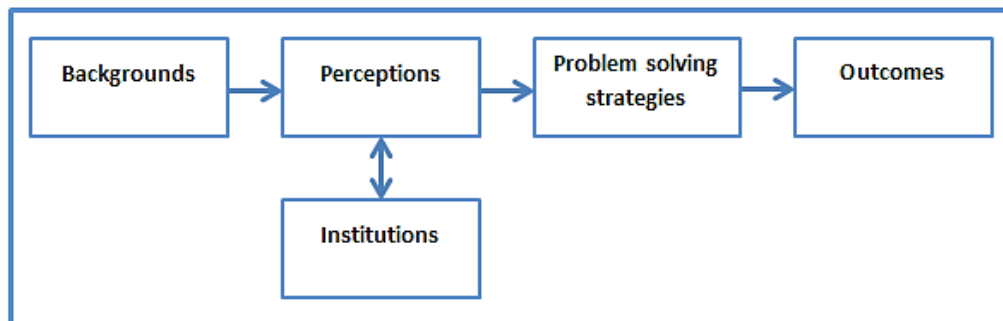
Figure 4: Relation diagram regarding institutions, perceptions, game strategies and outcomes

Institutional (network) theories can explain the difficulties the ROT and PT have regarding strategic policy advising. The different institutional settings in which actors participate are likely to cause substantive and institutional uncertainty (Koppenjan & Klijn, 2004, p. 48), which can result in difficulties in interactions between actors. It can cause ambiguity about how interactions will be handled and processes will develop. The discussion regarding the distinction between the strategic and operational level mentioned earlier, implies that there is no shared understanding about the rules that are in order. This can explain why there is uncertainty about the freedom of decision making at the different levels, why the policy teams do not ask the right questions and why the operational levels have difficulties in policy or strategic characteristics. Using the language metaphor once more, in order to understand each other, one must first talk the same language. In order to give strategic policy advice, both levels must have a shared understanding of what strategic policy advising actually is, what it should address (what is important) and how the advice must be given. Furthermore, strategic policy advising from a ROT to a PT can be regarded as an interaction that links two separate network organizations. The PT and ROT resemble different organizational networks that operate with their own set of rules. Therefore the organization is prone to ambiguity regarding the rules in use if there are no specific rules established to describe these interactions. The fact that the actors of the PT and ROTs do not always practice together, implies that institutionalism will not occur and rules will not be established, reaffirmed or reinterpreted.

2.3.3 What does the literature say about the institutional context of strategic policy advising?

There are no scientific documents found that focus specifically on the institutional context of the interaction between the ROT and a PT regarding strategic policy advising. There are however some studies that mention the institutional context in a different manner.

First of all, it is important to note that the basic thought of the Act Safety Regions is that the regions will themselves take proper measures to guarantee a desirable safety level adapted to the regionals specific needs and characteristics (Veldhuisen, Hagelstein, Voskamp, & Genderen, 2013). Therefore, despite the regulations, there are a lot of differences in the way the different Safety Regions operate (*Civiel -militaire samenwerking Eindmeting 2013*, 2013; Veldhuisen et al., 2013). These differences are visible in for example job descriptions, the extent and organization of the Safety Region and the manner in which the multidisciplinary cooperation has been organized. In addition, De Regt (2016), found in her literature study an incongruence between the juridical task descriptions and the translation of this in the regional crisis plans. The law and elaboration of the law in the documents of the safety regions are primarily focused on operational issues, whereas little attention is being given to issues like strategic opportunities, long term strategies and preparations for public accountability in the plans of the safety regions. In line with this, M. Ruiter (2016), studying the effectiveness of safety regions, found that the contradiction between flexibility and rigidity (or the organizational paradox) is indeed an issue in the safety regions. According to her findings, rigidity often prevails over flexibility because of the desire for structure and clarity during the chaos of a crisis. Crisis managers are able to deal with this contradiction by deviating from

the rules or by writing down the decisions and steps taken during a crisis. In this manner they are able to account for their decisions.

Another institutional topic that has been a reoccurring subject of study is the BOB decision making model that is being used by the Dutch Safety Regions. The IFV encourages the safety regions to use this model in crisis management. The model is based on the ´fase-hypothese´of Remmerswaal (2006), and has been developed to cope with typical crisis pitfalls, like groupthink, tunnel vision and overreaction (Eijk et al., 2013). However, the usability of the BOB-model during crisis situation is an issue of discussion in the Dutch crisis management field (De Regt, 2016; Eijk et al., 2013). The BOB-structure appears to be too rigid and the associated "meeting culture" does not match the time urgent aspects characterizing a crisis (Helsloot et al., 2010, p. 106).

Also, GRIP has become a topic of discussion in multiple regions, such as Safety Region Drenthe. This region has deliberately deviated from the rules prescribed by the Act Safety Regions. For example, SRD does not automatically form a complete ROT during GRIP 2 or higher in all situations (Scholtens et al., 2014; Wijkhuijs & Van Duin, 2017, p. 37). In case of what this region calls a "Flits crisis" or an "Acute crisis," the ROL will participate in a crisis team of a mayor, in which also a communication advisor and a public administrative advisor will participate (for example the municipal secretary). The emphasis in this model lays no longer on formal meetings to exchange information (Scholtens et al., 2014). Other regions use the button-model. In this model, the capacities have been selected based on the kind of incident, which enables regions to scale up proportionally without overreacting (Wijkhuijs & Van Duin, 2017, p. 36).

These issues all show that the safety regions use their own institutions, but these institutions differ. Some regions have deliberately deviated from imposed rules or raised discussions about them. No scientific documents have been found that focus specifically on the institutional context of the ROT-PT strategic advising.

2.4 Institutional Analysis and Development (IAD) Framework

To get an insight in the institutional context of an organization, one must perform an institutional analysis. Subsequently, in order to perform an institutional analysis, one needs a "tool" or framework. A well-known tool for analysing institutional arrangements and collective choice processes is the Institutional Analysis and Development (IAD) Framework of Elinor Ostrom (Feiock, 2013; Klok & Denters, 2002; M. D. McGinnis, 2011). The IAD framework describes situations in which groups of actors interact, exchange goods and services, make choices or solve problems. These situations Ostrom (2011) calls "Action Situations". The action situation refers to an analytic concept that enables an analyst to isolate the immediate structure affecting a process of interest, for the purpose of explaining regularities in human actions and results, and potentially to reform them (Ostrom, 2011). Earlier literature mentions a distinction between "action *arenas"* and "action *situations"*. The action situation had been described as the "black box" where policy choices are made. The actors playing the game formed a separate component set. However, since the recognition that the capabilities of actions can be attributed to the effect of the positions (rules) actors have in a game, Ostrom recommended to abandon the distinction between action situation and action arena (M.D. McGinnis, 2011; Ostrom, 2011). Therefore in this study the term action situation will be used, unless the term action arena is needed to explain results of previous studies.

2.4.1 What are the elements of the IAD framework?

In the IAD framework action situations are being described by means of seven elements (Klok & Denters, 2002; Ostrom, 2011):

1. *The set of actors*
   These include actors and how many and which actors participate in the situation.
2. *Positions*
   This element describes what positions exist in the situation that associates participants with an authorized set of actions (linked to outcomes).
3. *The set of allowable actions*
   This describes the set of actions participants in particular positions can take at different stages of a process.
4. *Potential outcomes*
   This element describes what outcomes are affected through the actions of participants in certain positions. It thus links the chain of events to outcomes.

5. *The level of control over choice*
   This element maps participants at decision nodes into intermediate or final outcomes (Klok & Denters, 2002). Do appropriators take the above actions on their own initiative, or do they confer with others (Ostrom, 2011).

6. *The information available to a participant in a position at a stage in process about the structure of the action situation*
   Many situations generate incomplete information. This element describes how much information actors have about the condition of certain resources, about others´ cost and benefit functions, and about how their actions affect joint outcomes.

7. *The costs and benefits of actions and outcomes*
   These describe the costs and benefits (or incentives and deterrents) that can be achieved through various actions of actors as a result of various group outcomes.

In order to explain the behaviour of actors in an actions situation, Ostrom describes actors by means of four variables (Klok & Denters, 2002; Ostrom, 2011):

1. The resources that an actor brings into a situation;
2. The preference evaluation that actors assign to potential actions and outcomes;
3. The way actors acquire, process, retain and use knowledge contingencies and information;
4. The processes and selection criteria actors' use for selecting and deciding upon a particular course of action.

An action situation is thus a conceptualization where actors play their (strategic) problem solving games. In order to put the action situation in the right context, an analyst must make assumptions about attributes of states of the world and their transformations, about the attributes of the community within which the situation occurs and the rules individuals use to order their relationships (M.D. McGinnis, 2011; Ostrom, 2011). Changes in these contextual factors thus influence the action situation (Klok & Denters, 2002).
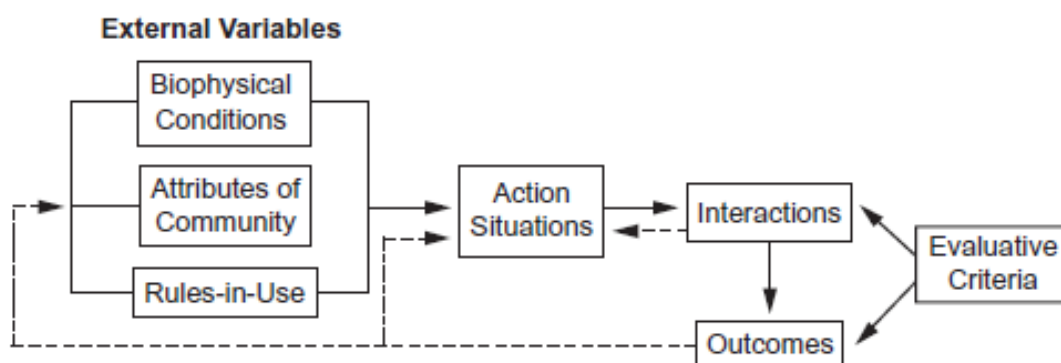

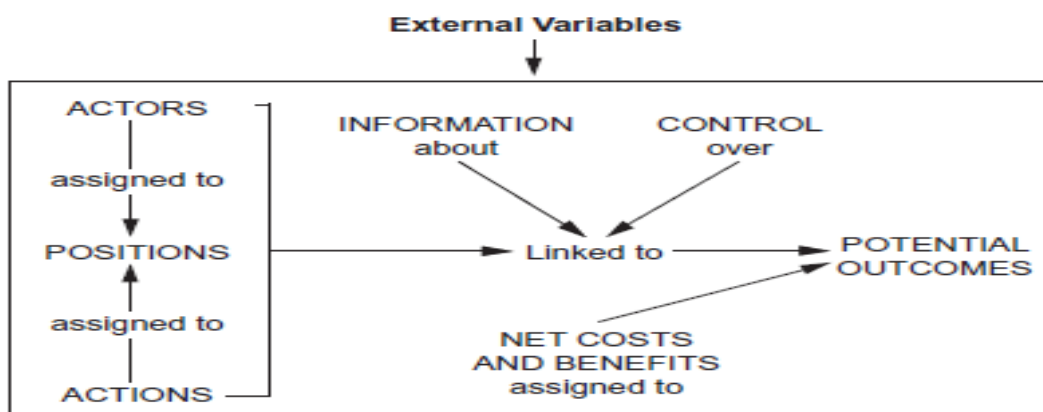Figure 5: The IAD framework, copied from Ostrom (2011, p. 10)

Figure 6: The internal structure of an action situation, copied from Ostrom (2011, p. 10)

2.4.2 What rules does the IAD framework discern?

the IAD framework classifies rules according to their impact on the elements of an action situation (Ostrom, 2011):

1. *Boundary rules*
   These rules set the entry, exit, and domain conditions for individual participants, thus
   Affecting the number of participants and their attributes and resources. These rules also determine the identity of positions by providing basis for normative role expectations (Klok & Denters, 2002, p. 4).

2. *Position rules*
   Position rules establish and distinguish particular positions in the situation with certain specifications such as tasks (for example the chair of a management committee).

3. *Authority/Choice rules*
   These rules assign sets of actions that actors in positions may, must, or must not take. They define the behavioural alternatives an actor has and determine the shape of the decision tree that links actions to outcomes.

4. *Scope rules*
   Scope rules delimit the potential outcomes that can be affected and, working backward, the actions linked to specify the set of outcomes that may be affected, including whether outcomes are intermediate or final. These rules are also important because they provide insight into the relations between various sub-arenas (Klok & Denters, 2002, p. 4).

5. *Aggregation rules*
   These prescribe how (collective) decisions and other outcomes in an arena are being made on the basis of the contributions of different position holders. Decisions are made by unanimity, simple or qualified majority rule or through a weighted voting systems (Klok & Denters, 2002, p. 4).

6. *Information rules*
   These describe which information is available to various position holders and how information is disseminated in the action situation.

7. *Payoff rules*
   Affect the benefits and costs that will be assigned to particular combinations of actions and outcomes, and they establish the incentives and deterrents for action. How large are the sanctions that can be imposed for breaking any of the rules identified above? How is conformance to rules monitored? Who is responsible for sanctioning nonconformists? How reliably are sanctions imposed? Are any positive rewards offered to appropriators for any actions they can take? (e.g., is someone who is an elected official relieved of labour duties?).
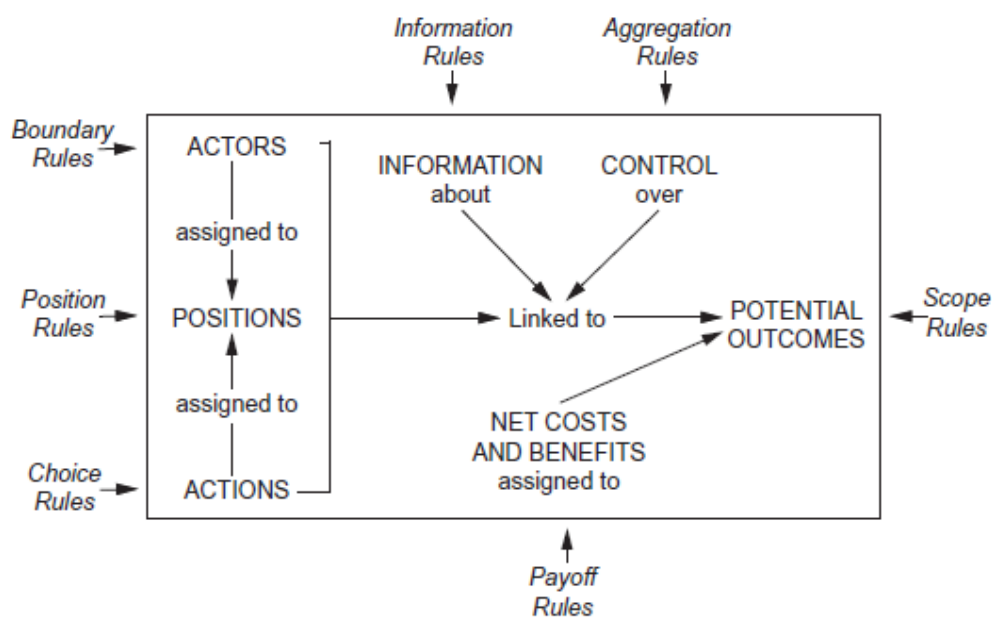

Figure 7: Rules as exogenous variables directly affecting the elements of an action situation, copied from Ostrom (2011, p. 20)

2.4.3 Are there any critical remarks known regarding the IAD framework?

Although the IAD framework is a well-known and widely accepted tool to analyse institutions, there are some critical notes made in the literature about it. For example, Klijn and Koppenjan (2004, p. 81) point to the fact that according to them the IAD framework does not include the identity of actors and their professional standards. Hence, they make a different distinction between arena rules and interaction rules. Although the identity of actors is not described in the rule types in the IAD framework, the actors are described in the IAD by the four variables mentioned earlier, therefore their critique and sub sequential distinction will not be adapted in this research.

Another element of discussion is the importance of rule compliance and the ways in which rule compliance can be achieved (Klok & Denters, 2002). According to Klok and Denters (2002, p. 6) this seems to be an aspect that is missing in the IAD framework. According to them, the rules that guide authoritative interpretation of the rules (what do they mean in concrete situations and who has to decide in case of conflicting interpretations) and the rules that enable the possible use of sanctions are important. Both authoritative interpretation and compliance is often seen as a central function of leadership. However, Ostrom does point out that enduring institutions rely on rule following behaviour and that other actors, or specific actors on certain positions, monitor the rule following behaviour and hold others accountable. So the question is whatever or not such rules are a missing element, or that these roles are encompassed in the rule sets of positions and authority rules in the IAD network. Besides, Ostrom writes that the rules in the IAD framework are a minimal set of rules and not an all including set of rules. What is interesting though about the comments of Klok and Denters (2002), is the introduction of the element of leadership. Using the IAD framework, Klok and Denters (2002, p. 6) discern two broad categories of solutions to cope with problems related to involvement: institutional design (formulating the institutional rules) and direct leadership involvement in arenas. They argue that the task of ensuring that actual behaviour of actors is in compliance with the institutional rules is one that could be specially linked to the tasks of leadership. This implies that leaders will have to be sure that some institutional provision is made to produce rule compliant behaviour. However, Klok and Denters (2002, p. 17) also found that 'acts' of leadership in an arena do not necessarily take the form of the actions of leaders themselves, but might also be disguised as rules, such as scope rules limiting the possible outcomes to the ones acceptable to leaders or the common interests they represent. Or they might be found in the acts of a special position holder (such as the review committee) that has the authority to maintain or interpret the rules, or as positions or boundary rules concerning the selection of actors that become holder of a certain position. In the context of crisis management, institutions can be used to meet the call for strong leadership which was the central issue in the centralization thesis.

Besides these topics, there is one other topic about the IAD framework which is less studied, but which is especially relevant for this research: action situations that influence each other. This topic will be described in the following paragraph.

2.4.4 What are Networks of Adjacent Action Situations?

The IAD framework is well known and thoroughly studied and debated in the literature. However, the IAD framework main unit of analysis concerns only one action situation. There are situations in which actors participate in multiple action situations and there are situations in which outcomes of one or multiple action situations influence the games in other action situations. The literature regarding this topic appears to be limited. Some scholars only mention the interaction between action situations in the margin of IAD framework studies. For example, Klok and Denters (2002) mention that the outcome of a "decision-making status" in one arena, can have de facto implications for the scope of the subsequent decision making arena, because it limits the number of alternative outcomes. Klijn and Koppenjan (2004, pp. 88-89) mention that decision making can be particular complicated when decisions are being made in different arenas that are also linked to different networks. This is because in those cases, actors are being confronted with other actors who do not only have different perspectives, but also consider different rules as correct and valid. They conclude that these complications create two kinds of (institutional) uncertainties, first the uncertainty where important decisions are being made, and second a lack of common rules to facilitate interactions. In addition, policy games are complex because there are many players making unpredictable choices, but also because simultaneously actors are often involved in more than one arena. This makes opportunities for influencing and steering decision making difficult. Actors can be confronted with unexpected decisions in other arenas in which they do not participate, but nevertheless have major consequences. In these cases it is important that actors must (in part) reach a consensus on the rules that will apply (Klijn & Koppenjan., 2006, p. 144). Similar, Emerson, Nabatchi, and Balogh (2012) mention that procedural and institutional arrangements must be defined at both the intra organizational level (i.e., how a single group or organization will govern and manage itself in the

collaborative initiative) and at the inter organizational level (i.e., how the groups of organizations will govern and manage together and integrate with external decision making authorities).

M. D. McGinnis (2011) introduces the term Networks of Adjacent Action Situation (NAAS) as an extension to Ostroms IAD framework. According to M. D. McGinnis (2011, p. 52) "two action situations are adjacent to each other when outcomes generated in one action situation help determine the rules under which interactions occur within the other action situation." McGinnis demonstrates the concept with empirical cases, arguing that the same rules described in the IAD framework can be used to study NAAS.

2.5 Concluding the theoretical framework

From the theories used in this chapter the following conclusions can be made:

1. In the Netherlands the municipalities and crisis response organizations work together in safety regions. These organizations are coordinated by means of three levels. Strategic coordination will take place at a Municipal or Regional Policy Team and operational command will be done at a Regional Operational Team (ROT). However, this structure resembles more like a network organization than a hierarchical organization. Coordination is difficult because typical network characteristics increase substantive, institutional and strategic uncertainties. Due to the different backgrounds of the between the strategic and operational level, and the ambiguity regarding the distinction between the strategic and operational level in the Dutch crisis management literature, the Dutch crisis management organization is very vulnerable for perception incongruence.
2. Perceptions form an important element in all crisis definitions. The significance and impact of extreme circumstances varies according to individual perceptions. Also the manner in which the levels of crisis management can be divided in strategic or operational levels is a matter of perception. Differences in perceptions can result in problems like conflicts, debates, stagnation and blockages of processes.
3. Problem solving strategies are chosen based on the perceptions of actors and the institutional arrangements in place. The relationship between perceptions and institutions is dialectical one. Actors have perceptions regarding the interpretation of institutions, but the institutional context also influences the perception of an actor about what is important or what is permitted. However, within crisis management there is a tension between the need for detailed institutions and flexibility. The institutional context must fit the crisis characteristics in order to facilitate effective crisis management.
4. The IAD framework can be used to study the institutional context of the strategic policy advising from a ROL to a mayor or Head safety Region.
5. Each safety region and municipality uses their own institutions regime. Some regions have deviated from prescribed national institutions rules because of various issues. This increases institutional uncertainty.
6. Differences in backgrounds and institutions reflected in the perceptions of actors can explain why regions have difficulties in strategic policy advising.

Chapter 3: Research Methodology

3.1 Case selection

Because it is not possible to study all the 25 safety regions due to time constraints, a selection has been made. In this case, a limited number of three safety regions have been used for this study.

The research topic concerns perceptions and institutional arrangements. Therefor selection criteria like the size of safety regions (both in area and inhabitants) are not suitable because they have no influence on the relation between the dependant and independent variables. The same applies for specific risks in a region. The number of municipalities in a safety region might influence differences in perceptions and the need for institutional arrangements. However a quick comparison of the results of the *Staat Van Rampenbestrijding 2016* in relation to the number of municipalities in a region, showed no indications for this. Some regions with a large number of communities perform highly, while other regions with fewer communities performed less well on strategic policy advising and vice versa.

The regions that have been selected for this study are Safety Region Groningen (SRG), Safety Region Drenthe (SRD) and Safety Region Utrecht (SRU). SRG and SRD are geographically adjacent to each other. Both regions work closely together and have a shared understanding about the GRIP structure, established by a policy document signed by the Safety Regions Groningen, Fryslan and Drenthe. However, SRD has recently turned their upscaling system upside down (Scholtens et al., 2014; Wijkhuijs & Van Duin, 2017). This makes it possible to perform a more detailed comparison regarding the institutional context and the congruence of perception. SRU has been included because this region has included some additional institutional rules. For example, from GRIP 4 (and sometimes GRIP 3) they work with a Technical Head of a PT, besides the Head Safety Region or a mayor.

3.2 Data collection (type of data, procedures, instruments)

3.2.1 How has data been collected about the congruence of perceptions?

To answer this specific (descriptive) research question a qualitative research method has been used. A qualitative research concerns the nonnumeric examination and interpretation of observations, for the purpose of discovering underlying meanings and patterns of relationships (Babbie, 2009, p. 394).

Qualitative interviewing enables a more flexible and iterative way of collecting data (Babbie, 2009, p. 318). Flexibility is needed because some respondents operate at the strategic policy level of safety regions and local communities, which very often implies that these respondents have only limited time available to chat with a university student conducting a master thesis. Qualitative interviewing also offers flexibility in the order of questioning and prioritizing of questions if needed. Furthermore, it enables the opportunity to ask for clarification and follow up questions. It also allows the interviewer to explain concepts to respondents if needed. This is especially relevant for this research because it is reasonable to assume that the concepts under investigation are not clearly defined among the respondents.

The questions asked to gain an insight in the perceptions of the ROT and PT on strategic policy advice have been based on a conceptual framework. Instead of just plainly asking for perceptions about strategic policy issues, also questions regarding objectives, interests and consequences have been asked. Objectives are concrete translations of perceptions. They imply choices and are formulated in more operational terms (Koppenjan & Klijn, 2004, p. 48). Interests and consequences relate to the importance, meaning and urgency an actor relates to this issue. The questions relating to perception have been listed below:

1. *What are, in your opinion, strategic policy issues about which the ROT has to advice on to the PT?*
   This question enables the respondent to give his perception about strategic policy issues in his own words. This question is being asked first deliberately, in order to gain an initial answer, not being biased by any earlier questions from the interviewer or answers given by the interviewee.

2. *Which objectives or goal must strategic policy advice achieve?*
   This question concerns the perception about what strategic policy advice needs to achieve.

3. *Why do you think that this is important?*
   This question concerns the importance, urgency and meaning of strategic advising on a ROT or PT. It focusses on the interests of the actor in strategic policy advising.

4. *What elements must be included in the strategic policy advice?*
   This question involves the means by which a strategic policy advice must be given. It concerns what an actor expects when he is being advised on strategic issues or how he constructs his advice when he gives advice to a PT. The answer illustrates the desired possible situation.

5. *Can you give an example of a policy advice well given, based on your own experience?*
   a. *Why was this a good advice?*

6. *Can you give, based on your own experience, an example of bad advices being given or having missed an advice that should have been given?*
   a. *Why was this a poor advice?*
   b. *What caused this poor advice or absence of advice?*

7. *Which disadvantages or costs do you have when strategic policy advice has not been given in an appropriate manner?*
   This question concerns the possible costs of bad strategic advising on a ROT or PT. It focusses on the consequences and hence interests of an actor.

8. *Have you ever noticed or experienced any differences in perception about strategic policy advising when you have been advised by a ROL, or in case of an interview with an ROL, when you have given an advise to a Mayor of HSR (for example:* Dialogs of the Deaf, operational decisions at strategic level and vice versa, *trouble at the PT in deciding about a strategic issue because of a poorly given advice from a ROT*)?
   a. *If yes, what do you think has caused these differences?*
   b. *If yes, how did this influence the strategic policy advising?*
   c. *If yes, how do you deal with this?*
   This question relates to actual experienced differences of perceptions of a ROL and a mayor or HSR and its effects.

9. *Based on a scale from 1-5, in which 5 is good and 1 is poor, how do you qualify this process in your region*
   a. *If 5, what goes well?*
   b. *If any answer lower than 5, what can be done better?*
   This question had been included in the first interviews in order to check whether or not there are indeed problems in strategic policy advising and whether or not actors are aware of them in their region. The scale of questions is meant to challenge the respondent, shaping the interview for the follow-up questions a or b. By directly asking "what can go better", respondents are more likely to respond that all is going well. However, most respondents are reluctant to give themselves the highest ranking. Any answer lower than 5 justifies the question "what can be done better". In later interviews, this question has been abandoned.

Because this research focusses on the perception of actors, the questions have been asked in an open manner deliberately, in order to avoid interviewer biases and to give the opportunity for the interviewee to provide his/her own answer (Babbie, 2009, p. 256). Any suggestions of possible answers (such as in a survey or questionnaire) might influence a respondent's answer, or perception regarding strategic policy advising. Because the way in which questions are being asked during an interview can bias the answers of interviewees, special attention has been paid to avoid these biases. Therefore the questions have been checked on the following aspects:

- Clear and unambiguous;
- Avoidance of double barrelled questions (avoid word "and" in questions);
- Avoidance of negative or "loaded" terms;
- Avoidance of biased questions.

In addition all interviews have been recorded and transcribed in order to be able to listening them back and to be able to code the information for the analysis.

3.2.2 How has data been collected regarding the institutional arrangements?

In order to describe the institutional context of regions studied, the IAD framework of Ostrom regarding the classification of rules has been used. Ideally, studying institutions requires spending time at a site and learning how to ask nonthreatening, context-specific questions about rule configurations (Ostrom, 2011, p. 21). However, time to perform lengthy studies is not available.

Instead, first a literature study has been performed on specific policy documents and manuals of the selected safety regions. This literature study has been performed by means of a content analysis; a study of recorded human communication (Babbie, 2009, p333). The focus was strategic policy advising between the ROT and a (R)PT. This literature study provided answers to the more formal, written rules in use at a specific safety region. Initially the crisis plans of the regions have been analysed. These plans describe the tasks, authorities, responsibilities and agreements regarding conditions, reports and alarming, upscaling and information sharing ("*Brochure Wet Veiligheidsregio*," 2013). When the interviewees mentioned during the interviews that besides these plans also other documents existed in which procedures regarding strategic policy advising have been mentioned, then these documents would have been included in the literature study as well.

Second, because institutional arrangements can also be informal (e.a. not written down) (Klijn & Koppenjan, 2004, p. 81), also data have been obtained by means of the earlier mentioned in depth interviews with key actors who operate at the strategic and operational level. The interviews have been essential for this research in order to proof the causality (correlation, time-order and non-spuriousness), because latent coding only proofs a covariation. The questions used in the interviews have been both derived from Ostrom (2011), Klijn & Koppenjan (2004) and Klok & Denters (2002).

First, the actors need to be described. This will be done by the earlier mentioned four variables of Ostrom to describe an actor in the IAD framework:

   a. The resources that an actor brings into a situation;
   b. The preference evaluation that actors assign to potential actions and outcomes;
   c. The way actors acquire, process, retain and use knowledge contingencies and information;
   d. The processes and selection criteria actors' use for selecting and deciding upon a particular course of action.

In order to acquire this information, the following questions about the role and resources of an actor have been added to the interview. Because these are relatively easy to answer, these questions have been put first to comfort the interviewee. These questions are:

   1) *What role do you have in the ROT or PT?*
   2) *Which interests do you represent?*
   3) *What unique resource do you add to the ROT or PT?*
   4) *What do you need from the ROL or Head of a PT?*

These questions primarily regard variable a and b. The variables c and d have been addressed later on in the interview, because these questions are closely related to the aggregation and information rules.

The following questions regarding the institutional rules have been added to the interview in order to gain an insight in the unwritten rules present in a safety region.

   1. *Does your region have any rules or arrangements regarding strategic (policy) advising in the safety region?*
      This question is asked deliberately open to ask if there are any formal rules known by the actor regarding strategic advising. If the answer is *"YES"*, a follow up question will be asked:
      a. *Do you think these arrangements influence the policy advising?*
      b. If answer is "YES": *In which way?*

      Question a and b are essential in order to check for the time order and non-spuriousness criteria regarding a causal relationship.

   2. *What topics is the ROL allowed to advise about?*
      This question regards the scope of strategic advising of a ROL to a (R)PT.

3. *Is there a standard format or manner how to give a strategic advice (or advice question)?*
    This question regards scope rules and focusses on the arrangements taken about what topics and how an advice should be given.

4. *Who is allowed to give advice or to ask an advice question?*
    This question relates to the authority rules regarding strategic policy advising.

5. *How do you determine which advice the ROL will give to the head of a PT or which question the head of a PT will ask a ROL?*
    This question regards to the aggregation rules in use.

6. *Who monitors the quality of the strategic policy advice (or advice question)?*
    This question relates to the monitoring function mentioned by Ostrom (which is in essence an authority rule), but also relates to a position rule because some safety regions have added a technical chairman in the PT organization.

7. *How are lessons learned regarding strategic policy advising documented and implemented?*
    This question relates the importance of rules and SOPs regarding learning and the possibility and willingness to change the institutional rules.

8. *Who is allowed to act as a Regional Operational Leader of a ROT or Head of a PT?*
    a. *What are the rules regarding a ROLs (professional) background and experience?*
    b. *What are the rules regarding training and education?*

    Question a relates to the boundary rules associated with an ROL. The boundary rules of a mayor are out of the influence sphere of a safety region. However, since the ROL is the formal link between the ROT and PT and the safety regions are responsible of selecting the ROLs, it is important for the institutional context to acquire this information in the ROT PT interaction.

9. *How do you obtain your information from the PT or ROT team?*
    This question relates to variable c to describe an actor, but also relates to the information rules of the IAD framework.

10. *Who determines if and what information is being shared or not?*
    This question relates to the authority and information rules.

11. *What are the consequences for you when strategic advice will not be given on when a bad advice has been given?*
    This question relates to the *payoff rules.*

By combining the results of the literature study and the interviews, a complete picture will be constructed regarding the institutional context of a safety region. This picture has been used to compare the institutional regimes that regions use regarding strategic policy advising. Subsequently the regions have been typified based on the observed differences in the institutional regimes.

3.2.3 How will the influence of backgrounds on the congruence of perception be analysed?

The influence of actors´ backgrounds on the congruence of perception will be answered in two ways:

1. First the answers regarding the perception about strategic policy advising of the members of a ROT and a PT of a specific region will be compared with each other. In this manner, the influence of differences of the professional backgrounds can be analysed. The relevant actors in a PT are more likely to have a politico public administrative background, while most ROLs (ROT level) have an operational background from crisis response organizations (fire brigade, police, etc.).

2. Second, the answers regarding strategic policy advising of similar levels will be compared across the safety regions studied. In this manner, differences of perceptions among the actors that operate on the same strategic or operational level of different regions can be analysed. In this manner background factors can be excluded and regional specific factors can be controlled for.

The comparisons will be made using two techniques. First, the congruence of perception will be analysed by coding the answers given by the interviewees on the different aspects of perception regarding strategic policy advising. This will result in a numerical overview, enabling a better comparison of the results. The coding and analysing method will be described in more detail in Chapter 4. However, the coded data only shows a covariation, but not the criteria of a causal relation: correlation, time order and non-spuriousness. These aspects will be derived from the interviews transcripts using a latent study technique. Specifically by asking if backgrounds influence the congruence of perceptions of actors.

One issue regarding these comparisons is what forms "the backgrounds" of an actor. As has been mention in paragraph 2.2, perceptions are being formed through socialization, such as friendships, education and work experience. Friendships are hard to check for, and it would be likely that perceptions regarding a professional topic would be formed by colleagues that work in the same organization or region. This variable will be covered by comparing the regions with each other. Education and work experiences raise the question what education and work experience is relevant and if the differences regarding these aspects are important enough to make a meaningful distinction.

Looking at the list of interviewees, all ROLs have been higher educated, all ROLs have at least more than 10 years of working experience in their field of work, and all ROLs but one have been a ROL for at least 5 years. The one had 2 years' experience as an ROL, but had already worked in the same safety region for over seven years. Also, all public administrators interviewed for the strategic level have been higher educated, have at least 5 years working experience at the strategic level and have worked in their public administrative domain for a longer period. Therefore it is not likely that checking for these aspects would result in any big differences. However, the one big difference between the actors is their professional background and the level where they work during an upscaling. The ROLs interviewed had a background as a firefighter, police, administrative background or a combination of these. The PAs interviewed at the strategic level are mayors or high level municipal administrators, such as a municipal secretary, a deputy mayor or a director safety region. The latter one has been interviewed as actor from the strategic level. However, he also had an operational background besides his strategic background. Hence during the analysis the operational background will be checked for. Another difference is that the ROLs have followed the ROL course and passed the examination of the IFV. Most administrators did not follow this course, nor do they have to pass the exam. Hence, as background in this study the occupational background will be used.

3.2.4 How will the influence of institutional arrangements on the congruence of perception be answered?

By combining the data from research questions 1 and 2, a comparison can be made among the safety regions regarding the influence of institutional arrangements on the level of congruence of perception regarding strategic policy advising.

This will be done by comparing the level of congruence of perceptions of actors from regions that have implemented specific institutional arrangements regarding strategic policy advising, with the level of congruence of perception of actors in regions with other types or less specific arrangements. The analysis will be performed by means of the data derived from interviews regarding congruence of perception, and by means of a qualitative, latent study of the interviews; do the interviewees confirm that institutions that are being used influence the congruence of perception.

Chapter 4: Results & Analysis regarding Perceptions and Institutions

4.1 Congruence of perceptions

In this section the results regarding perception will be presented with the help of a number of tables. First a quick description will be given of how the analysis has been performed and how the data in tables have been derived.

4.1.1 How to analyse the level of congruence of perception?

As has been said before, all interviews have been recorded and transcribed. Afterwards, the level of congruence of actors regarding strategic policy advising has been determined. Therefore coding has been applied. Coding is the process of "classifying or categorizing individual pieces of data, coupled with some kind of retrieval system" (Babbie, 2009, p. 400). First, open coding has been applied to establish an initial classification and label concepts. Second, axial coding has been used to determine the general concepts in the interviews. The results of the coding per region per question have been put in Annex C.

This brings us to the coding process and the calculation of the level of congruence regarding perceptions. Initially, a binary score has been used. When an interviewee mentioned a perception aspect of strategic policy advising during the interview, this aspect would be included (coded) in the list and would be given a value of one (meaning present). When another actor would mention the same element, he would also score a "1" on this aspect. If other interviewees did not mention this, they would score a "0" (or no score). In the end, a table will appear containing all the aspects regarding strategic policy advising mentioned by the interviewees. Subsequently, in order to determine the level of congruence between two actors at one level of one region, the scores of these partners have been added up, but only when this element had been mentioned by more than one actor (one cannot speak about congruence if only one actor mentions a specific element). The added congruence scores have been put in the column "Congruence Score ROL" or "Congruence Score PA." Also the congruence score between the levels has been calculated. Those results have been lists in column "Congruence Score ROL-PA". Next, in order to be able to compare the results with each other, the scores have been transferred to percentage of the total score that could be achieved. In other words: a 100% score implies that all the answers regarding the different aspects of perception regarding strategic policy advising of the interviewees were the same. A "0" score would imply that only different answers have been given. An example has been given in table 2.

Table 2: Example calculating the level of congruence of perception after coding

Perception of Strategic Policy Advice	ROL 1	ROL 2	PA 1	PA 2	Congruence Score ROL	Congruence Score PA	Congruence Score ROL-PA
Coded Aspect 1	1	1	1	1	2	2	4
Coded Aspect 2	1	1	1	0	2	0	3
Coded Aspect 3	1	0	1	0	0	0	2
Coded Aspect 4	1	0	0	0	0	0	0
Coded Aspect ...							
Coded Aspect n							
Total Sum					2+2= 4	2	4+3+2 = 9
Maximum score					4 x 2 = 8	3 x 2 = 6	4 x 4 = 16
Level of congruence (%)					50%	33%	56%

Explanation to the table:

- Coded Element 1 has been mentioned by all interviewees. Therefore it scores 2 points on both the operational and strategic level, with a Congruence Score ROL-PA of 4 out of 4.
- Coded Element 2 has been mentioned by all interviewees but one PA. Therefore the congruence level score at the operational level is 2, at the strategic level is 0 (the answers are not congruent) and the congruence score between the two levels is 3 out of 4.
- Coded Element 3 has been mentioned by ROL 1 and PA 1, but not by ROL 2 and PA 2. Hence the congruence score at the operational and strategic level is 0, but the congruence score between the levels is 2 out of 4.

In order to calculate the total congruence level of this Aspect of Strategic Policy Advising, the percentage has been calculated per level:

- At the operational level, the ROLs have mentioned 4 different elements that have been coded, of which 2 similar. The total sum is 2, whereas the maximum total score could have been:
    - n (the number of elements mentioned at the operational level) x 2 (the number of ROLs) = 4.
    - The congruence level in this example would be 50% (2 out of 4).
- At the strategic level the two PAs have mentioned 3 different elements, of which only one similar, Hence a congruence level of 33% (1 out of 3)
- In this example the interviewees mentioned all together 4 different elements. The scores of the elements that have been mentioned at both the operational level and strategic level at least once have been added to the score to calculate the level of congruence between the levels. In this example a total score of 9. The maximum score that could have been gained is 4 x 4 = 16. Thus follows a congruence level of 56% (9 out of 16).

4.1.2. Are the perceptions of the actors in the regions studied congruent?

Table 3, Table 4 and Table 5 show the results of the different levels and between the levels by region per aspect of perception. Table 6 shows the average score of the level of congruence by level and between the levels.

During the interview it appeared that one interview at the strategic level was with two persons at the same time who appeared to have an operational background but nowadays work at the strategic policy level. Because the background is an independent variable, a correction has been made. If this had not been done, the outcomes would have influenced the validity regarding the causality between backgrounds on perception. The corrected values have been added to the tables with the addition of "after correction". However, this also resulted in only one actor interviewed in this region at the strategic level after correction. Because you cannot speak of congruence with only one actor, these scores have been excluded from the data.

Table 3: Level of congruence by perspective aspect at the operational level

Level of congruence by perspective aspect regarding SPA at the operational level	Strategic Policy Issues	Objectives	Interests	Elements	Costs	Overall Mean
Safety Region Groningen	50%	50%	100%	60%	0%	52%
Safety Region Drenthe	40%	50%	67%	100%	100%	71%
Safety Region Utrecht	50%	33%	20%	75%	67%	49%
Safety Region Utrecht (after correction)	67%	58%	60%	70%	57%	63%

Table 4: Level of congruence by perspective aspect at the strategic level

Level of congruence by perspective aspect regarding SPA at the strategic level	Strategic Policy Issues	Objectives	Interests	Elements	Costs	Overall Mean
Safety Region Groningen	50%	50%	50%	40%	25%	43%
Safety Region Drenthe	56%	50%	67%	40%	67%	56%
Safety Region Utrecht	33%	50%	89%	25%	25%	44%
Safety Region Utrecht (after correction)	excluded	excluded	excluded	excluded	excluded	excluded

Table 5: Level of congruence by perspective aspect between the operational and strategic level

Level of congruence by perspective aspect between the operational and strategic level	Strategic Policy Issues	Objectives	Interests	Elements	Costs	Overall Mean
Safety Region Groningen	22%	20%	25%	75%	31%	35%
Safety Region Drenthe	40%	38%	38%	13%	13%	28%
Safety Region Utrecht	50%	50%	60%	56%	29%	49%
Safety Region Utrecht (after correction)	29%	25%	45%	22%	7%	26%

Table 6: Average level of congruence of perception regarding SPA by region

Average Level of congruence on perception by region	Operational	Strategic	Operational - Strategic
Safety Region Groningen	52%	43%	35%
Safety Region Drenthe	71%	56%	28%
Safety Region Utrecht	49%	44%	49%
Safety Region Utrecht (after correction)	63%	excluded	26%
Average Level of Congruence by level	57%	48%	37%
Average Level of Congruence by level with correction SRU	62%	49%[3]	30%

A critical note must be made regarding the interpretation of the data found. The sample size of the population is rather low. Especially when using percentage as analysing technique, one must be aware that small differences in response can have noticeable effects in the percentages found. These effects are especially visible at the operational level. For example, the SRU scores relatively low on the level of congruence on the operational level regarding the perception aspect "Interests" compared to the other two regions. Looking closer to the data in detail, one finds that one ROL of the SRU mentioned one interest, while the other ROL of this region mentioned five different interests; hence a relative low congruence score of 20%. However, when comparing these answers with the answers given by the ROLs of the other two regions, most ROLs only mentioned two or three interests. This resulted in a higher score of 67 and 100%. A similar effect can be seen at SRG and SRD regarding the perception related to costs at the operational level. The ROLs in SRD both mentioned one aspect which happened to be the same resulting in a score of 100%, whereas in SRG both ROLs also mentioned two things each, but none was similar resulting in a score of 0%. SRU scored 67% (57% after correction), but both ROLs mentioned five elements with four similar ones. Thus the numbers give a first impression, but in order to make the right interpretation, one must look beyond the numbers. Conclusions can only be made in coherence with the study of the latent content.

Keeping that in mind, the following rough conclusions can be made based on the data shown in the tables:

1. The operational level shows a higher level of congruence in all regions compared to the level of congruence at the strategic level (see Table 6). This means that at the operational level, actors have a more similar perception about strategic policy advising than the actors at the strategic level. The differences in perception have also been mentioned by most ROLs. As one ROL put it:

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[3] The average level of congruence after correction: in other words the mean of Safety Region Groningen and Safety Region Drenthe.

> "Mayors are not similar. There are mayors who are very operationally minded. They have experienced things that cause them to think they need to be operational. There are also mayors who are emotionally involved in what is happening in the field. Those mayors also tend to be operational. And you have got mayors who say from a distance, tell me what to do"

Because this difference occurs in every region that has been studied, it is reasonable to assume that non-regional specific variable(s) explain these differences.

2. The level of congruence between the operational and strategic level is lower in all regions than the level of congruence of the operational and strategic level (see Table 6). This means that there are observable differences in what actors at the operational level and the strategic level perceive as strategic policy advice. For example three quotes, one from an actor at the strategic level and two from the operational level:

> "During a dilemma you are continuously searching and analysing what actor is the proper authority. Does it concern the authorities of the mayor or head? Are multiple authorities involved? And another important question regards the making of priorities in the allocation of scarce resources. These aspects are always strategic"

> "Strategy is rare during a crisis. It is more tactics and common sense, rather than strategy. When there are strategic aspects, these concern mostly how to influence society in a clever way in order to avoid troubles at the end"

> "He <the mayor> doesn't see the consequences or he has a completely different picture of the incident and how he thinks he should operate"

3. There are differences in the levels of congruence between the regions at both the operational and strategic level (see Table 6) and between the levels. Also the regions score differently on the separate elements of the construct of strategic policy advice (see Table 3, Table 4 and Table 5). This means that there are regional differences in what the actors at the strategic and operational perceive as strategic. Because these differences are visible in every region that has been studied, it is reasonable to assume that (a) regionally specific variable(s) explain(s) these differences.

Summarizing, the persons interviewed have different perceptions about strategic policy advising. First the operational level shows a higher level of congruence in all regions than the strategic level, implying non-regional differences. Second the level of congruence between the operational and strategic level is in general lower than the level of congruence at the operational and strategic level. And third, the levels of congruence of perception between the regions at both the operational and strategic level differ from each other as well, implying that there are regionally specific variables that influence the congruence of perception.

4.2 Institutions regarding SPA in the safety regions

In this section the institutions will be mentioned and analysed that the safety regions have implemented regarding SPA from the ROL to the mayor or HSR. In order to determine if regions have additional rules regarding strategic policy advising, one must first determine which rules apply to all regions, because they are prescribed by law. This is important in order to determine the causal relation between the additional or divergent rules a safety region uses compared with the other two regions. This will be analysed first. Afterwards, the analysis of the specific institutional regimes of the selected regions will be made.

4.2.1 What does the national institutional context prescribe to the regions?

For this purpose the Act Safety Regions including the derived Directive Safety Regions (in Dutch: Besluit Veiligheidsregio´s) and the Directive Personnel Safety Regions (in Dutch: Besluit Personeel Veiligheidsregio´s) have been analysed. Both documents have been based on the Act Safety Regions and came into effect simultaneously with the Act Safety Regions

("*Brochure Wet Veiligheidsregio*," 2013, p. 15). The Directive Safety Regions imposes quality measures to the Safety Regions. The Directive Personnel Safety Regions forms the (legal) base for the Regulation Personnel Safety Regions that describe rules regarding certain members of the safety regions ("Brochure Wet Veiligheidsregio," 2013, p. 15). Also the Toetsingskader of the Inspectorate of Safety and Justice has been included in the analysis. This framework is designed to evaluate the quality of functioning of the Safety Regions. This framework is also being used to gather data used for the Staat Van Rampenbestrijding. Because the mayor is an important actor, the Municipality Law ("Gemeentewet," 2018) must be taken into account as well. This law contains certain authorities, boundaries, scope and pay off rules that apply to the mayor.

Before focussing on the rules as described in the IAD framework, the Act Safety Regions contains some general rules that apply to the safety regions. This will be mentioned first, because it puts the rules regarding strategic advising in a certain context. After that, the institutional analysis of the legal context will be performed using the IAD framework. This will be done by the describing this context for the mayor, the head of safety region and the Regional Operational Leader. This section will end by describing the rules that apply to the different teams of the crisis management structure and the rules that apply to advising in this structure. An overview of the institutional context using the IAD framework can be found in Annex D.

4.2.1.1 General rules
This section describes the rules that create a general context for the safety regions.

- Article 16 ("Wet veiligheidsregio's," 2018) issues the safety regions to make up a crisis plan every four years, in which the organization, responsibilities and authorities of the disaster and crisis management have been described.
- Article 18 ("Wet veiligheidsregio's," 2018) describes that by directives measures can be taken for the fire department, public health, the organization for disaster and crisis management, medical relief and community care in case of disaster and crisis management.
- Article 22 ("Wet veiligheidsregio's," 2018) obliges the administrations of the safety regions to provide an information and communication service, including the information requirements and measures regarding frameworks, standards and quality demands for information exchange.
- Article 36 ("Wet veiligheidsregio's," 2018) obliges the safety regions to appoint a staff member to coordinate the measures and provisions taken by the local communities regarding a crisis or disaster. Most often this is the municipality secretary of one of the participating communities ("*Brochure Wet Veiligheidsregio*," 2013, p. p33).

These rules determine that the regions must and can take measures in order to create a crisis management, without dictating which measures they have to take exactly. This gives the regions freedom to organize things in a way what they think is best for their region. This has been done on purpose. The basic assumption is that the professionals of the crisis organizations at the regional and local level are capable to work out detailed procedures by themselves taking into account the specific context of their region (Veldhuisen et al., 2013, p. 48). The downside of this is that the institutional context can differ between the safety regions region and even in the regions between communities. This increases institutional uncertainty.

4.2.1.2 National rules applying to the mayor
Article 5 of the Act Safety Region ("Wet veiligheidsregio's," 2018) gives the mayor the supreme command in case of a crisis or disaster, positioning those who take part in the crisis response under his command. This supreme command only regards his authority regarding public order and safety ("*Brochure Wet Veiligheidsregio,*" 2013, p. 11), which can be regarded as a scope rule. He is not allowed to make decisions regarding other communities ("*Referentiekader Regionaal Crisisplan 2016*," 2016). When a mayor thinks the actions of another functional chain are irresponsible, the mayor has the authority to give enforcing directions to that party ("*Referentiekader Regionaal Crisisplan 2016*," 2016, p. 21).

Article 5 also forms a boundary rule: one should be a mayor to get in the supreme commanders position. The procedures to become a mayor have been stated in article 61 of the Municipality Law ("Gemeentewet," 2018). Mayors are being selected for terms of six years on competences for being a good public administrator. This selection is being done by the commissioner of the king, after being advised on by the municipal council. In the job description of a mayor, crisis management is only a small part of the job (Van der Laan & Landman, 2007, p. 29). Being a good administrator, does not guarantee being a good crisis manager. This raises the question if a mayor has enough knowledge and experience for being a crisis manager, and if he is capable of developing crisis management skill (Van der Laan & Landman, 2007, p. 29).

The majority of the authorities of a mayor regarding public order and safety have been stated in the Municipality Law article 172 to 176a (Engberts & Cornelissen, 2010, p. 75; *Zakboek Openbare orde en veiligheid*, 2017). In addition, the mayor has authorities granted by the Law Public Manifestations, the Law Opium, and authorities regarding administrative detention, the issuance of, security areas, the eviction of perpetrators of home violence, exclusion orders, notification obligations or group bans (Engberts & Cornelissen, 2010, pp. 75-76). Because a mayor is a single headed governing body, the authorities regarding public order and safety cannot be delegated or mandated (*Zakboek Openbare orde en veiligheid*, 2017, p. 14). Two main authorities provided by the Municipality Law are the emergency warrants (in Dutch: Noodbevel, article 175 of the municipal law) and emergency Ordinances (in Dutch: Noodverordening, article 176 of the municipal law). These emergency authorities cannot be used plainly, but should be used taking care of the principles of proportionality, or the weight of the measure should be proportionate to the extent of the crisis, and subsidiarity, if the effect could be achieved with less rigorous measures, these should be applied (Martens, 2012, p. 7). If the juridical context does not provide enough authorities to deal with the situation, a mayor could use what is called "unwritten emergency law". The mayor must account for any use of emergency authorities (Martens, 2012, p. 7). The mayor is not allowed to break any constitutional laws, but he is allowed to constrain them regarding freedom of movement (for example imposing a curfew) and private life, such as forced evacuations ("*Bestuurlijke Netwerkkaarten Crisisbeheersing: Netwerkkaart 1 Rampenbestrijding algemeen en handhaving openbare orde*," 2017, pp. 2-3). If a mayor issues certain measures, the financial consequences will be on account of the mayor´s local municipality (Helsloot et al., 2010, p. 47). This can be regarded as a payoff rule.

Article 7 of the Act safety region issues the mayor to provide information to the local community regarding the source, extent and effects of a crisis or disaster concerning his municipality, and the action perspectives. This article also orders him to provide the persons involved in the crisis management information regarding the crisis or disaster, the risks concerning their tasking and the precautions that have or will be taken regarding their tasking. Article 7 thus forms a scope and information rule.

Article 39 describes the authority of a mayor to make written objections regarding decisions taken by Head Safety Region, if the mayor thinks this decision will harm his municipality disproportionally.

Art 53 and 54 describe the possibility of the minister and commissioner of the king to give the mayor directions if needed. These are at first sight position and authority rules, but can also be regarded as a payoff rule. Giving enforcing directions reduces the autonomy of a mayor. Therefore these rules have not been made in effect, but can be made in effect by royal degree through a minister if the situation demands so. This is also the manner in which functional chains can ask the commissioner of the king to intervene when these chains consider measures taken by a mayor irresponsible (Wijkhuijs & Van Duin, 2017, p. 21). Furthermore article 61b and 62 of the municipality law describe the possibility to suspend or dismiss a mayor by the minister, with or without a request from the municipal council to do so. Article 180 of the municipality law issues the mayor to account for his administration.

What is not explicitly stated in the law but is generally accepted, are the four roles a mayor has during the response phase of a crisis. These are (www.burgemeesters.nl, 2019):

1. Decision Maker
   As Head of a policy team and guardian of the policy process the mayor ensures a decisive crisis management. He takes administrative decisions based on the advice from the policy team and ensures clarity regarding authorities of other governmental organizations and determines lines of action towards them. He is responsible for noting decisions taken including their considerations for accounting and "guilt" question, for acquiring validated context information by operational and administrative lines, and anticipating on future developments.
2. Public Farther/mother
   Being the figurehead to the local community at the moments that care, by showing compassions and solidarity to the victims and community in shock. He should connect and if necessary canalise the collective feelings of emotions and stress and form a binding role between people and groups with conflicting interests, representing the government of the crisis to the media, population, relief organizations and public administrative institutions.
3. Mayor as strategist
   The mayor should promote the interests of the local community, victims or others struck and note down promises and agreements made. He must create perspectives and opportunities to compensate the suffering of those involved and acquire political support for handling structural issues relevant for the crisis at hand.

4. Mayor as collegial administrator

The mayor should be aware that the regular administrative processes must continue as well. Being aware of the effects of the crisis on the local municipal public administration organization, timely informing the municipal council, timely informing the commissioner of the king and the Ministry of the Interior and Kingdom Relations regarding the developments of the crisis or disaster, organizing meetings with other administrative colleagues relevant to the crisis.

Furthermore The Dutch Association of Mayors advises to practice at least two times a year with the policy team (including the deputy mayors) in order to get to know each other and being able to anticipate each other actions (*Handreiking bestuurlijke aandachtspunten bij crises*).

4.2.1.3 National rules applying to the Head Safety Region

The juridical context of an HSR is somewhat different from that of an "ordinary" mayor. This is because in case of GRIP 4, the HSR acts as the supreme commander, which implies that certain authorities of the other mayors of communities who participate in the region, have to be reassigned to the Head Safety Region.

Article 39 of the ASR describes the authority of an HSR to call together a policy team, consisting of the mayors of the municipalities involved, the head officer of justice, and the heads of the dike reeves involved. The HSR also has the authority to invite other actors, whose presences are needed regarding the situation. Furthermore the HSR has the authority to appoint a ROL, who is in charge of a ROT. The HSR is allowed to give the ROL directions that the HSR deems needed for the execution of the decisions taken. Article 39 delimits the authority of the HSR to a crisis or disaster with a more than local impact. However, regarding his region the HSR has been granted the authorities mentioned in ("Wet veiligheidsregio's," 2018):

- Article 4 to 7 of the Act Safety Regions 2010;
- Article 172 to 177 (with the exception of art 176 3-6) of the municipality law for the communities involved;
- Article 11, 14 (first paragraph), 56 (first and fourth paragraph) and 62 of the Policy Law 2012;
- Article 5 to 9 of the Law Public Manifestations.

In essence, these are the same authorities granted to a mayor regarding public order and safety, the use of emergency authorities, the authority over the fire brigade, supreme command, informing the local population and crisis response workers, the authority over the police and military police regarding public order and safety, providing relief and requesting assistance.

Article 39 of the Act safety regions obliges the HSR to consult with the policy team first, before taking any decisions regarding these topics, unless urgency requires otherwise (network aggregation rule). The HSR is also responsible for the coordination of the measures taken that the different municipalities (Bron & Zannoni, 2010, p. 101).

Article 51 of the Act safety regions gives the HSR the authority to ask the minister for additional support or assistance, informing the Commissioner of the King at the same time. This request can also be done directly to adjacent regions, but only when the crisis plans of both regions contain agreements regarding these matters.

Art 40 issues the HSR to send a written report, in accordance with the mayors involved to the councils of the municipalities involved, regarding the course of events and the decisions taken. The report must include the use of a mayor´s authority to make any written objections. In this manner, the law provides for democratic accountability (payoff rule).

The Decree Legal Status Heads Safety Regions ("Besluit rechtspositie voorzitters veiligheidsregio's,") describes the possibility and conditions when a minister can suspend or dismiss a HSR in case of incompetence or incapability as a head, a disrupted relation with the general management or with the minister, the abolishment of a region or on other grounds (payoff rule).

4.2.1.4. National rules applying to the Regional Operational Leader

The act safety regions article 39, positions the ROL at the head of the ROT, which consists of the general commanders (in Dutch: Algemeen Commandanten) of the response organizations that are involved in the crisis management. Furthermore article 39 of the ASR positions the ROL in the RPT. It is worth mentioning that whereas an HSR is obliged by law to appoint a ROL, a mayor is *allowed* to appoint a ROL. The role of a ROL as head of a ROT in GRIP 2 has been based on informal rules concerning GRIP (Helsloot et al., 2010, p. 137). The double role of the ROL as head of a ROT, and at the same time

participating in the RPT can cause practical issues: he cannot be at two places at the same time (Helsloot et al., 2010, pp. 154-155).

The Directive Personnel Safety Regions requires a ROL to follow a Leader ROT course at the IFV and pass an exam before being appointed as a ROL (boundary rules).

The Regulation Personnel Safety Regions ("Regeling personeel veiligheidsregio's,") mentions the tasks, competences and competence levels of certain members of the crisis structure, among others the ROL. This regulation positions the ROL at the head of the regional operational team, but also under command and accountability of the mayor. According to the regulation the ROL has two tasks:

1. Commanding the ROT
   The ROL provides direction to the crisis organization, planning and monitoring the operational results within the administrative framework. He is responsible for the multidisciplinary operations regarding the area that is affected by an incident. He translates the tactical information to strategic decisions and acts as advisor to the administration / mayor (policy team).

2. Advising and informing the policy team.
   The ROL is responsible for the transfer of information and advising to the mayor (policy team). He translates the tactical information to strategic decisions and acts as advisor to the administration / mayor (policy team). As of GRIP 2, the ROL is responsible for the composition of multidisciplinary scenarios, clear advice and decision points for the policy team.
   o Informing and advising, the policy team or mayor on strategic, political or administrative decisions
   o Provides clear and adequate advice and issues deliberated decision points to the mayor during GRIP 2.
   o Considers knowledge and imagination to provide an accurate picture of information to the policy team
   o Supports the creation and establishment of goals during upscaling situations.

The regulation personnel safety regions adds that the ROL advises the mayor from a multidisciplinary perspective about strategic, political or administrative decisions. Moreover, according to this document, the ROL is responsible for the development of realistic multidisciplinary scenarios, clear advices and decision points to the policy team (regulation personnel safety regions).

In contrast, the scope of the ROL mentioned in the ("*Referentiekader Regionaal Crisisplan 2016*," 2016, p. 12) is to prepare and achieve operational goals regarding public order and safety that cannot be overseen or coordinated from the place of incident, or when there is no real place of incident. This implies that the scope is limited to the domain of public order and safety. However, it should be noted that the ("*Referentiekader Regionaal Crisisplan 2016*," 2016, p. 12) is not legally binding, whereas the rules and regulations are.

4.2.1.5 National rules applying to the Regional Operational Team (ROT)
Article 2.1.4 of the Directive Safety Regions describes the minimal positions in a Regional Operational Team ("Besluit veiligheidsregio's,"):

- Regional Operational Leader
- Section Fire Department
- Section Medical Relief Organization in the Region
- Section Police
- Section Population Care
- Section Information Management
- A staff member crisis communication ROT

The same article authorises the ROT for the operational command and coordination with the parties involved in a disaster or crisis and the advising of a municipal or regional policy team.

4.2.1.6 National rules applying to the Policy Teams

Article 2.1.5 of the Directive Safety Regions describes the minimal positions in a Municipal Policy Team (MPT):

- Chief Fire Department
- Chief Medical Relief Organization in the Region (MROR, in Dutch GHOR)
- Chief Police
- Chief People Care

The ("*Referentiekader Regionaal Crisisplan 2016*," 2016, pp. 13-14) also places the mayor, the chief prosecutor, the ROL, a communication advisor in the MPT and in support an information manager, resource manager and additional actors whose presence is deemed relevant considering the situation, whereas (Wijkhuijs & Van Duin, 2017, p. 33) places the municipal secretary and or the civil servant public order and safety, a communication advisor and depending on the type of incident the chiefs of the fire department, MROR and police in the MPT.

The MPT supports the mayor during crisis and disaster. The members from the fire department, the MROR and police do not participate as chief of their branch, but act as advisor to the mayor. Operational crisis response is a responsibility of the sections at the ROT level. Because the participants of "functional chains" are very often also authorities of their chain, this organization enables coordination between the functional and main chains ("*Referentiekader Regionaal Crisisplan 2016*," 2016, pp. 13-14). However, Helsloot et al. (2010, p. 107) mentions that this double role creates the risk that these advisors will bring in operational issues at the policy level, because they are also final responsible for their own organizations operational activities. This also places the ROL in the ROT offside regarding the other members of the ROT, because these can directly contact their commanders in the PTs (Groot & Helsloot, 2018, pp. 3-4).

The composition of a RPT has been stated in the ASR article 39: the mayors of the communities involved, the chief prosecutor, the dike reeves of the water boards involved, and other actors deemed necessary. The "*Referentiekader Regionaal Crisisplan 2016*" (2016, p. 14) stipulates that the RPT is not a decision making board, but an advisory board to the Head Safety Region (authority rule). This also applies to the role of the ROL.

A recent development is the enhancement of the position of the municipal secretary (in Dutch: gemeente secretaris) in the policy teams (Bron & Zannoni, 2010, p. 107). In a growing number of municipalities, the municipal secretary forms a buddy for the mayor as advisor regarding public order and safety. The civil servant responsible for public order and safety in a municipality appeared to be to light as first advisor for the mayor or to the managers of municipal services (Bron & Zannoni, 2010, p. 106). The municipal secretaries very often have strategic overview enabling them to oversee the public and political force fields in which the crisis takes place (Van der Laan & Landman, 2007, p. 23).

Another development is the creation of an extra position in the policy teams called the "Technical Head". When a "Technical Head" is added to a policy team, the HSR stays the head or supreme commander, but the "Technical Head" is responsible for steering the crisis management organization and conducting the meetings. In this manner the head creates more opportunities for reflection and consideration (Helsloot et al., 2010, p. 159).

4.2.1.7. National rules regarding Strategic Policy Advising

Article 2.4.3. of the Directive Safety Regions ("Besluit veiligheidsregio's,") concerns advising in the main crisis response structure. This article dictates that an advice or order in the main structure must be based on the actual "own" picture of that part of the structure and the current "total" picture. This article thus forms a broad scope rule. The scope of the "own" and "total" pictures have been described in the article 2.4.1 and 2.4.2 of the Directive Safety Regions:

- Article 2.4.1 prescribes that the administration of a safety region has to provide a total picture within the main crisis organization structure during a crisis or disaster. This total picture will be composed based on the available information about the incident, the relief work, prognoses, the courses of action and the measures taken including their results. The article further mentions that this total picture must be shared by automatic means as soon as possible.
- Article 2.4.2 prescribes that the elements of the main crisis structure must contain an image of the developments and effects of the incident, the risks for the relief workers and the persons present in the affected area and the incident response and the personnel and material needed for doing so. Again this information must be shared by automatic means as soon as possible.

The "*Basisboek Regionale Crisisbeheersing*" (Helsloot et al., 2010, p. 186) provides a standard format for a ROT that can be used to report to the PT. It further mentions specific decision points and advises for the PTs (Helsloot et al., 2010, p. 188):

- Requests for additional support;
- Advice over the use of the warning siren;
- Request for the use of emergency warrants or ordinances;
- Advice regarding evacuations;
- Advice regarding the distribution and allocation of scarce resources;
- Advice regarding the administrative directions regarding public care;
- Advice regarding the course of action for the after phase;
- Advice regarding the provision of information for the population and media including perspectives for action.

The directive Safety Regions article 2.4.3. is very broad regarding the requirements of the advice in the crisis management structure. In fact, the directive has been simplified based on an advise of the Commission Hoekstra, despite comments of the National Policy indicating that even before the simplification it is was not clear what preconditions applied to a total picture of a disaster or crisis ("Besluit van 15 oktober 2015, houdende wijziging van het Besluit veiligheidsregio's, ter vereenvoudiging, actualisering en verbetering van dat besluit, alsmede ter aanpassing van de verdeelformule van de brede doeluitkering rampenbestrijding," 2015, p. p8). This is also reflected in the new Toestingskader 2018 ("*Toetsingskader Multidisciplinaire Taakuitvoering Veiligheidsregio's,*" 2018) as to the ("*Toetsingskader staat van rampenbestrijding,*" 2013). The Toetsingskader 2018 uses much broader requirements regarding information sharing.

Figure 8: Standard report for a ROT to a PT (Helsloot, Martens, & Scholtens, 2010, p. 186)

4.2.1.8. Summarizing the national institutional context

Looking at the formal rules and regulations that describe the national institutional context one can conclude that the law and regulations focus on positions and authorities (including limitations and delimitations). These roles position the mayor as head of the crisis management organization. It further provides a broad scope of the mayor's tasks during a crisis. However, it does so in very general terms.

Also it can be noted that some rule types have been given less attention in the National institutional context. For example, the positions and authorities of the heads of the teams have been allocated to specific actors. However, the aggregation rules regarding the teams have been given less attention. An explanation for this can be that the development of these rules has been left to the regions themselves. Another explanation can be that because the ROL and the mayor or HSR has been allocated the authority to give directions, additional aggregation rules are deemed irrelevant. Also the guarding or monitoring position mentioned by Ostrom appears to be missing in the national institutional context. The institutional context also has an embedded risk for institutional uncertainty. Helsloot et al. (2010, p. 107) mention that the doubling of advisors in the PTs has the risk of bringing operational issues to the policy level, because they are also responsible for their own organization´s operational activities.

Besides formal law and regulations, there are also a number of handbooks and documents describing additional rules. These documents are not legally binding, but reflect how certain regions have put the law into practice. Also a trend towards more flexible rule regimes is also observed, such as a more flexible GRIP-structure and less specific rules (such as the toetsingskader), despite already existing uncertainties regarding the preconditions.

4.2.2. Which institutions do the regions use regarding SPA?

In this paragraph a summary will be given of the most important rules that apply in the regions under study by rule type. A more detailed overview of the rules has been put in Annex E. First, a description must be given regarding the actors in order to complete the IAD framework.

4.2.2.1 Describing the actors

The first questions asked of the actors during the interviews has been to describe their interests, which resources they provide for the other level and what they needed from the other level. The results have been put in Table 7.

Table 7: Actor description by region

Actos Backgrounds	Operational	Strategic
Safety Region 1 ROL 1: Fire Dep ROL 2: Fire Dep PA 1: Municipal secretary PA 2: Deputy Mayor	**Interests** - Freedom of action for the ROT - Administrative legitimacy for the ROT **Resources** - Information regarding the incident about the seriousness, nuances, implications, dilemma´s and developments **Needs** - Starting points and guidelines	**Interests** - Local population (social costs) - After care **Resources** - Insight in the community - Legitimacy for the operational level - Overview over all disciplines **Needs** - Answers from the ROT - Questions from the ROT - Filtered information from the operation - Liaison to the operational level
Safety Region 2 ROL 1: Fire Dep ROL 2: Fire Dep PA 1: Mayor / HSR PA 2: Mayor	**Interests** - The interests of the mayor - Operational level - All organizations in the ROT **Resources** - Decision points - Information regarding the incident - Information regarding the relief operations and consequences **Needs** - Starting points and directions - Decisions regarding additional resources - Decisions regarding the use of violence - Guidelines - Legitimacy from the mayor / city council - A mayor who takes advice - Freedom of Action	**Interests** - The interests of the mayor - Operational relief organizations - Local population (social costs) **Resources** - Decisions - Legitimacy - Enforcing powers **Needs** - Information regarding the incident (what and consequences) - Reliable operational information - Operational insight - Professional advice (including courses of action and tips & tricks) - Media sensitive issues
Safety Region 3 **Actos Backgrounds:** ROL 1: Police Dep ROL 2: Fire Dep / SR PA 1: Technical Head / SR PA 2: Mayor	**Interests** - Mayor / Administrative level - Operational level - Area that is being influenced by the incident or crisis **Resources** - Information regarding the incident, relief work, scenario´s and consequences - Experience **Needs** - Perception of the PT regarding the incident - Information requests from the PT - Specific community related issues that are relevant to the incident.	**Interest** - Administrative level - Operational level - Local population **Resources** - Directions - Administrative starting points **Needs** - Validated operational picture - Scenario´s - Courses of actions - Degree of choice

The interviews revealed some nuances regarding the aspects mentioned in the table. For example regarding legitimacy, one public administrator said the following:

> "He <the regional operational leader> must not try to let me seal his operational decision, which is his job. He does need to inform me about it because it is useful to know."

And another quote from a public administrator regarding what he expects from an operational leader.

> "The operational leader is not there to keep the public administrator out of trouble. The operational leader´s main task is to enable the public administrator to do his job."

Looking at the table one can see some overlapping interests and corresponding resources and needs. However, there are also differences between the levels and between the regions. The most notable observation regards the interest "local population" which has been mentioned by all public administrators regarding the strategic level, but not by the actors interviewed at the operational level as interest for the ROT (see also the tables regarding interests in Annex C).

Summarizing, the actors´ description provides an insight that helps to understand the interests, needs and resources of the actors. However, these elements are on their own less important for answering the research questions. What is important is how these elements have been processed into the institutional rules that are being used, because these determine what topics are important and what products or services are to be produced in which quality (see section 2.3.2.).

4.2.2.2 Institutional analyses of Safety Region Groningen regarding SPA

This section describes the findings from the interviews held with actors from SRG. During the interviews both ROLs interviewed from this region declared that the region has no formal rules or documents regarding strategic policy advising. Therefore for this region the only documents studied are the region´s crisis plan (*Regionaal Crisisplan Veiligheidsregio Groningen*, 2014) and the "*Kaders voor de GRIP in Groningen, Friesland en Drenthe*" (Haasjes, 2014).

1. *Boundary rules*

   From the interviews with the ROLs it became clear that the ROLs in the safety region Groningen have to follow the mandatory ROL course and pass the examination of the IFV. The safety region uses the national qualification dossiers when selecting new ROLs. According to the crisis plan, the region initially demands a background as fire fighter or police officer. Until recently, the safety region had a ROL with a background from the Community Care. At the moment of the interviews, the region was thinking about recruiting a ROL with another background such as municipal secretary.

2. *Position rules*

   The region´s crisis plan mentions the positions mandated by law and regulation. This organization can be regarded as a classical standard organization. The section describing the positions of the municipal policy team mentions an extra position, which is an advisor crisis management. The crisis plan also states that the region has adopted a flexible manner of upscaling, enabling the possibility to alarm specific staff sections or separate teams matching the requirements of a crisis, without automatically alarming the whole multidisciplinary organization of the region. The ROT is located at the location of the Safety Region in Groningen, which is housed in one of the fire stations in the city of Groningen. The Municipal Policy team will be located at the town hall of the municipality involved. The Regional Policy Team will be seated at the location of the Safety Region in Groningen (in the same building as the ROT, but at a different level).

3. *Authority/Choice rules*

   The crisis plan does state a definition of operational command (*Regionaal Crisisplan Veiligheidsregio Groningen*, 2014, p. 6). The crisis plan also mentions the roles of the mayor during a crisis (*Regionaal Crisisplan Veiligheidsregio Groningen*, 2014, p. 6):
   - Decision maker: supreme command and taking strategic policy decisions during GRIP 3
   - Administrator: accounting to the municipality council
   - Figurehead: acting as figurehead during crisis communication
   - Farther of the community: being ready as farther or mother to the local population

The role of the HSR has been stated as:
- Decision maker: taking strategic policy decisions
- Administrator: making written declaration to the municipality councils involved
- Figurehead: acting as regional figurehead during crisis communication

The crisis plan further mentions the authorities for up and downscaling for different GRIP levels (p15-16). What is notable in the crisis plan of Groningen is that the authority of the division of scare operational resources has been allocated to the regional operational team. From the crisis plan it becomes not clear if there is a specific position that has been allocated for guarding the processes (although this does not necessarily mean that this is not put in one of the job descriptions of one of the described positions). Also from the interviews with the ROLs an ambiguous picture formed regarding this position or authority. Both ROLs mentioned that this is a task for every member in the policy and operational teams. But the perception to which position this task has formally been allocated differs. Positions being mentioned were the municipal secretary, the General Commander Community Care (sometimes fulfilled by the municipal secretary), the information managers and the juridical advisor. Both ROLs declared that according to them, only the ROL is allowed to give strategic policy advice from the ROT to the Mayor or HSR.

4. *Scope rules*

The crisis plan of SRG states some specific scope rules for the teams. For example, one of the ROTs tasks is to perform scenario development for the time period of 4-12 hours ahead and the policy teams beyond 12 hours. Furthermore the policy team is responsible for the integrated planning, monitoring and when needed adjusting of policy and tolerance limits and the administrative and operational goals. It also emphasis that the policy team should take strategic decisions and gives policy directions to the operational leader. The crisis plan does not specify what these tasks are. The crisis plan also provides criteria for up and downscaling (which are mandated by the act safety regions). However, these criteria do give a general indication of the scope of strategic policy advice. The interviews also revealed a somewhat ambiguous picture regarding the scope of strategic policy advising. One ROL mentions quality elements such as an advice which is feasible, unambiguous, proportional, and subsidiary or which chains are involved. He also limited the advice to the domain of public order and safety. Whereas the other ROL did not mention any limitations, but stated that he is allowed to advice about everything regarding the partners participating in the ROT.

5. *Aggregation rules*

According to the crisis plan the HSR takes strategic policy decision in accordance with the mayors involved. Both interviewed ROLs stated that they make up their advice after consulting with the members of the ROT. They also communicated beforehand with the mayor or HSR regarding their needs.

6. *Information rules*

The SRG uses LCMS. This information is accessible to all members who participate in the crisis management organization, unless the situation demands restrictions regarding the sharing of information, for example in case of a juridical investigation.

7. *Payoff rules*

These are not stated in crisis plan. Interviews indicated that although the ROL does account to the mayor or HSR during a crisis, in practice they account to the director safety region.

The crisis plan of SRG mentions the use of the network cards in order to provide a picture of the division of authorities among different (governmental) organizations. The ROLs use their own information cards that help them to perform their tasks as head of a ROT and chairing a meeting. These cards are aligned in the safety region regarding the agenda of the ROT meeting, but are not focussed specifically on strategic policy advising. The crisis plan of SRG does not specifically define what is strategic or operational is. Only implicitly, by mentioning that strategic decisions are being made at the level of the policy teams.

Finalizing, the Safety Region Groningen represents a "classical" crisis management organization which is in accordance with to the rules described in the act safety regions. The region has no specific rules regarding strategic policy advising or the interaction between the two levels. The crisis plan describes which person or team does what and the plan mentions some

specific authorities allocated to certain positions. However, the crisis plan does not contain any rules describing strategic policy advising from the ROT to the PT specifically.

4.2.2.3 Institutional analyses of Safety Region Drenthe regarding SPA

Both SRG and SRD have agreed on the "*Kaders voor de GRIP in Groningen, Friesland en Drenthe*" (Haasjes, 2014). However, due to the experience during several incidents, SRD concluded that the "standard" manner of crisis management prescribed in the act safety regions did not match the specific context of the safety region Drenthe. The results of these studies have been written down in the report "*Hoe doen we het effectiever en efficiënter in de regio Drenthe?*" (Scholtens, 2011). The General Management Board of the region agreed on this report on March 23rd, 2011. The report concluded that the standard crisis management organization results in suboptimal actions due to untrained participants, resulting in a limited COPI-ROT-PT interplay (Scholtens, 2011, p. 3). Also the region had troubles in matching the qualitative standards as stated in the law and regulations due to the limited (personnel) available in the region, due to the regions´ rural character (Scholtens, 2011, p. 3). The new structure in Drenthe aims at performing the necessary actions as soon as possible, reducing the number of "enforcing" meetings. This results in a different organization and additional guidelines regarding the crisis management structure as described by the act safety regions and underlying regulations.

1. *Boundary rules*

   As is the same with the SRG, the crisis plan states that initially the ROLn will be recruited with a police or fire fighters background. The safety region demands that the candidates accomplish a qualification test. They will also have to follow the mandatory ROL course and pass the IFV ROL exam. What is specific for the SRD is that this region selects their candidates based on their relation with public administrators (mayors or equivalent level) in the region during their regular daily businesses. This is founded on the assumption that repeated personal contact in the normal daily routines will increase trust and understanding that improves the level of trust and understanding during an actual crisis or disaster. As one ROL interviewed put it:

   > "In that case <when a ROL does not know a mayor> there is almost no communication. You speak words, but you don´t know in which pit it ends"

2. *Position rules*

   In the current organization the SRD makes a distinction between an acute crisis and a non-acute crisis. During an acute crisis, there is no ROT. Instead, a crisis team will be established in which the mayor, the ROL, a public administrative advisor (most often a municipal secretary) and a secretary participate. The ROL will be supported by a small staff consisting of an information manager and a policy advisor. The crisis team will be seated at the town hall of the municipality involved. At a regional level, the Regional Crisis Team will be similar, but with the HSR in charge. The Regional crisis team can be located at the town halls of Assen, Emmen or Hoogeveen.
   During a non-acute crisis, a "regular" ROT and RPT (if necessary) will be established at the location of the Safety Region in Assen.

3. *Authority/Choice rules*

   The authority rules described in the crisis plan of SRD primarily concern the authorities to decide on up- and downscaling. In addition, the crisis plan specifically puts the authority to start the recovery phase at the Mayor or HSR. The ROL is authorized to activate NL ALERT. Furthermore, the Administrative Advisor in the Municipal Crisis Team is authorized to provide the mayor advice on administrative issues, and supports and guards the decision-making and interpretation process. In the Regional Crisis Team, these authorities are put at the Coordinating municipal secretary. The Information Manager and the Policy Advisor support the ROL. However, when asked about the guarding authority regarding policy advising one ROL mentioned the municipal secretary, the other mentioned the policy advisor in the ROL supporting staff.

   During the interviews both ROLs stated that the advice from the operational level to the policy level will be done by the ROL. According to one ROL:

> "I take the operational context to the strategic level. That is why we don't have the other parties at the table, because there is always operational suction. And you will notice that, because it depends on the characters of the people sitting at the table. And on the operational leader, whatever he is capable of or not to filter the operation out of the information"

4. *Scope rules*

As is the same with the SRG, also SRD has stated criteria regarding upscaling. The crisis plan of SRD further states that during the first hours of a crisis the advisors of the mayor will primarily support the mayor regarding the interpretation of the crisis. The information manager and policy advisors in the ROL´s supporting staff support the ROL with filtered validated information and prepared written advice, including their considerations and courses of action. However, the ROLs stated during the interviews that this written advice only concerns the "standard" formal decisions, such as the use of emergency authorities which the mayor or HSR needs to sign in order to become effective.

During the interviews a discrepancy was found between the two ROLs. One ROL stated that the advice could be about everything, specifically political sensitive issues. The other ROL stated that it could be about almost everything, except political issues, because that is the domain of the administrator.

5. *Aggregation rules*

The crisis plan of SRD clearly states that during the hectic phase of a crisis no multidisciplinary coordination will take place. The relief organizations and the municipality will focus on monodisciplinary coordination and ad hoc interdisciplinary coordination (*Regionaal Crisisplan VRD*, 2014, p. 6), conducted primarily by phone and LCMS. The mayor or HSR will take decisions, with or without support of his advisors, but always in the presence of the operational leader (*Regionaal Crisisplan VRD*, 2014, pp. 10,13). During the interviews both ROLs stated that they develop their advice with the help of their supporting staff and sometimes after consulting another ROL of the region. Both ROLs stated that they confer with the mayors regarding the advice needs.

6. *Information rules*

SRD uses LCMS as an information system. What is specific of the crisis plan of safety Region Drenthe (compared to the crisis plans of the other two regions studied) is that the crisis plan clearly state timings when and how information sharing takes place. For example, the ROL provides as an operational strategic advisor within three quarters of an hour (and afterwards each hour) a multidisciplinary picture regarding the main issues. The participants in the crisis teams inform and advise the mayor in the most direct manner. And the mayor interprets the crisis within 60 minutes after alarming and afterwards every two hours. When a Regional crisis team is in place, coordination will be conducted by phone during the hectic phase of a crisis, enabling the other mayors to stay at their communities for directing the municipal working teams. As is the same with SRG, SRD uses the network cards to provide insight in the allocation of administrative authorities among the different governmental organizations and levels.

7. *Payoff rules*

To ROLs did not state any payoff rules, other than adjusting their advice if the situation turns out otherwise.

The crisis plan Drenthe contains specific rules describing the interaction between the operational and administrative levels. Most rules concern the authority for up and down scaling and the start of the recovery phase. The crisis plan specifically describes the guarding authority. However, the interviews revealed that this is not the perception of all ROLs. What is notable is the emphasis on when and how information is being shared between the two levels (information rules). On the contrary, besides the criteria for upscaling, there are no additional (scope) rules that describe *what* the strategic advice should concern. This is also emphasised by both ROLs during the interviews. They stated that there are no formal, written down rules or procedures regarding the advising from the operational level tot the policy level in the region. In fact, both ROLs share the opinion that during a crisis the number of strategic decisions is so low, that it does not take place that often.

4.2.2.3 Institutional analyses of Safety Region Utrecht regarding SPA

SRU can also be regarded as a safety region that has been organized in a more "classical" manner. The crisis plan does not specifically define what strategic is, although they do make it visible in a figure as the level of the policy teams (*Regionaal*

Crisisplan Utrecht 2018-2020, 2018, p. 25). This would suggest a hierarchical distinction between the levels. However, also the SRU has experienced issues regarding the interaction between the operational and strategic level. This resulted in an extra position at the RPT and the MPT of the municipality Utrecht: the technical head. Also SRU introduced a more flexible manner of working.

Since 2016 the region has undertaken several actions in an attempt to improve the strategic advising. The region has adopted framework of Boin as a framework for strategic crisis management. In addition, they use what the SRU calls the Ten Strategic Families as a checklist for strategic advising, which has also been developed in cooperation with Boin and Overdijk. These families are: classification of the incident, organization of the chains, evacuation and redirecting, uncoupling of critical processes, division of scarce resources, prioritising preventive protection measures, authorizing emergency authorities, communication, after care, and accounting. The SRU also recognizes some administrative themes. These are Upscaling and Relationship of Authorities, Administrative Coordination and Information, Emergency Authorities, Scarce Resources, Community Care, Communication, Investigation and Accounting, Weighting up Interests and Finances.

1. *Boundary rules*
   As is the same with the SRG and SRD, also SRU uses selection tests in order to select their potential ROL candidates. Also the ROLs have to follow the mandatory courses and exam at the IFV. The Safety Region´s management selects their ROLs based on their administrative insight and experience. Therefore their ROLs are a mix of persons with backgrounds in police, fire brigade and persons with an administrative background. One ROL mentioned that regarding the strategic advising, the advisor does not have to be the ROL, but the advice can also be given by a person mandated by the ROL.

2. *Position rules*
   The SRU uses a "classical" manner to organize the crisis management structure with a ROT and a MPT or RPT, as is prescribed by the act safety regions and underlying regulations. The crisis plan does mention a process guardian in both the MPT and a Technical Head at the RPT. However, the municipalities are free to decide if they put a technical head in their policy team or not.

   The ROT is located at a fire station in the city of Utrecht. The MPTs will be located at the municipality that is involved in a crisis. The RPT is located in the same building as the ROT when activated. In 2018 the SRU started experimenting with a mobile ROT unit, which enables the ROT to go to a place in the vicinity of the MPT of the municipality that is involved, reducing the physical distance between them.

3. *Authority/Choice rules*
   As is the same with the crisis plan of Groningen and Drenthe, the crisis plan of SRU also contains the authorities related to up and downscaling. The crisis plan of safety region Utrecht also mentions the authorization (and mandates) for the use of the alarming system (WAS), NL-ALERT, the emergency broadcast network RTV UTRECHT and the public information number.

   The crisis plan of SRU emphasises that the ROT is responsible for the coordination with the other parties involves and advising to the municipal and regional policy teams (*Regionaal Crisisplan Utrecht 2018-2020*, 2018, pp. 19-20). The ROT also informs and advises the proper authorities. The ROT formulates administrative strategic decision points for the mayor or HSR (*Regionaal Crisisplan Utrecht 2018-2020*, 2018, p. 20). The ROL is authorized to scale up to GRIP 3, after consultation with the mayor (unless the situation does not make consultation possible). The ROL decides when the ROT is operational. The ROL can be mandated by the commander of the fire brigade to activate the alarming sirens, but he or she may only do so after consultation with the mayor or HSR (*Operationele Regeling VRU na 3de wijzging DB*, 2018).

   The crisis plan of SRU puts the assignment of the administrative and final authority regarding incident and crisis management at the mayor or Head Safety region, and they have the decision making authority in respectively the municipal or regional policy teams. The crisis plan of SRU also mentions that the other advisors in the policy teams are not the point of contact for the operation, but only provide the mayor or HSR with strategic advice as a representative of their column.

During the interviews one ROL stated that guarding the quality of the advice was an authority of the mayor or HSR. The Technical Head interviewed confirmed this in ultimo case. However he stated that primarily in the RPT the technical head performs this task. Both ROLs and the Technical Head stated that the ROLs should determine whether or not an advice question from the mayor or HSR is appropriate. One ROL also stated that the process guardian should do this as well.

4. *Scope rules*

The crisis plan of SRU also mentions the criteria for up and down scaling. The crisis plan further mentions the criteria when administrative upscaling is necessary: this is the case when public unrest stretches beyond the scope of public order and safety and when multidisciplinary coordination is needed. This implicates that the scope of the policy team is broader than public order and safety.

The interviews indicate that the SRU does not impose any formal or informal limitations for the scope of strategic advice. However, as has been mentioned before, both ROLs and the Technical Head referred to the ten strategic families and administrative themes. One ROL mentioned that the advice is limited to the mayor roles, however this ROL also emphasised that there are no formal rules limiting the scope of the advice.

5. *Aggregation rules*

Both ROLs state that they consult with their ROT when developing their strategic advice. They also first contact the mayor or HSR for their advice needs. The Technical Heads also stressed that the ROLs need not wait for the formal PT meetings in order to give their advice to the mayor.

6. *Information rules*

The safety region uses LCMS to disseminate information. Both ROLs interviewed stated that they use their phones for advising.

7. *Payoff rules*

Besides the formal pay-off rules, there are no additional rules stated in the crisis plan or during the interviews.

Summarizing, the rules in use concerning strategic policy advising in Safety Region Utrecht reflect those of the act safety regions. The crisis plan primarily mentions position and authority rules related to certain positions or teams. It does regularly mention rules from the Act safety regions and the Directive Safety Regions. The crisis plan mentions almost no specific aggregation rules. What is significant for the Safety Region Utrecht is that they have added a technical head in the regional policy team in order to guard the process and the level of the topics discussed at the regional policy team. Since 2018 the region has adopted the ten strategic families and eight administrative themes as a checklist for strategic policy advising. In this manner the Safety Region Utrecht distinguishes itself from Safety Regions Groningen and Drenthe.

4.2.3. Do the institutional arrangements regarding SPA from the ROT to the PT differ between the regions?

Generally, all regions have put the formal law and regulations in their formal crisis plans. For example, all ROLs in the regions have to pass competence tests, the ROL course and examinations in order to become an ROL. All regions crisis plans describe the authority and criteria for up and down scaling, and in some cases the authority to use the alarming systems. Besides the formal rules, a couple of informal rules appeared to be similar as well. For example, all ROLs ask the mayors or HSR what they need from the ROT and all ROLs consult with their ROTs or supporting staff when developing their advice. And in all the studied regions, no specific pay off rules regarding strategic policy advising have been found, except for the formal accounting of the mayor or HSR regarding the municipality councils as stated in the act safety region. So where do the cases differ?

Safety Region Groningen can be regarded as a normal safety region according to the act safety regions. The ROLs interviewed stated that there are no specific rules regarding strategic policy advising. The crisis plan primarily mentions positions and authorities in a broad manner of speaking.

Safety Region Drenthe is a somewhat divergent, because they have deliberately deviated from the formal crisis management organization as stated in the ASR during acute crisis. According to the interviewed ROLs, safety region Drenthe has no specific rules regarding strategic policy advice either. However, the crisis plan of SRD does mention some rules that specifically describe the interaction between the operational and strategic level. These concern mostly specific

positions, authorities, scope, aggregation and information rules and describe who does what at which moment. The scope rules do not specifically mention what the advice should be about. The information rules have been developed to make the information lines as direct and short as possible, focussing on speed, reducing additional "noise" and physical distance. The crisis plan also allocates the guardian task to positions in the crisis teams. What is further specific for safety region Drenthe is their focus on the relationships of ROLs with the mayors of the region during their daily routines as a selection criteria for the ROL candidates.

Safety Region Utrecht crisis management organization can be regarded as a "standard" safety region like SRG. As is the same with SRG, the crisis plan focusses on positions and authorities, reflecting the ones stated in the formal law and regulations regarding the safety regions. In addition, the Safety Region Utrecht specifically addresses a process guardian position in the municipal policy teams and a technical head at the regional policy team. The SRU distinguishes itself from the other two regions because of the use of additional scope rules, the ten strategic families and eight administrative themes, as a checklist for strategic policy advising.

Table 8: Institutional typology of the safety regions studied

Safety Region	Institutional Typology
Safety Region Groningen	Standard Safety Region
Safety Region Drenthe	Focus on Interactions (specifically aggregation and information rules)
Safety Region Utrecht	Focus on Content (specifically authority and scope rules)

There were also some contradictious or ambiguous elements between actors in a region regarding their perception about the institutional context of that region. One example regarding the scope of advice has been mentioned before, about everything or only about public order and safety issues. Another example regards politics. In one region one ROL and one PA stated that the advice should also be explicitly about politically sensitive issues. Quoting the PA:

> "I do expect from my advisors that they are able to, that they have the political sensitivity to understand what such an advice does with me and which position they put me in with their advice"

While in the same region, the other ROL stated:

> "It should not be about politics. These elements must not be included. Mayors operate in a political context, and those considerations they can make themselves. Without prejudice that they have knowledge of that context, I do show understanding for that context, so it is not that I am unaware of it"

One could ask the questions, what is meant with politics and what does the PA expect from being politically sensitive?

As has been mentioned before, SRD and SRU have changed their institutional context in order to make a better fit with the context of crisis management. For example, some PAs would like the ROL to take a bit more freedom of action.

> "He <the OL> should follow his own advice. But give me the opportunity to intervene. I will be very expedient about it, because I don´t like to intervene. What he has to do, what all OLs have to do, is bring the incident to a good end"

Also the blurring of the levels, which has been mentioned in the literature reappeared during the interviews (strategic level, operational level), for example:

> "When you look at the theory regarding administrative dilemmas that need to be solved, the dilemmas very often have a very operational context"

And examples of (informal) rules that interdict with each other in practice. For example regarding the roles of the mayor:

> "What you see are issues that can be handled at the operational level, but when you get in your role as a public father, you get very close and involved in the incident and you are unable to duck away from it"

When the answers of the ROLs are being compared to the rules prescribed in the national institutional context, it appears that most elements stated in the national rules and regulations such as providing information about the incident, providing information about the relief work, prognoses, courses of action, the measures taken including their results, the developments and effects of the incident and the risks for the relief workers and the persons present in the affected area have, the incident response and the personnel and material needed for doing so, have been mentioned most. The aspects mentioned in the "*Basisboek regionale crisisbeheersing*" (Helsloot et al., 2010) which is not mandatory, has been mentioned less frequently. Also no ROL has stated that he uses the format provided by Helsloot et al. (2010).

What is interesting further is that the law and legislation do lack aspects that frequently have been mentioned by the interviewees, such as dilemmas. Although some aspects mentioned in the national institutions can be regarded as a dilemma, dilemmas have not been mentioned specifically in the national institutions. Hence there is also no definition of a strategic or administrative dilemma.

Summarizing, the interviews showed broadly speaking that the national institutional context and the organizational culture do not fit the crisis context. As a result some regions have undertaken changes in order to make their institutional context more congruent with the contextual needs of their region. The regions that have been studied differ from each other regarding the formal and informal rules they use. The most important elements have been put in Table 8. The interviews also revealed that actors from both levels have sometimes contradicting or ambiguous perceptions regarding the institutional context in their region.

4.3 Summarizing

This chapter provides the answer to the two descriptive research questions; are the perceptions regarding strategic policy advising of actors of PTs and ROTs congruent and do the institutional arrangements between the ROTs and (R)PTs of safety regions regarding strategic policy advising differ.

Regarding the congruence of perception the following has been found:

1. The persons interviewed have different perceptions about strategic policy advising;
2. The operational level shows a higher level of congruence in all regions than the strategic level;
3. The level of congruence between the operational and strategic level is in general lower than the level of congruence at the operational and strategic level, and the levels of congruence of perception between the regions at both the operational and strategic level differ from each other as well.

These results indicated that there are both regional and non-regional (but level) specific variables that influence the congruence of perception.

The following conclusions have been made regarding the differences in the use of institutions between the regions:

1. The rules that have been prescribed in the national laws and directives have been implemented in all regions that have been studied and are similar. Specifically regarding positions, authorities, boundary rules and pay-off rules such as the basic crisis management structure, up- and downscaling and public accountability. As a consequence, the crisis plans of the regions primarily focus on the rules that describe the action situations of the separate teams of the two levels. The rules that shape the interactions between the two levels (such as scope rules, aggregation rules and information rules) have been less formalized. Some interviewees appeared to be unaware of the rules that are in place, others stated that their region did not have any specific agreements regarding strategic policy advising. This study further showed that the less formal (written) documents regarding the interaction between the two teams, such as a standard report from the ROT to a PT, have not or only partially, been implemented in the regions.

2. The cases studied differ in how they have shaped their institutional context regarding strategic policy advising. Even within regions, there appear to be differences in the interaction between the MPTs and the ROTs. In this study the institutional regimes of the regions studied have been typified using latent, qualitative analysis as standard, focus on interactions and focus on content.
3. Institutional uncertainty characterizes the safety regions institutional context. This conclusion can be made by the concerns actors have stressed regarding the developments for more flexible institutional regimes, such as a more flexible GRIP-structure, and the shift to broader rules despite uncertainties regarding certain preconditions mentioned earlier. The institutional context is being discussed.

Chapter 5: Analysis regarding the Causal Questions

5.1 The influence of backgrounds on the congruence of perception regarding SPA

Looking at Table 6 a difference can be noticed between the two levels. The average level of congruence of perception regarding strategic policy advising at the operational level is higher than at the strategic level. This becomes clear from the averages of the level congruence by level, but the table also shows that this is the case in all regions that have been studied. This makes it reasonable to assume that level specific variables matter. The effect becomes even stronger after the correction with the SRU. However, because SRU also uses additional scope rules, one cannot conclude that this effect is a result of an actor´s background. Because this difference is also visible in the SRG, which has fewer specific rules regarding strategic policy advising, it is reasonable to assume that actors´ backgrounds do influence the level of congruence regarding strategic policy advising.

Indications of the influence of backgrounds can also be seen when looking at the different scores between the regions at the operational and the strategic level (Table 3 and Table 4). Looking at Table 4, Table 4: SRD scores a higher level of congruence at the strategic level on all aspects of perception. The institutional context could not explain these regional differences because of two reasons. First, in SRD two actors have been interviewed with similar occupations (mayor) that were both unaware of any specific regional rules regarding strategic policy advising. In the other regions, actors with slightly different occupations have been interviewed (mayor, deputy mayor, municipal secretary, director safety region). In SRU one actor at the strategic level declared that he was unaware of any specific rules in use in the region regarding strategic policy advising, which neutralizes the effect of institutions because one must be aware of rules in order to follow them. Second, institutions could not explain the lower level of congruence of perception in SRG compared to SRD at the strategic level. The two actors interviewed from SRG both worked in the same municipality and thus act under the same institutional regime. However, they have different occupational backgrounds.

A similar effect can be seen at the operational level in Table 3. In SRG and SRD all interviewed actors had an operational background as a firefighter. However, the ROLs interviewed in SRU had different operational backgrounds (police vs fire fighter/administrative). These differences in background might explain why the level of congruence is lower in SRU, despite the rules in use. The reason why the level of congruence rises after the correction is because the actors interviewed at the strategic level have the same background (firefighter/administrative) as one of the ROLs. Rules cannot explain this effect, because the institutional context in the region stays the same. When looking at the effects of the correction at the operational level more in detail, one can find that the most important results that are influenced by this correction are the objectives and interests. These elements are harder to capture in rules, because they are more related to what needs to be achieved with an advice and why (which is more subjective to the actors opinion) rather than what an advice is or should be about, which is easier to capture objectively in a rule. The reason why the score at the elements interests and costs of SRU at the operational level after correction is somewhat lower than SRD, is because the actor from the strategic level of the SRU with an operational background mentioned some additional elements that have not been mentioned by the other two ROLs of the SRU, but have been mentioned by the other actor at the strategic level such as dilemmas, reassuring the community and community trust. In other words, the strategic background of this actor influences the congruence of the actors with operational background in SRU after correction negatively, because this actor has more strategic experience.

In section 1.3 it has been mentioned that a causal relation must fulfil three criteria, correlation, time order and non-spuriousness. The table and previous section thus show the covariation. However, the time-order and no spuriousness cannot be derived from the numbers but must be derived from the interviews. The following quotes indicate there is indeed a relation between actors operational or administrative background that meet the three criteria for a causal relation.

> "It has also to do with the fact that operational leaders come from a sort of administrative reality of the ROT, which is not right, but that is how it is… It also has to do with the culture, a kind of fire fighters culture like we will fix this problem, rather than looking at the real issue beyond the problem"

> "Mayors are administrators. They are mostly not crisis managers. So they do what they think they should do and use their administrative gene. This has a positive side, because they recognize very well what aspects are administrative and politically sensitive"

> "I very often notice that the relief organizations have a focus on the operation. And that is what I think should be the translation from the tactical operational level to the strategic level. You hope that people are able to broaden their mind-set a bit, because if not, you don´t get to the strategic decisions but you stay at the level of passing over operational decisions"

> "Because I think that the operational organizations very often use a better safe than sorry mode. They prefer more measures in order to prevent any risks. But the question is: how many more? When do you act responsibly enough?"

> "The question is whether or not the mayor has been trained adequately and if we can get him at a proper level for managing a crisis. I think that they very often think that they are managing a crisis, but they are not thinking about the long term"

In short, based on an analysis of the coded data derived from the interviews one can reasonably conclude that a relation exists regarding the congruence of actors' backgrounds and their congruence of the perception regarding strategic policy advising. A latent analysis of the transcribed interviews show that backgrounds do influence an actor's perspective regarding strategic policy advising.

5.2 The influence of institutional arrangements on the congruence of perception regarding SPA

The third conclusion made in section 4.1 is that there are differences in the levels of congruence between the regions at both the operational and strategic level (see Table 6). The regions also differ in the level of congruence of perception between the two levels. This implies that there are regional specific variables that influence the level of congruence regarding strategic policy advising. The question is thus if institutional differences between the regions can explain these differences.

The first indicator showing indications that positively acknowledges this hypothesis can be found when we look at the level of congruence at the operational level (Table 3). SRD scores the highest level of congruence at the operational level. The results from SGR and SRU appear to show a contradicting effect. However, one must also account for the fact that the ROLs interviewed at the operational level of the SRU had different backgrounds. After correction, which increases the level of congruence of operational backgrounds for SRU, the SRU scores higher than SRG (Table 3). In other words, the regions that have specified additional rules regarding strategic policy advising show a higher level of congruence than the region that has not. This indicates that rules do have a positive effect.

The second indicator can be found in Table 5. When looking at the congruence between the two levels, the SRU scores the highest on all aspects of perspectives. Both SRU and SRD score high on the aspect what strategic policy issues are, what objectives it should achieve and what interests it should pursue. But the SRU also scores higher on the aspect Elements. This can be explained with the differences in focus on information and aggregation (SRD) or scope rules (SRU).

In Table 5 there is one result that appears to be divergent: the high score of SRG regarding the elements of what should be mentioned in a strategic policy advice. This score also influences the overall mean score of that region compared to the other regions. One explanation for this is that at the time of the interview, the actors interviewed of both the strategic and operational level had specifically trained with each other in the period before the interviews because of King´s day. This explanation also indicates a positive relation between institutions and congruence of perception as well, because during training arrangements will be made of how operations will be handled, resulting in additional (unwritten) rules and institutionalism.

The tables do show a covariation between the different use of institutions and the level of congruence between the levels and within the operational level. In the previous section it has already been argued that institutions seem to have no influence at the strategic levels and that the reason why SRD scores higher could be explained because these actors interviewed at this level in this region had similar backgrounds.

The next question is if the causal relation also meets the time-order and non-spuriousness criteria. Again, this will be studied by looking at the interviews in more detail.

The interviewees were asked what they thought about the effectiveness and need of some specific rules. The answers showed a mixed picture regarding the effectiveness of different rules.

One rule that seems to have a positive effect is the earlier mentioned boundary rule used in SRD for selecting ROLs based on their relation with public administrators during their daily jobs. But other things have been mentioned as well.

A ROL talking about the use of checklists regarding strategic policy advising:

> "It thus functions like a sort of checklist, such as: is this a case in which emergency warrants can come at the table. Even if the mayor doesn´t ask for it, I can already prepare these at the ROT and get them ready in in advance."

And an actor from the strategic level regarding the use of rules for strategic policy advising,

> "I don´t believe in templates for everything. When someone needs a protocol in order to get things done in the Regional Policy Team, he is not suitable for the job in my eyes. I do believe in a list on a piece of paper. When you don´t use such checklists, it will go wrong. So I do believe in checklists, but I don´t believe in lists to lead"

Another quote illustrating the positive effect rules can have:

> "Protocols, you never follow protocols. De ROL doesn´t, the people at the COPI don´t. You will let yourself be guided by the situation at that time. And that is understandable, because it is the right thing to do. And then it appears that protocols do have elements you use, because you will follow the protocols of a similar training like a sort of automatic pilot"

This quote illustrates that rules should match the specific context. And it shows that when rules are constantly being used being applied and reaffirmed, they become part of the culture.

A specific example of a rule that has been introduced to control the interaction between the two levels has been the use of a Technical Head next to the mayor or the Head Safety Region. When asking an actor at the strategic level from SRU why a Technical Head was necessary, the response was:

> "Sometimes the RPT needs help. Because I think the policy team has a tendency to interfere with the operation. Why? Maybe because they are not being informed in the right way? Or maybe because it comes naturally, instead of keep working on the strategic issues at hand. One is very inclined to keep oneself concerned about the here and now, whereas a public administrator should look ahead in time"

The added value of a Technical Head is reaffirmed by another actor from the strategic level:

> "In that case the OL and I collided. We just weren´t talking with each other on the same frequency and we didn´t notice it. If a Technical Head had been present, then he might have noticed it, allowing me to keep myself busy with the actual things that needed to be done. It might have gone more smoothly."

This is a typical example of a "dialogue of the deaf" mentioned earlier. Also actors from other regions acknowledged the need of a process guard:

> "When someone is less dominant, he can still have a very meaningful input. So what can I do to let him bring forward his input? When all things go according to plan, the head will see to it, but the head is under a lot of pressure due to all things that are happening. I think that in such a situation, as an advisor next to the head, I must say to the head that he must let that person speak, because he might have something to add"

However, one actor from the operational level had some mixed feelings about extra positions guarding the process, next to the mayor or the Head Safety Regions. According to that actor, it also depends on personal characteristics and the arrangements made about these roles.

Another example showed that the current tendency to make things more flexible also has a downside. Quoting an actor from the strategic level about a situation that occurred during a GRIP 3 incident using a flexible manner for upscaling:

> "At that time, there was confusion about who was at the table in what role. I was a big supporter for flexible upscaling, but since then I doubt its usefulness"

Apparently, making things more flexible also increases the institutional uncertainty of actors.

As has been mentioned earlier, the opinions regarding the use of institutions have been mixed. When interviewees had reservations, these reservations mostly regarded an institutional misfit. For example how the institutions of the different levels are tuned onto each other:

> "They also have a standard agenda at their level. However, we need to get the agendas of both levels aligned better"

Or regarding the usefulness of rules such as protocols regarding personal characteristics:

> "Every mayor is different, has other focusses, other intentions. This means that there is no blueprint for policy advising that fits all situations. It is calling the mayor immediately, informing him about what you know, asking him what he wants, what he needs help with and how you can support him."

Or how the national institutions fit the crisis management context regarding the time aspects of crisis, the allocation of authorities to different levels and the need for flexibility:

> "The idea that you can give direction based on information, and hence can decide based on information, is completely outdated."

> "You need to give people freedom to make decisions at that moment. And when the tempo is high, you can´t expect decisions to be handed back… This implies that more mandates need to be put lower in the chain of command, and see to it that there is enough craftsmanship at that level to do that right"

> "We are in the process of making crisis management more flexible. This includes mental flexibility. To come loose from protocols, from predetermined meetings of sorts"

The quotes above thus show a misfit between the rules in use and crisis management. For example regarding the "meeting culture" versus the perspective of an actor from the strategic level of how a regional policy team should be lead.

> "It is also a culture; we turn to our daily meeting patterns during a crisis, although this just doesn´t fit… There is too much talking, not to the point, main issues and side issues are not being filtered, that is not right … being nice to each other. It starts with an introduction round, no I don't want to know what your name is, I want to know what you do"

The literature showed that institutions need to be developed, be argued, contested and reaffirmed, or else would be dismissed. This requires frequent interaction, which is also a characteristic of network organization. However, the following quotes show a misfit concerning the use of networks in the institutional context of crisis management.

> "A team operates best when the receiver tells how much he would like to receive and the supplier is able to join in line and deliver, resulting in a discussion how to do this in the best possible manner. Well, this hardly ever happens. In my opinion that is the biggest problem in this world. Only once or twice, a crisis happens and then it is the question of how you are going to get used to each other. And then you will notice that it matters who takes part in the team in which you operate."

> "I would like to have a conversation with such a public administrator sometimes after a crisis. Reflecting on the previous action and how he experienced it. But those people are often too busy and don´t have the time to do so. You could say that this has something to do with trust. We trust that things have gone all right. But I would appreciate it when we could brainstorm every now and then with that level. In earlier times this sometimes happened, but that didn´t result in any fixed structure"

Another way to show that institutions do matter is looking at how institutions influence the strategies actors use in order to come to the desired objective. As has been argued during the literature study, perceptions influence the strategies actors use, and institutions influence these relations. The following quotes show that this is also the case in the interaction regarding the strategic and operational level. For example, the need for extra control measures:

> "I will take strategic policy advises from mister A, whom I have known for years, more seriously than from mister X whom I have met only once in forty years. Once in my lifetime. That makes a difference as to what strategic policy advice is and when. In both cases it is important. But the first one I trust right away and he doesn´t need to put that much on paper. While from the latter one I expect a thorough strategic advice. So I know if I can trust and rely on him."

Or avoidance strategies in order to avoid conflict:

> "Some mayors don´t let themselves be guided. This implies that you should overload them with operational information, because if not, they will become very nervous. With other mayors you just want to make sure that they will not be confronted with surprise in the end. They trust you. But you need to give them that assurance, and you need to have that, so that you are not going to surprise them. And the relation in the day to day business helps to do so"

> "When a mayor is very specific in his directions, then I will pass that to my team, and we will adapt. In such a case he can say how he wants it… And I don´t want to make a brawl about it. That is to no use at all. Just go along, we will do it his way"

These quotes show the asymmetric power relationship between the ROL and the mayor. The question is if these measures taken or the chosen problem solving strategies used are appropriate. And subsequently would institutions prevent unappropriated strategies.

5.3 Summarizing the causal relations

Summarizing, the data from the interviews show observable differences in the levels of congruence between the regions at both the operational and strategic level (see Table 6) and between the levels. This implies that there are level and regionally specific variables that influence the level of congruence regarding strategic policy advising. Based on the results and analysis, the following conclusion can be made regarding the causal relations:

1. A positive relation exists regarding the congruence of an actors' backgrounds and their congruence of perception regarding strategic policy advising. The answers of the interviewees indicate that backgrounds do determine an actor's perspective regarding strategic policy advising.
2. The regions with additional institutional arrangements regarding strategic policy advising score higher levels of congruence of perception regarding strategic policy advising than the region that has not. Especially on the aspects: what are strategic policy issues, what objectives should it achieve and what interests should it take into account (see Table 5). Also the regions that have additional agreements show a higher level of congruence of perception at the operational level, with the remark that this applies only when the data of the SRU has been correction for the background of one actor. The answers given by actors regarding the effectiveness of specific rules regarding strategic policy advising, showed that rules can have a positive effect, but only when they fit the crisis management context.

The crisis management context mentioned in conclusion 2 is being characterized by differences in people characters, the way in which the rules of the different levels have been attuned and the characteristics of a crisis in relation to the institutional context, specifically the urgent need for action and high levels of uncertainty. The urgent need for action requires fast decision making, but the national institutional context inhibits an allocation of authorities over multiple levels which implies a delay in the decision making process. The high levels of uncertainty not only involve uncertainty regarding what has happened and what might happen, but the different perception of actors at the different levels regarding strategic policy advice show that these actors have a different interpretation about which interests are at stake and what they expect from each other. In short, besides substantive uncertainty there is also institutional uncertainty, resulting in dialogues of the deaf and strategies such as go along, or overloading decision makers with information. The current tendency to make things more flexible makes this institutional uncertainty even bigger.

From a theoretical perspective, a misfit can be observed regarding the manner in which the safety regions have been organized. The safety regions can be seen as network organizations, but during a crisis also as a hierarchy. Networks require frequent interactions so that institutionalism can develop, resulting in a macro culture. Hierarchies require stable interactions. These elements appear to be missing in the institutional context of the safety regions. The strategic levels of a municipality and the operational level of a safety region only train once or twice a year with each other. During these trainings, only one or two of the ROLs of the safety region will participate (most regions that have been studied have 3-5 ROLs) and the mayor or a deputy mayor will participate. No wonder that a high level of substantive, institutional and strategic uncertainty will remain. By reducing the institutional uncertainty, the strategic uncertainty can be reduced as well, provided that the institutions are known and confirmed by all actors on both levels.

Chapter 6: Conclusions, Recommendations & Discussion

6.1 Conclusions

In this chapter the most important conclusions will be mentioned. Subsequently, based on these conclusions recommendations will be given that can be used to make the strategic policy advising from the operational level to the strategic level more effective. Finally, some issues will be discussed that came up during this research.

6.2.1. Are the perceptions regarding Strategic Policy Advising of Actors of PTs and ROTs congruent?

Based on an analysis of transcribed interviews held with actors from the strategic level and operational leaders from different safety regions, three conclusions have been drawn regarding the congruence of perceptions actors of the PTs and ROTs regarding strategic policy advising:

1. In all regions studied the ROLs show a higher level of congruence on their perception of strategic policy advising than the actors interviewed from the strategic level. This means that at the operational level, actors have a more similar perception about strategic policy advising than the actors at the strategic level.
2. The level of congruence between the operational and strategic level is in general lower than the level of congruence at the operational and strategic level. This means that there are noticeable differences in what actors at the operational level perceive as strategic policy advice compared to their counterparts at the strategic level.
3. The levels of congruence of perception at both the operational and strategic level differ between the regions. Also the regions score differently on the separate elements of the construct of strategic policy advice. This means that there are regional differences in what the actors at the strategic and operational level perceive as strategic.

Conclusion 1 and 2 imply that there are non-regional variables that explain these differences between the levels. However, conclusion 3 implies that there are also regionally specific variables that influence the congruence of perception that explain the different scores between the regions.

6.2.2. Do the institutional arrangements between the ROTs and (R)PTs of Safety Regions regarding Strategic Policy Advising differ?

In this study a number of conclusions can be drawn about the institutional arrangements between the ROTs and (R)PTs of specific safety regions regarding strategic policy advising.

4. The rules that have been prescribed in the national laws and directives have been implemented in all regions that have been studied and are similar. Specifically regarding positions, authorities, boundary rules and pay-off rules such as the basic crisis management structure, up- and downscaling and public accountability. As a consequence, just as the institutions mentioned in the formal national documents, the crisis plans of the regions primarily focus on the rules that describe the action situations of the separate teams of the two levels. The rules that shape the interactions between the two levels (such as scope rules, aggregation rules and information rules) have been less formalized. Some interviewees appeared to be unaware of the rules that are in place, other stated that their region did not have any specific agreements regarding strategic policy advising. This study further showed that the less formal (written) documents regarding the interaction between the two teams, such as a standard report from the ROT to a PT, have not or only partially, been implemented in the regions.
5. The cases studied differ in how they have shaped their institutional context regarding strategic policy advising. Even within regions, there appear to be differences in the interaction between the MPTs and the ROTs. In this study the institutional regimes of the regions studied have been typified using latent, qualitative analysis as standard, focus on interactions and focus on content.
6. Institutional uncertainty characterizes the safety regions institutional context. This conclusion can be made by the concerns actors have stressed regarding the developments for more flexible institutional regimes, such as a more flexible GRIP-structure, and the shift to broader rules despite uncertainties regarding certain preconditions mentioned earlier. The institutional context is being discussed.

6.2.3. Do different backgrounds of actors in a PT and ROT influence the level of congruence of perception regarding Strategic Policy Advising from a ROT to a PT?

The conclusion of this question has been given in section 5.3. Based on an analysis of the coded data derived from the interviews one can reasonably conclude that a positive covariation exists regarding the congruence of actors' backgrounds and their congruence of the perception regarding strategic policy advising. A latent analysis of the transcribed interviews showed that backgrounds do determine an actor's perspective regarding strategic policy advising. This leads to the following conclusion:

7. Different backgrounds (operational or administrative) of actors explain the different scores of the level of congruence of perception of strategic policy advising both between the levels, but also the different scores of the levels between the regions.

6.2.4. Do institutional arrangements regarding strategic policy advising influence the level of congruence of perception regarding strategic policy advising of the actors involved?

In section 5.4 conclusions have been made regarding the influence institutional arrangements regarding strategic policy advising on the level of congruence of perception about strategic policy advising.

The relation between using specific institutional arrangements regarding strategic policy advising and the level of congruence of perception about strategic policy advising has been derived from the analysis of the coded data regarding the congruence of perception. The conclusion was:

8. The regions with additional institutional arrangements regarding strategic policy advising score a higher level of congruence of perception regarding strategic policy advising than the region that has fewer institutions implemented. Especially on the aspects: what are strategic policy issues, what objectives should it achieve and what interests should it take into account (see Table 5). Also the regions that have additional agreements show a higher level of congruence of perception at the operational level, with the remark that this applies only when the data of the SRU has been corrected for the background of one actor.

The time-order and non-spuriousness criteria have been analysed with a qualitative, latent study of the interviews. From this analysis the following has been concluded.

9. Rules can have a positive effect on strategic policy advising, but only when they fit the crisis management context. This conclusion has been based on the answers given by actors regarding the effectiveness of specific rules regarding strategic policy advising. This context is being characterized by differences in people's characters, the characteristics of a crisis in relation to the institutional context (specifically the urgent need for action and high levels of uncertainty) and how the rules of the different levels have been attuned.

6.2.5 Do different backgrounds of actors in a PT and a ROT, and institutional arrangements regarding strategic policy advising in a safety region, influence the congruence of perception of these actors regarding strategic policy advising from a ROT to a PT?

By answering the specific research question the main research question can be answered. The main research question actually contains two parts:

10. *Do different backgrounds of actors in a PT and a ROT influence the level congruence of perceptions regarding strategic policy advising from a ROT to a PT?"*
    The answer to this question is yes. There is a relation between the level of congruence of perception regarding strategic policy advising and the operational or administrative background of the actors. This conclusion is important, because it explains typical problems that occur in the safety region, such as dialogues of the deaf, the search for more information, the feeling that the operational level does not know what the strategic level needs and the feeling that the operational levels do not know what the strategic level needs. Actors with an administrative background have different perceptions of what a strategic policy advice should be about, what

interests it should pursue, what it should achieve and what is should look like, compared to the operational leaders. The importance of this conclusion is that backgrounds are hard to change. A person's background defines who a person is and how he perceives the world. It takes time to change this.

11. *Do institutional arrangements regarding strategic policy advising in a safety region influence the congruence of perception of these actors regarding strategic policy advising from a ROT to a PT?"*
   The answer to this question is also yes. Institutional arrangements regarding strategic policy advising do influence the level of congruence of perception regarding strategic policy advising. However, different rules have different effects on aspects of perceptions. Whereas both the focus on content and interaction have a positive effect on what a strategic policy advice should be about, what interests it should pursue, what it should achieve, the focus on content also has a positive effect on what elements it should contain. This conclusion is important because rules are easier to construct and can be regarded as an act of leadership. The process to develop these institutions contributes to the exchange and securing of interests and objectives. The real challenge concerning institutions is that they constantly need to be acknowledged, discussed and reaffirmed or rejected in order to become part of the macro culture of the networks. That this takes time is the main problem when interactions between the actors that it concerns are limited as is the case in the safety region.

6.2 Recommendations

Apparently, when you ask 12 different persons what strategic policy advising is, you will get 13 different answers. One interviewee put it like this:

> "I think you ask the right question: why is something strategic? The big problem in the world of crisis management is, what one perceives as operational, the other perceives as very strategic. And this is being influenced by a lot of factors; you will never know it exactly."

This research identified two factors that influence the perception of actors regarding strategic policy advising. And based in these conclusions, recommendations can be made aimed at making strategic policy advising more effective. These recommendations are as follows:

1. The safety regions should develop arrangements that shape the strategic policy advising of the operational team to the mayor or head of safety region. Describing the institutions for the separate teams is not enough; the interactions between the teams need to be developed as well and they require equal attention. The IAD framework can be used to specify additional institutional arrangements. Specific attention should be paid to the characteristics of a crisis and the regional characteristics when developing these rules in order to be effective. Detailed protocols do not work. Rules that facilitate interactions, such as checklists as reminder with themes or elements do. As well as guidelines about how and when information will be shared.
2. Arrangements regarding strategic policy advising must be developed with actors from the strategic level (such as mayors or deputy mayors) and the operational leaders in order to be effective. The process of developing these rules can be used to exchange perceptions and discuss what strategic policy advising is, what interests it should produce, what objectives it should achieve, what elements it should contain and what the costs are that need to be avoided. By developing arrangements (institutions), institutional uncertainty will be reduced, which also reduces the influence of the different backgrounds of actors regarding their perception of strategic policy advising. Furthermore, making rules more explicit implies thinking deliberately about them. Constructing and discussing rules contributes to the congruence of perception regarding the objectives and interests, elements and costs.
3. Arrangements regarding strategic policy advising must be known by all actors that have to deal with strategic policy advising. This implies that these arrangements should also be acknowledged by all actors from the different regional or municipal policy teams. In other words, the safety region and the different municipality teams that form a safety region must have a common understanding of what strategic policy advising is and what agreements are in place regarding strategic policy advising in the region. This would reduce the institutional uncertainty that seems to be institutionalized in the current national legal documents. In an ideal world both the actors from the operational level and of the strategic level (including the mayors, their deputies and the process guardians) have followed the same education or course in which a common understanding can be created

regarding strategic policy advising. Thus it would be recommendable to make a basic crisis management course mandatory for mayors and their deputies alike, as it is for the ROLs.

4. Process guardians of the different regional, municipal and operational teams should be aware of the rules that apply in the region regarding strategic policy advising and guard them during crises and training sessions. This is important because rules need to be confirmed and discussed. Another reason why process guardians are important is because interviewees showed that public administrators at the strategic level have limited opportunities to train. Because of this, the question arises if a decision maker, such as the mayor, is able to control the process adequately. The only thing he can rely on is his background, and this research showed that this results in incongruence of perception with the actors with an operational background. And due to the unequal power relation towards the ROL, this might enhance group thinking and blind spots. In this manner rules need and can be regarded as a form of leadership.

5. Strategic policy advice should be an important element in the evaluations after a training session or after an actual crisis by actors from both levels. Rules can only be sustained when they are constantly being discussed and developed in order to fit the specific context. Therefore it is important that the lessons learned should be stored in the institutions that have been developing in order to safe best practices. By saving them, you are also able to deliberately change them if necessary.

6. The confirmation and discussing of rules requires frequent interactions, which must be facilitated. However, at the moment municipal policy teams only train once or twice a year for a day or a half. A head of a policy team, such as a mayor when he is able to participate, only meets one or two of the ROLs of the safety region during that moment. Most often, these exercises only regard one type of crisis, apart from the question if strategic policy advising will take place during the exercise at all. The following quote is very typical for the interviews that have been held, because this was a reoccurring topic:

> "I have dealt with a couple of incidents, and it depends on the operational leader. Or rather the interaction between the operational leader and the mayor. Sometimes you find each other very quickly; sometimes it takes a bit longer to get a meaningful conversation. Very often it is the first time you will meet. And people have their own characteristics, and they have their own opinions about how things should work"

One mayor interviewed for this research recommended to perform more table top exercises in which multiple mayors, or deputies, of the region would participate together with the ROLs of that safety region. During these table tops, strategic policy issues could be discussed, the mayors could point out their needs and the operational leaders could share the advice they would give in such a situation. In this manner perceptions regarding strategic policy issues can be shared and become more congruent. And most importantly, it allows the actors involved to meet and get to know each other.

6.3 Discussion

> "Yeah, it is fun, talking about strategy. But I do think people really exaggerate it"

This section will conclude this thesis and will discuss some topics using three themes. First, I will discuss issues regarding the theories that have been used which formed the theoretical framework for this research. Second, the research methodology will be discussed. And third the issues will be mentioned that popped up when putting the research strategy and methodology into practice.

6.3.1 Discussing the theoretical framework

In this research three sorts of theories have been used: crisis management, networks and institutions. I will reflect on this per theory.

Reoccurring themes in crisis management are the "organizational paradox" and the "centralization paradox". The conclusion regarding the organizational paradox was that there can be an institutional fit, but only when crisis managers can get the mix right between hierarchal, formalized efforts and organizational procedures to supplement interpersonal skills and their modes of governance and to shape collaboration. This research showed that institutions can have positive effects on the effectiveness of crisis management organizations. Looking at the cases studied, institutions that focus on the

rules that facilitate interactions, rather than prescribing interactions, and institutions that describe the content of those interactions instead of determining what needs to be done precisely, can work. Rules that specifically describe procedures that have to be followed or protocols that have to be followed in order to generate a product will produce inflexibility resulting in loss of tempo and resistance. Checklists do work, because they do not determine interaction, but act as a reminder of what could be done. This is an essential difference.

The centralization paradox, or the call for a strong leader, has made room for networked organizations due to various reasons. One ROL interviewed put it like this:

> "The idea that the government has the ability to control what is happening in the field, based on decisions made and directions being executed, it just doesn´t work…. Things are happening here that are different from how you wish things to be happening. This means that you have to change the manners of how you get things done in order to organise the work together"

However, as has already been mentioned, networks characteristics sometimes conflict with the need to deliver a rapid, coordinated crisis response (Moynihan, 2008a, p. 210). The Dutch crisis management organization merged the centralization theories with these network theories, but by doing so revealed a third paradox: the network paradox. The main problem regarding centralization (or hierarchies) and networks is that these theories rely on subsequently stable contacts or frequent interactions. However, the manner in which the Dutch Crisis Management organization has been organised is neither stable, nor are there frequent interactions between the actors because both trainings and actual crises do not happen that often (luckily). But that is also why institutionalization does not take place, or only partly. This results in a high level of institutional uncertainties, substantive uncertainties (because of different perceptions) and gaming uncertainties. Additional research will be required to solve these issues.

The other aspect regarding crisis management theories is the question of what strategic or operational is. This research does not provide an answer what strategic policy advising actually is or should be in the context of the Dutch crisis management organization. These answers are outside the scope of the research question. Determining what strategic policy advising is requires a broad analysis what it should be, and it requires validation in practice. The literature study showed that there are different manners to determine what strategic or operational is. In addition, the formal and informal documents are ambiguous about strategic policy issues and lack aspects that frequently have been mentioned by the interviewees such as dilemmas (although some aspects mentioned in the national institutions can be regarded as a dilemma, dilemmas have not been mentioned specifically). This ambiguity results in different perspectives of what strategy is and how strategic policy advice should be given in the context of the Dutch Crisis Management Organization. By defining what strategic is in actual terms, rather than broad terms, people will start to speak the same language. For example, based on the interviews all interviewees stated that a dilemma is in fact a contradicting interest. This can be regarding safety (life or death), economic costs, environmental costs, legal (criminal or constitutional), privacy, safety or freedom. It will also be easier to mandate decisions. Furthermore it reduces substantive and institutional uncertainty. By defining the strategic level in a hierarchical manner (such as the authority to issue emergency warrants), a better distinction can be made than using a functional approach (such as long-term decisions). Decisions that should have been made at the strategic level, but have been made at the operational level due to time constraints are in the hierarchical geographic perspective still strategic decisions, and thus should be ratified by the strategic level. These decisions can be mandated beforehand to the operational level. The functional approach, in which "strategic decisions" can be made at the operational level, only results in blurring of the levels, enhancing confusions and uncertainty who is authorized to take what decisions. This does not mean that decisions taken at the operational level cannot have serious effects on the decision making process at the strategic level. What is strategic in the Dutch crisis management context, and which tasks are suitable to be mandated under which conditions, can be a subject for future research. It is recommended to include these results in the formal rules and legislatives, as these are being adopted in the protocols and procedures (such as the crisis plans) of the safety regions.

The other theories that have been used are institutional theories, specifically the IAD framework. The IAD framework has been used to study the interaction between two action situations: the ROT and the Policy Teams. However, as has been mentioned in section 2.4.3, the IAD framework´s main unit of analysis concerns only one action situation. The literature regarding Networks of Adjacent Action Situation (NAAS) as M. D. McGinnis (2011, p. 52) called it, appears to be limited. One could argue that this is a shortfall in the theoretical framework that supports this study. However, typical difficulties mentioned by Klijn and Koppenjan (2004, pp. 88-89) regarding decision making in different arenas that are also linked to

different networks, such as dealing with actors who have different perspectives and who consider different rules as correct and valid, have all showed up in the cases studied. Also the conclusion of Emerson et al. (2012), that procedural and institutional arrangements must be defined at both the intra organizational level and at the inter organizational level, is in line with the findings of this study. A challenge encountered during this research was that the national institutional context and the crisis plans of the regions studied mainly regard the rules of the teams themselves. The rules regarding the interactions between the teams have been given less attention in these documents. This makes it harder to study the rules in use regarding strategic policy advising because of several reasons. First of all, the documents describe rules not only by positions or actors, but also by the teams (or action situations), such as the scope or authority rules of a ROT instead of a ROL. However, the scope rules of a specific actor in a team can be different from the scope rules that apply to the team as a whole. Second, the rules that describe the interaction between the teams, or actors that form the bridge between the teams, are often put in the rulesets that describe a specific team. For example, all crisis plans studied described the position of the operational leader and his authority to provide advice to the mayor or head safety region in the paragraph of the ROT. This makes it harder to determine which rules define solely the authorities and rules of the ROL or the ROT and which rules define the interactions between the teams. This is the reason why in this study, only latent coding has been used. It is advisable to describe the interactions between the teams explicitly. It also became clear that the actors who do operate in multiple teams such as an operational leader, are subjected to multiple rule regimes coupled to their positions in those different action situations. This means that he must be aware of these differences. It also follows that if one person acts in two action situations, he must meet the boundary criteria of both situations. For example, a ROL must be selected on the boundary rules that apply to his role in the regional operational team, but also to his role in the ROT. The same applies for the head of a policy team (a mayor or a head safety region). Also the mayor or HSR must be selected not on his role as a public administrator, but as a crisis manager. This is especially relevant because people's backgrounds do influence someone's perception, but the perceptions are hard to change. One interviewed PA put it like this:

> "You <a mayor or deputy mayor> find yourself in a totally different chain of command. And you are ultimately responsible for decisions that can be about life and death. Not everyone is used to that. In fact, it would be strange if you are used to that. But not everybody is able to cope with that or is suitable for that the job. I think people really underestimate this"

Based on the insights gained by this study, the following model has been developed how NAAS can be linked institutionally (see Figure 9):

1. By means of developing institutional rules regarding the facilitation of interactions between the NAAS. Such as the sharing or exchanging of output and information standards and procedures. In this manner, no specific person has to be appointed, but the institutions of the action situations must be aligned;
2. By letting representatives of one action situation (A), participate in the other action situation (B). The institutional rules regarding this representative must be included in the institutional context of both action situations. And the representative must know the rules in use in both action situations and especially be aware of the differences;
3. By creating a third action situation in which the interactions take place, using an own set of institutional rules, in alignment with action situation A and B. This option looks like the management structure of what (Provan & Kenis, 2008) call a Network Administrative Organization (NOA). According to (Provan & Kenis, 2008) a NOA addresses specific network tensions, because it favours efficiency, stability and can cope with tensions regarding legitimacy better.

These models do not exclude the option that multiple models can be used simultaneously. The safety regions seem to combine all three models;, model one when you regard for example the information management and communication line, model two when you only regard the ROT and the PT and model three when you also take into account the networks of the different actors of a ROT and a PT regarding their own organization. What model is most efficient depends on the specific context in which the action situation operates. This fits the notion that social practices and interactions are supported by overlapping rules (see section 2.3.2.). Contingency theories could possible provide additional insights in which rules configurations fits the crisis management context best. However, this fell beyond the scope of this research, but it can be a topic for a follow up research.

Another aspect that has been given less attention in this research but forms an important element in the IAD framework are the problem solving strategies of the actors involved. Although some of these strategies have been observed during the

interviews (see the final quotes mentioned in section 5.2), these strategies were not the central element in this research. This is because these strategies are determined by the perceptions of the actors involved. Because perceptions formed the dependant variable of this study, the problem solving strategies fell outside the scope of this research. Because some strategies can be regarded as appropriate or inappropriate, it would be a good topic for future research to gain an insight in the strategies the heads of a PT and ROLs use during their problem solving games, how these strategies influence the outcomes of events and subsequently change the perception of actors and in turn the institutional context.
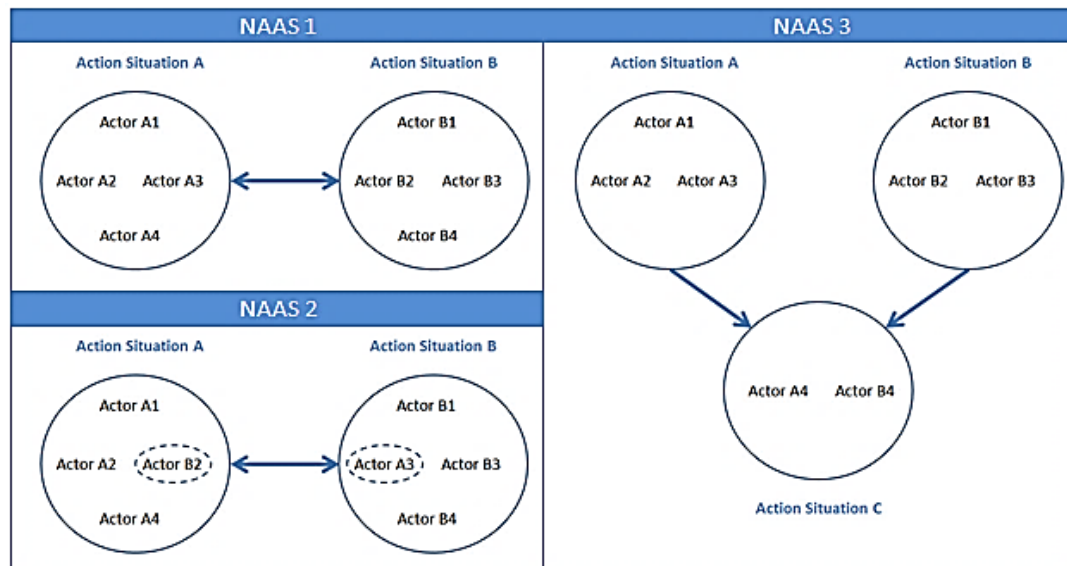
Figure 9: Three institutional models for facilitating interactions between NAAS

In line with this, another interesting topic for follow up research can be to study how the action situations, or in this case the interaction between the strategic and operational level has changed over time. Ostrom (2011, p. 11) explains that there are two additional steps an analyst can take after gaining an initial understanding of the structure of an action situation. The first steps concern a study to the factors that affect the structure of the situation. Only the first step has been taken in this research. Deepening this step could provide insight in the influence of regional characteristics of the different safety regions on the perceptions and rules in use regarding SPA. The second step explores how the action situation changes over time because of changes in perceptions and strategies due to previous experiences and outcomes. That second step could possibly identify the structural institutional misfits that cause institutional changes by the safety regions. Moreover, it can provide an insight in the effectiveness and outcomes of specific problem solving strategies.

Because this research only used crisis management, networks and institutions theories, other theories have not been taken into account that could provide additional insights. For example, because strategic policy advising is an interaction process, communication sciences could provide additional insight in how the advices are actually being given in practice and if the manner how an advice is being given can be improved. These outcomes can be used to develop additional scope and information rules. Other fields of science that can provide additional insights are psychology or sociology, because these regard the (unequal) relationship between the supreme commander (mayor or HSR) and the ROL and leadership issues.

6.3.2 Discussing the research methodology
This research only studied the institutional context of three regions that were selected deliberately. Also a limited number of respondents have been interviewed due to time constraints. This limits the generalizability of the conclusions made. However, most regions only have four to five ROLs. Interviewing two ROLs per region encompass almost 50% of ROLs of that region. It is also questionable if the results regarding the congruence of perception at the strategic level would have deviated much if more persons (more mayors or deputies) from more regions would have been interviewed. When looking at table 6, the level of congruence at the strategic level of SRG and SRU (both regions had actors with different occupations in these regions) is almost similar. Because this research only focused on the interaction between the mayor or HSR and the ROL, the interaction with other actors of the ROTs and PTs have not been taken into account. For this research, studying these interactions has been less important, because strategic policy advising between the levels is primarily being done between the mayor or HSR and the ROL (all interviewees acknowledged this). However, when developing rules that describe the interaction between the levels, the interactions between other members of the teams with their counter parts

at the other level (for example the communication advisors and the information managers that are present at both levels), should be taken into account as well. These rules must be in coherence with each other in order to be effective.

Another issue regarding the research methodology is that the observations have been made at one point in time per case, whereas the total study has been spread out over roughly one year. The limited number of cases allowed controlling for confounding factors, but the long timespan implies that confounding factors cannot be excluded entirely. Hence special attention has been given to the criteria regarding a causal relationship: correlation, time order, non-spuriousness (Babbie, 2009, pp. 94-95) as has been mentioned during the analysis. Besides this extra attention, one could question if during the timespan of this study, the independent variables would have changed meaningfully. Backgrounds of actors are formed over time and changes in occupation after the interviews do not influence the observations and perceptions at the moment of the interview. Furthermore, institutional rules can only be sustained if actors choose to do so. By performing the institutional analyses using interviews, not only the formal institutional context could be observed, but also the actual (informal) institutional context that applied at that moment. These informal rules, like means and habits, evolve over time (see section 2.3.2.). If a formal document, like a crisis plan, would have been changed in the period of this research, it would have been likely that this specific region already worked according to these new rules at the moment of the interviews, because it takes time to develop and implement them (for example the 10 strategic families of the SRU).

This research has furthermore been limited to the relation between the (R)PT and ROT during the "hot" phase of a crisis or training session, without focussing on a specific crisis or disaster. One could argue that this is a shortfall regarding the viability of the conclusions made. Typical crisis characteristics, such as time pressure, uncertainty and threat may result in different behaviour than when stated in an interview during the "cold phase". On the other hand, during the interviews most interviewees used examples of crises they had experienced to explain or clarify what they meant. Thus these elements have been included. Furthermore, two interviews have actually been performed during an event or incident. This limitation also implied that strategic policy advising during other phases of a crisis, such as the preparation and after care phases, have not been taken into account. For example, one interviewee asked prior to the interview if advices regarding the location of fire stations and equipment stationed at these stations fell within the scope of this research. Because this decision will be taken during the preparation (or "cold") phase prior to an incident, these advises fell outside the scope of this study. Also advising about after care issues have been mentioned by interviewees, but mostly with the notion that these aspects needed to be worked out more in detail. The IAD framework can be used to support the development of rules that facilitate these interactions, but this requires additional research focussing on these topics.

The last methodology issue mentioned here concerns the data gathering. Data gathering by means of qualitative interviews enabled flexibility in the order of questioning, the possibility to prioritize questions when needed, provided opportunities to ask for clarification and follow up questions and it allowed the interviewer to explain concepts to respondents if needed. Although special attention has been given to avoid biased questions during the preparations (see section 3.2.1), some questions might have been biased during the interviews itself. These biases have been mitigated by summarizing the answers of the interviewees during the interviews in my own words, by asking for clarification or examples and by recording and transcribing the interviews. Another research methodology that has been considered was to gather data using surveys. Surveys can be used for explanatory researches involving large population groups (Babbie, 2009, p. 254). This collection method would have allowed for gathering data from all regions instead of three. However, this method has not been chosen because of several reasons. First, the concepts in this study are rather complex and require the possibility to explain or prioritize questions. Second, during the exploration phase of this study, signals had been received that the intended target audience might suffer from "survey fatigue" due to the number of (survey)requests that are being submitted at the safety regions and the municipalities. This made it questionable whether enough persons from the target audience of each region would cooperate and return the surveys in order to conduct a meaningful analysis. Hence the methodology of using survey questionnaires has been found inappropriate for this study.

6.3.3 Discussing the results & analysis

This research entailed a literature study and a study of data derived from interviews with actors involved. For the literature study a limited number of documents have been analysed as has been mentioned in Chapter 4. Documents that have not been studied in detail are the job descriptions and standard meeting agendas of the different teams. This is because these documents are likely to describe the rules of one actor or one team only, and not the interaction between the two levels. Also there is a possibility that other documents exists within the regions that contain specific rules regarding strategic policy advising. However, these biases have been mitigated by asking the ROLs during the interviews if there are any other protocols or documents in use in their region that describe rules regarding strategic policy advising. In this manner, these rules could have been accounted for. In addition, if these rules had been present, but were not mentioned during the

interviews, it can be assumed that these rules are not being accepted and hence can be assumed to have less influence on the perception of an actor regarding strategic policy advising.

In order to analyse the data from the interviews, open coding and axial coding have been used. The literature study has been performed using latent content. Latent coding has also been applied in or to meet the criteria regarding a causal relationship, especially regarding the time order and non-spuriousness criteria. Coding could lead to researcher biases because of misunderstanding or misinterpretation of information. Because of the limited number of respondents, and the manner in which the data have been analysed after the coding, these errors could have influenced the results that have been presented. In order to limit coding errors, the coding procedure has been done twice with an interval of four weeks. Both times the results were similar. Although special attention has been given to the coding procedure, it cannot be excluded with certainty that coding errors have not been made. On the other hand, the influence of these biases would have been limited. As has been mentioned in section 4.1.2, the values describing the congruence of perception only give a good impression of the covariation of the influences of the independent variables on the dependant variables. The actual causal relation and influences of the independent variables on the dependant variable can only be observed by means of a latent study of the interviews transcripts as has been performed. That being said, the latent study of the interviews vouched the data presented in the tables.

With these foods for thought this thesis has come to an end. The title page mentioned bridging the strategic gap, which refers to my background as an engineer, but also refers to what has been called the seemingly unbridgeable gap between the strategic level and the operational level in the Dutch crisis management organization. Although only two variables have been studied, focussing on a rather abstract unit of analysis, the congruence of perception, I do believe that this study did deliver some valuable insights in the institutional context of the Dutch safety regions and the issues regarding strategic policy advising. I also believe that the recommendations, such as using the IAD framework in order to develop rules that facilitate interactions between the regional operational team and the policy teams, provide the building blocks to build that bridge and bridge the gap.

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Annex B: List of Interviewees & Attended Events

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Annex C: Score Tables

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Annex D: Overview Institutional Context Safety Region using the IAD Framework

This annex provides an overview of the national institutional context of the safety region regarding strategic policy advising. The information has been derived from the following documents:

1. Act Safety Regions ("Wet veiligheidsregio's," 2018)
2. Directive Safety Regions ("Besluit veiligheidsregio's,")
3. Directive Status Head Safety Regions ("Besluit rechtspositie voorzitters veiligheidsregio's,")
4. Regulation Personnel Safety Regions ("Regeling personeel veiligheidsregio's,")
5. Municipality Law ("Gemeentewet," 2018)

IAD Rule Type	Regional Operational Team	Municipal Policy Team	Regional Policy Team
Boundary Rules	Head: Regional Operational Leader - Appointed by administration Safety Region. - Competences stated in Directive Personnel Safety Regions and supplemented by requirements Safety Region. - IFV Examination required. ROL decides who participates in ROT, besides those who are appointed by the Directive Safety Regions article 2.1.4.	Head: Mayor - Appointed by Commissioner of the King. Selection process as prescribed by the municipal law. Mayor decides who participates in MPT, besides those who are appointed by the Directive Safety Regions article 2.1.5.	Head: Head Safety Region - Mayor appointed from the mayors of the communities involved after consultation of the Commissioner of the King. Head Safety Region decides who participates in RPT, besides those who are appointed by the act safety regions article 39.
Position Rules	Head: Regional Operational Leader Participants: - Section Fire Department - Section Medical Relief Organizations in the Region - Section Police - Section Population Care - Section Information Management - Staff member crisis communication - Others deemed necessary by the ROL	Head: Mayor Advisors: - Chief Fire Department - Chief Medical Relief Organization in the Region (MROR) - Chief Police - Chief Population Care - Others deemed necessary by the mayor	Head: Head Safety Region Advisors: - Mayors communities involved - Chief Prosecutor - Dike Reeves of the water boards involved - Regional Operational Leader - Others deemed necessary by the Head Safety Region

IAD Rule Type	Regional Operational Team	Municipal Policy Team	Regional Policy Team
Authority Rules	Regional Operational Leader: - Provides direction to the ROT - Advisor to mayor and Head safety Region General Commanders (of sections): - Responsible for operations of own departments.	Mayor: - Authorities Public Order and Safety - Emergency Authorities - Supreme command - Mayor decides, others advise	Head Safety Region: - Head Safety Regions decides, others advise - Authorities Public Order and Safety - Emergency Authorities - Can give enforcing directions to ROL - Supreme command - Allowed to request additional support Mayors: - Authorized to make written objections regarding decisions made by Head Safety Region

Scope Rules	- Multidisciplinary operations regarding the area that is effected by an incident
	- Public order and safety
	- Advise ROL to mayor or Head Safety Region (based on the Directive Safety Regions article 2.4.1 – 2.4.3.):
	  o Incident information
	  o Relief work
	  o Prognoses
	  o Courses of action
	  o Measure taken including results
	  o Developments and effects of the incident
	  o Risks for relief workers and persons present in the affected area
	  o Incident response and personnel and material needed for doing so.
	- The ROL advises the mayor from a multidisciplinary perspective about strategic, political or administrative decisions (regulation personnel safety regions)
		- Only strategic, policy issues
		- Only Public Order and Safety
		- Only own municipality
		- Provide information regarding the source, extent and effects of a crisis or disaster and the action perspectives to population and media
		- Provide information to persons involved regarding the crisis, the risks concerning their tasking and precautions that have or will be taken.
			- Only strategic, policy issues
			- Only Public Order and Safety
			- Only own region
			- Provide information regarding the source, extent and effects of a crisis or disaster and the action perspectives to population and media
			- Provide information to persons involved regarding the crisis, the risks concerning their tasking and precautions that have or will be taken.

IAD Rule Type	Regional Operational Team	Municipal Policy Team	Regional Policy Team
Scope Rules	- The ROL is responsible for the development of realistic multidisciplinary scenarios, clear advises and decision points to the policy team (regulation personnel safety regions).		
Aggregation Rules			- Head Safety Region must consult with RPT before making decisions, unless urgency requires otherwise.
Information Rules	- Information must be shared as soon as possible by automatic means - ROL informs mayor or HSR	- Information must be shared as soon as possible by automatic means	- Information must be shared as soon as possible by automatic means
Payoff Rules	- ROL accounts to mayor or Head Safety Region	- Mayor accounts to municipality council - Municipality responsible for costs resulting from use of emergency authorities by mayor - Minister and Commissioner of the king can suspend or dismiss mayor and can give directions	- Head Safety Region accounts to municipality councils of communities involved - Minister can suspend or dismiss Head Safety Region and can give directions

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Annex E: Overview of institutions regarding strategic policy advising in the safety regions studied

1. Safety Region Groningen (SRG)

For this overview the following documents have been studied:

- "Regionaal Crisisplan Veiligheidsregio Groningen" (2014) (*Regionaal Crisisplan Veiligheidsregio Groningen*, 2014)
- "Kaders voor de GRIP in Groningen, Friesland en Drenthe" (Haasjes, 2014)

IAD Rule Type	Regional Operational Team	Municipal Policy Team	Regional Policy Team	Derived from the interviews with the Regional Operational Leaders
Boundary Rules	Regional Operational Leader (ROL): Initially a background from the fire department or police department	-	-	- National qualification dossiers - Training cycle - Education and examination IFV - Experience in Crisis management - Multidisciplinary
Position Rules	Location: Safety Region Groningen ROT: - Regional Operational leader - General Commander Fire department - General Commander Police department - General Commander Medical Relief Organizations in the Region (MROR) - General Commander Community Care - Regional Military Operational Advisor - Representative Prosecution - Representative Water boards - Communication Advisor - Information Manager - Secretary - Representative of the Province (if province is involved)* - Others invited by the ROL*	Location: Town hall of the municipality involved (in municipality Groningen location Safety Region) MPT: - Mayor - Advisor Community Care - Advisor Fire Services - Advisor Medical Relief - Advisor Police services - Public Prosecutor - Communication Advisor - Information Manager - Secretary - Advisor Crisis Management - Representative Ministry of Defence* - Representative Water boards* - Public administrator Public Order & Safety* - Others invited by the mayor*	Location: Safety Region Groningen RPT: - Head Safety Region (HSR) - Mayors of the communities involved - Chief Public Prosecutor - Dike Reeve - Regional Operational Leader - Advisor Fire Services - Advisor Police services - Advisor Medical Relief - Advisor Community Care - Representative Ministry of Defence* - Communication Advisor - Information Manager - Secretary - Others invited by the Head*	Process Guardian: - By ROL is strong by ROL - By all members is strong by ROL - General Commander Community Care - By IM is mentioned once - Other: m**unicipal** secretary and Juridical advisor

IAD Rule Type	Regional Operational Team	Municipal Policy Team	Regional Policy Team	Derived from the interviews with the Regional Operational Leaders
Authority Rules	ROL: Downscaling during GRIP 2 Tasks ROT: - Decides on allocation of scarce resources	Mayor: Downscaling during GRIP 3 Mayor, Regional Commander of the Fire Department, General Commander of Medical care or higher and unit commander of the police are allowed to declare GRIP 4	HSR: Downscaling during GRIP 4 HSR, mayors, Regional Commander of the Fire Department, General Commander of Medical care or higher and unit commander of the police are allowed to declare GRIP 4	Only ROL authorized to give strategic policy advice from the ROT to the mayor or HSR.
Scope Rules	Upscaling rules: - GRIP 3: prolonged relief work, severe effects on local population (failure of vital infrastructure), extensive material damage, possible a lot of injured and deceased. - GRIP 4: upscaling above municipality level, prolonged relief work, severe effects on local population, extensive material damage, possible a lot of injured and deceased, coordination required between communities Tasks: - Scenario development (4-12h)	Upscaling rules: - GRIP 3: prolonged relief work, severe effects on local population (failure of vital infrastructure), extensive material damage, possible a lot of injured and deceased. - GRIP 4: upscaling above municipality level, prolonged relief work, severe effects on local population, extensive material damage, possible a lot of injured and deceased, coordination required between communities Tasks: - Integral planning, monitoring and adjusting policy and tolerance limits regarding administrative and operational performance - Scenario development (>12hrs)	Upscaling rules: - GRIP 3: prolonged relief work, severe effects on local population (failure of vital infrastructure), extensive material damage, possible a lot of injured and deceased. - GRIP 4: upscaling above municipality level, prolonged relief work, severe effects on local population, extensive material damage, possible a lot of injured and deceased, coordination required between communities Tasks: - Integral planning, monitoring and adjusting policy and tolerance limits regarding administrative and operational performance - Scenario development (>12hrs)	Difference between to two ROLs interviewed: - Limited to public order and safety, and executable, unambiguous, proportional, subsidiary. - Advice about every subject
Aggregation Rules	-	-	-	- Both ROL base their advice on the input of other ROT members. - Both ROL ask the MPT/RPT about their needs.
Information Rules	Information exchange will take place in an integrated interactive network: LCMS. SRG use the Administrative Network Cards in order to provide insight in the allocation of administrative authorities.	Information exchange will take place in an integrated interactive network: LCMS. SR GR use the Administrative Network Cards in order to provide insight in the allocation of administrative authorities	Information exchange will take place in an integrated interactive network: LCMS SRG use the Administrative Network Cards in order to provide insight in the allocation of administrative authorities	- Information exchange by LCMS - Sharing to all users of LCMS, unless the situation demands otherwise.
Payoff Rules	-	-	-	-

2. Safety Region Drenthe (SRD)

For this overview the following documents have been studied:

- "Regionaal Crisisplan VRD" (2014)
- "Kaders voor de GRIP in Groningen, Friesland en Drenthe" (Haasjes, 2014)
- "Hoe doen we het effectiever en efficiënter in de regio Drenthe?" (Scholtens, 2011)

IAD Rule Type	Regional Operational Team	Municipal Crisis Team / Municipal Policy Team	Regional Crisis Team / Regional Policy Team	Derived from the interviews with the Regional Operational Leaders
Boundary Rules	ROL: Initially a background from the fire department or police department	-	-	- Qualification Test - Relation with Public Administrators (Mayors) in daily business
Position Rules	Distinction between Acute Crisis and Long Crisis: - Acute crisis: No ROT - Not Acute Crisis: ROT ROT (Not Acute Crisis): - Regional Operational Leader - General Commander Police department - General Commander MROR (GHOR) - General Commander Fire department - General Commander Community Care - Communication Advisor - ROL supporting staff, consisting out of an Information manager and a Policy Advisor Head ROT: Regional Operational Leader Location ROT: Safety Region Drenthe in Assen.	During an acute crisis a Municipal Crisis Team will be established: - Mayor - The Regional Operational Leader - Communication advisor - Administrative advisor (municipal secretary) participates. - Secretary - ROL supporting staff, consisting out of an Information manager and a Policy Advisor Location: Town hall of the municipality involved	During an acute crisis a Regional Crisis Team (RCT) will be established: - Head Safety Region - Regional Operational Leader - Coordinating municipal secretary - Communication advisor - Secretary - ROL supporting staff (see CCT). Location Regional Crisis Team: Town hall in Assen, Emmen or Hoogeveen Regional Policy Team (RPT): - Head safety Regions - Regional Operational Leader - Coordinating municipal secretary - Communication advisor - Mayors (or deputies) of the communities involved - Main prosecutor - Dike Reeve of the water boards involved - Secretary Location: location RCT	-

IAD Rule Type	Regional Operational Team	Municipal Crisis Team/ Municipal Policy Team	Regional Crisis Team / Regional Policy Team	Derived from the interviews with the Regional Operational Leaders
Authority Rules	ROL: - Authorized to downscale during GRIP 2. - Advices the mayor regarding upscaling - Authorized for activation of NL ALERT - Decides in which city the RCT will be located - Authorities when participating in RPT the same as in CCT The Information Manager and Policy Advisor support the ROL.	Mayor: - decides on Upscaling GRIP 3 based on advice of ROL and general commanders involved. - authorized to downscale during GRIP 3. - determines explicitly the start of the recovery phase. Administrative Advisor: - Advices the mayor on administrative issues - Supports and guards the decision-making- and interpretation process.	Distinction between light and full administrative upscaling: - Light Administrative Upscaling: one municipality is in control of the situation in cooperation with the other communities involved. Decisions must be ratified by the HSR. - Full upscaling: RPT on call of the HSR. Head Safety Region: - Decides upon Upscaling GRIP 4 and 5 based on advice of mayors, ROL and general commanders involved. - Downscaling during grip 4 - Determines explicitly the start of the recovery phase Coordinating municipal secretary: - identical to Administrative Advisor in CCT	Advise only via ROL Guarding Authority: - By ROL (mentioned by both ROLs) - By municipal secretary (mentioned by one ROL) - By policy advisor in ROL supporting staff (mentioned by one ROL)
Scope Rules	Upscaling rules GRIP 2: - Support of COPI required - Complicated origin - Severe extend - Multidisciplinary - Tactical coordination and decision making required - Measures inside and outside the incident area. - In case of interdisciplinary conflicts, administrative decision making required, coordination regarding the interpretation message, activation of mayor and crisis team, etc.	Upscaling rules GRIP 3 (CP, P22): - prolonged relief work, - severe effects on local population - extensive material damage - possible a lot of injured and deceased - In case of exceptional high costs for the municipality, prolonged demand of required capacities, extensive public effects, use of emergency authorities of means of violence.	Upscaling rules GRIP 4 - Full upscaling at above municipality level - prolonged relief work, - severe effects on local population - extensive material damage - possible a lot of injured and deceased - coordination required between communities - (see net page)	- Everything (one ROL) - About political sensitive aspects (one ROL) - Not about political sensitive aspects (one ROL) - Written advice only for authorization of emergency authorities. (one ROL)

IAD Rule Type	Regional Operational Team	Municipal Crisis Team/ Municipal Policy Team	Regional Crisis Team / Regional Policy Team	Derived from the interviews with the Regional Operational Leaders
Scope Rules (continuation)		- During the first hours of a crisis, the advisors primarily support the mayor regarding the interpretation of the crisis. - The Information Manager and Policy Advisor support the OL by providing verified and filtered information. - The Information Manager and Policy Advisor support the OL by providing prepared written advice, including relevant considerations and courses of action.	In case of multiple communities involved and when the situation demands interpretation or administrative decisions making by the head safety region, such as situations regarding exceptional high costs for the municipality, prolonged demand of required capacities, extensive public effects, use of emergency authorities of means of violence.	
Aggregation Rules	During the hectic phase of an acute crisis no multidisciplinary coordination will take place	- During the hectic phase of an acute crisis no multidisciplinary coordination will take place - The mayor takes, with or without support of his advisors, but always in presence of the operational leader operational feasible strategic decisions.	- During the hectic phase of an acute crisis no multidisciplinary coordination - HSR takes, with or without support of his advisors, but always in presence of the operational leader operational feasible strategic decisions - HSR determines explicitly in consultation with the other mayors involved the start of the recovery phase	- Consulting with other ROLs - Consulting with Crisis staff - In deliberation with mayor or HSR.
Information Rules	- The ROL provides as operational strategic advisor within three quarters of an hour (and afterwards each hour) a multidiscipline picture on main issues. - During GRIP 1 and 2 a formal information line exists between the leaders COPI, the ROL and the Mayor. - SRD uses the Administrative Network Cards in order to provide insight in the allocation of administrative authorities. - The operational commander of a monodisciplinary services informs the mayor directly (Scholtens, 2011, p. p2)	- The participants in the Crisis Team inform and advice the mayor in the most direct manner. - As figurehead for the local population the mayor interpret the crisis within 60 minutes. During the multidisciplinary coordination phase the mayor will interpret the every 2 hours. This means that a figure head is available for communicating to the press that an incident has happened, the extend of the situation has been acknowledged, emphasizing the mayors role and show empathy towards those directly involved (Scholtens, 2011) - SRD uses the Administrative Network Cards in order to provide insight in the allocation of administrative authorities. - The mayor informs the municipal council within 48hrs	- During the acute phase of a crisis coordination will take place by phone, in order to enable the mayors to stay in their communities for communication and directing the municipal working teams. - The HSR informs the other mayors involved about the (regional wide) decisions, eventually using the ROL supporting staff - SRD uses the Administrative Network Cards in order to provide insight in the allocation of administrative authorities.	- LCMS - Informing the mayor within an hour after alarm notification
Payoff Rules	-	-	-	-

3. Safety Region Utrecht

For this overview the following documents have been studied:

- Regionaal Crisisplan Utrecht 2018-2020 (*Regionaal Crisisplan Utrecht 2018-2020*, 2018)
- Operationele Regeling VRU na 3de wijziging DB (*Operationele Regeling VRU na 3de wijzging DB*, 2018)

IAD Rule Type	Regional Operational Team	Municipal Policy Team	Regional Policy Team	Derived from the interviews with the Regional Operational Leaders
Boundary Rules	-	-	-	- Selection - Education and examination IFV - Experience in Crisis management at tactical and operational level - Knowledge of crisis organisation - One ROL mentioned that the advisor does not necessarily be a ROL
Position Rules	ROT: - Regional Operational leader - General Commander Fire department - General Commander MROR (GHOR) - General Commander Police department - General Commander Community Care - Communication Advisor ROT - Information Manager ROT Advisors: - Regional Military Operational Advisor Support - Resource Manager ROT - Plotter ROT	MPT: - Mayor - Commander Fire Department - Director Public Health - Local Head Basic Team Police - Strategic Advisor Community Care Advisors: - Regional Officer or (deputy) Main Prosecutor - Communication Advisor (R)PT Support: - Information Manager (R)BT - Process Guardian MPT - Secretary CBT.	RPT: - Head Safety Region - Mayors of the communities involved - Main Prosecutor - Dike reeves of the water boards involved Advisors: - Government Lords (in Dutch: Rijksheren) involved - Regional Operational leader - Commander Fire Department - Director Public Health - Strategic Advisor Community Care; - Head Police Regional unit Midden Nederland - Liaison of the commissioner of the King - Communication Advisor (R)PT Support: - Information Manager (R)PT - Technical Head RPT - Supporting secretary RPT - Secretary RPT	-

IAD Rule Type	Regional Operational Team	Municipal Policy Team	Regional Policy Team	Derived from the interviews with the Regional Operational Leaders

Authority Rules	ROL:
	- The final Operational authority is, assigned to the Regional Operational Leader (on Duty) during GRIP 2-4.
	- Upscaling GRIP 3, after consultation with the mayor, unless the situations requires otherwise.
	- Downscaling from GRIP 2.
	- Decides when the ROT is active and informs the proper authority when this is the case.
	- Decides to exempt one or multiple participants of the ROT if the situations does not requires the actors participation, and informs the mayor or Head safety Region about this.
	- The ROL is responsible for the development, monitoring and finalizing the total image regarding information as is meant in article 2.4.1 Directive Safety Regions
	- The Commander of the fire department has been mandated by the proper authority to activate the warning and alarming system by means of the notification room, checks this authority before acting and notes down who has issued this order at what moment. The ROL can be under mandated by the commander of the fire department for this authority.
	- The ROL does not use this authority, but after he has coordinated with the mayor involved or the HSR, unless the situation doesn´t allows this.
	
	(see next page)
		Mayor:
		- The administrative and final authority regarding incident and crisis management has been assigned to the mayor or Head Safety Region (in case of art. 39 Act safety regions)
		- Has the decision-making authority within Municipal Policy Team.
		- Can expand the municipal policy team with other persons.
		- Informs the population regarding the source, extend and consequences of a disaster or crisis which threatens the community, including the proper way of conduct.
		- Informs the persons involved in the disaster management or crisis management regarding the disaster or crisis, the risks regarding their health due to their efforts and the precautions taken.
		- Upscaling GRIP 3
		- Downscaling during GRIP 3.
		- Applying the warning and alarming system (WAS), NL-ALERT, the emergency broadcast RTV UTRECHT and the public information number
		
		(see next page)
			Head Safety Region:
			- The administrative and final authority regarding incident and crisis management has been assigned to the mayor or Head Safety Region (in case of art. 39 ASR)
			- The head doesn't take decisions regarding these authorities granted by article 39, but after he has consulted the RPT, unless the situation demands otherwise
			- Informs the population regarding the source, extend and consequences of a disaster or crisis which threatens the community, including the proper way of conduct.
			- Informs the persons involved in the disaster management or crisis management regarding the disaster or crisis, the risks regarding their health due to their efforts and the precautions taken.
			- Can invite additional participants of crisis partners he deems necessary
			- Upscaling to GRIP 4, eventually on request of mayor or participants of the RPT.
			- Downscaling during GRIP 4.
			- Applying the warning and alarming system (WAS), NL-ALERT, the emergency broadcast RTV UTRECHT and the public information number
			
			(see next page)
				- ROL is the only one who is authorized to provide advice.
				- One ROL mentions a by the ROL mandated staff member to give the by the ROL approved strategic advice to the mayor.
				- Guarding authority:
				  o Mayor or HSR by both ROLn
				  o ROL by both ROL
				  o By Technical Head (mentioned by both actors interviewed from the Policy Team)

IAD Rule Type	Regional Operational Team	Municipal Policy Team	Regional Policy Team	Derived from the interviews with the Regional Operational Leaders
Authority Rules (continuation)	ROT: - Is responsible for the coordination with other parties involved in the crisis and advising to the Municipal and regional policy teams - Informs and advises the proper authority. - Formulates administrative, strategic decision points for the mayor or Head Safety Region. - The head can invite additional participants of crisis partners he deems necessary	MPT: - Supports the mayor at the strategic level during disaster and crisis management and advises the mayor when making administrative considerations and policy decisions. - Advice the proper authority regarding decisions at the strategic level - Communication strategy - Support and advise the authority regarding decisions provided by the ROT - Administrative alignment of parties involved - Informing administrative authorities - Support the proper authority when issuing emergency warrants and emergency ordinances - Support the proper authority when deciding upon the request of additional support - The head can invite additional participants of crisis partners he deems necessary - The participants of the MPT act as advisor to the mayor. They are not the point of contact for the operation, but provide strategic advice as representatives of their column.	RPT: - Administrative coordination with the parties involved. The members of the RPT are authorities of their own chains. Therefor in the RPT also coordination between the general chain and the functional chains. - Informing administrative authorities - Support the proper authority when issuing emergency warrants and emergency ordinances - Support the proper authority when deciding upon the request of additional support. - At the moment that the RPT is active, the Regional action centre crisis communication coordinates the crisis communication under responsibility of the HSR.	
Scope Rules	The ROT focusses on achieving operational results regarding public order and safety that cannot be overseen and coordinated at the place of incident or when there is no place of incident	- The mayor can decide to call together (parts of) a MPT that advises hem on his automotive role, in case of public unrest which goes beyond issues of maintaining public order and safety and when multidisciplinary coordination is required - GRIP 3: in case of administrative issues regarding the proper authority that require the support of a MPT to a mayor. For example the necessity of extensive public care (including informing the local population) and the corresponding use of relief organizations or other administrative issues.	GRIP 4: need for administrative coordination and management of more than local importance. This is the case when the actual effects or public appearance exceeds the authority of a mayor and a necessity exist for unambiguous administrative actions	One ROL: - Scarce Resources - Courses of Action - Priorities - First advice, than argumentation - Restricted to mayor roles (but formally no restrictions) One ROL: - Everything regarding all the partners - 10 Strategic families - 8 strategic themes - Everything

IAD Rule Type	Regional Operational Team	Municipal Policy Team	Regional Policy Team	Derived from the interviews with the Regional Operational Leaders
Aggregation Rules	-	-	-	- Multidisciplinary in the ROT - In coordination with MPT/RPT
Information Rules	- The proper information is defined as the actual, essential facts of a major incident, the expected effects and the capacities being used. - The proper form, a multidisciplinary total image, consists out of information regarding the incident, the relief work, prognoses, the approach, the measures taken and the results of these measures (based on art 2.4.1, par 2 BVR) - The information management organization needs a tool to perform it´s work in a good manner. In this case this concerns primarily LCMS.	- The information management organization needs a tool to perform it´s work in a good manner. In this case this concerns primarily LCMS. - Providing information Regarding the facts and situation related to the crisis, responsibilities, tasks and actions of the actors within the crisis management organization and striving for as much transparency as possible. - Providing information regarding Damage Control such as instructions aimed at reducing (health or material) damage for (parts of) the society. Stimulating self-reliance and providing mutual relief. Communicating clearly regarding the risks of the crisis. Also providing directions for the conduct of (parts of) society in order to make measures taken by the government more effective and/or to reduce hinder regarding fighting the incident. - Meaning making: Interpreting the crisis and placing it in a bigger perspective, in which a connection will be made with the emotions that are present in (parts of) society. Showing empathy is crucial. The purpose of meaning making is allocated to the mayor regarding his role a public father. Important is the balance between ratio and emotions, naming the dilemma´s, recognizing the perceptive situation and putting things into perspective. - The network cards provide an overview of the administrative parties of a sector (chain) and the role which they fulfil during a crisis. Next to this the network cards shows who is responsible for a specific topic and can take measures. Furthermore the network card mentions instruments and administrative focus areas related to a crisis in a sector.	- The information management organization needs a tool to perform it´s work in a good manner. In this case this concerns primarily LCMS. - Providing information Regarding the facts and situation related to the crisis, responsibilities, tasks and actions of the actors within the crisis management organization and striving for as much transparency as possible. - Providing information regarding Damage Control such as instructions aimed at reducing (health or material) damage for (parts of) the society. Stimulating self-reliance and providing mutual relief. Communicating clearly regarding the risks of the crisis. Also providing directions for the conduct of (parts of) society in order to make measures taken by the government more effective and/or to reduce hinder regarding fighting the incident. - Meaning making: Interpreting the crisis and placing it in a bigger perspective, in which a connection will be made with the emotions that are present in (parts of) society. Showing empathy is crucial. The purpose of meaning making is allocated to the mayor regarding his role a public father. Important is the balance between ratio and emotions, naming the dilemma´s, recognizing the perceptive situation and putting things into perspective. - The network cards provide an overview of the administrative parties of a sector (chain) and the role which they fulfil during a crisis. Next to this the network cards shows who is responsible for a specific topic and can take measures. Furthermore the network card mentions instruments and administrative focus areas related to a crisis in a sector.	- LCMS - Phone - Exchanging experiences with other ROLs
Payoff Rules	-	-	-	One ROL: accountable to director SRU

General rules mentioned in the crisis plan of the SRU:

- A deviation from the legal main structure requires an explicit decision, among other because of accountability. This decision will be taken and noted by the head of the highest team that has been activated during the first meeting.
- Depending of the type of the incident or crisis, an administrator can be supported by a team that is tailored to his specific needs. The Regional Operational Leader acts like a front office and acts as network manager. If requested by the proper authority he can provide advice or refer to others, for example to another authority or another organization