



**Enhancing the Efficiency of Alerting Systems Through
Personalized, Culturally Sensitive Multi-Channel Communication**

Project No. 261699

Deliverable D2.1.

“Conceptual Interview Design Report”

Contributing Partner(s):

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Objectives of Opti-Alert in general and WP 2 in particular

The EU-funded project “Enhancing the Efficiency of Alerting Systems Through Personalized, Culturally Sensitive Multi-Channel Communication” (“Opti-Alert” – EC Grant Agreement No 261699) deals with improved regionalization and personalization of warning messages, as well as a closer cooperation and integration of industry-funded alerting systems and state-funded alerting tools.

The objective of this project is to develop an alerting tool that:

- (a) allows for a rapid simulation of the impact of different alerting strategies (depending on the selected media-mix and current availability of communication media),
- (b) supports the composition of the optimal mix of communication channels (individualized alerting channels and mass media),
- (c) improves alert compliance through socio-cultural adaptation and personalization of alert messages and communication channels,
- (d) supports the rapid and automated implementation of a selected alert strategy,
- (e) can simultaneously address a plethora of communication channels simultaneously to facilitate efficient high-throughput alerting, and
- (f) can be integrated with existing tools and legacy systems via well-defined interfaces.

The following key research activities will support these objectives:

- (a) in-depth analysis of the impact that socio-cultural and regional factors have on risk perception and risk communication,
- (b) analysis of the influence that observed socio-cultural differences have on regional alerting strategies,
- (c) analysis of the impact of individualized alerting (via text messaging (SMS), e-mail, etc.) and alerting via the mass media,
- (d) identification of best practices in alerting via the mass media,
- (e) definition of appropriate algorithms for alert propagation throughout the population, depending on the selected mix of communication channels.

This *Conceptual Interview Design Report* is the first out of seven deliverables within work package (WP) 2: *Socio-cultural factors in risk and crisis communication*. WP 2 addresses the fundamental question: How are different types of risks (technological, environmental, social, etc.) perceived in different socio-cultural and regional contexts, and what is the impact of these perceptions on efficient risk communication? The perception of risk communication will be analyzed for different socio-cultural clusters in all participating countries. Additionally, current media repertoires of different socio-cultural milieus will be analyzed, compared, and reflected to show the impact of different media repertoires on the risk communication process. A particular focus within this analysis will lie on the perception of individualized alerting (via text messaging, e-mail, personal messaging etc.), “traditional” alerting via mass media such as radio and TV, and emerging communication channels on the web (blogs, social networks, etc.).

This *Conceptual Interview Design Report* outlines both the methods and the analytical framework used within WP 2. It elaborates on our choice of disasters as well as on our

selection of interviewees for in-depth expert interviews, explorative interviews, and focus group interviews. Following an introduction to our analytical framework and definition of terms, disaster selection criteria, and research methods, we will give an account of the interview guidelines and then we will briefly outline the setting of the focus group research.

Analytical Framework

Risk and crisis communicators are increasingly aware that it is time to move from a “one message fits all” paradigm toward more adequate target specific crisis communication that leads to more appropriate alerting methods. The central weakness of the current alerting and crisis management systems is that the citizens to whom crisis communication are addressed are mostly unknown to those who send crisis messages. WP 2 focuses on this challenge by asking the following questions: What do citizens *know* about alerting and crisis communication? How do they *perceive* crisis communication? How did people who were actually affected by a disaster *behave* at the time of the disaster? How do citizens expect to be *informed* in case of an acute life-threatening disaster? How might crisis communication following a man-made disaster differ from that which follows an environmental disaster? We will address all of these questions in a comparative study that includes seven member states of the EU: Austria, France, Germany, Hungary, Italy, the Netherlands and Sweden.

WP 2 addresses questions in the following areas:

1. *Knowledge about alerting & crisis communication*
 - What do citizens know about the alerting systems in their countries?
 - Do people know who is responsible for disaster management and mitigation?
 - Do people know how and where to be informed about a disastrous situation?
 - Do people know how to behave in a particular disaster?
2. *Risk perception*
 - How do people evaluate the risk of being threatened by either a man-made disaster, a natural disaster, or both? In other words, what is their subjective feeling of insecurity?
 - What is the role of trust in risk perception? For example, what is the degree of trust that people have in the risk management abilities of institutions and industries?
 - What is the credibility of provided information in the mass media and in other communicative channels?
3. *Actual and assumed behaviour in the case of a crisis*
 - How did people who were affected by a previous disaster (“survivors” of a disaster) actually react?
 - How do people who have not yet been affected by disasters anticipate their own likely behaviour?
 - What have been the actual roles of family, friends, and social media in disaster cases? What are their anticipated roles?

4. *Information behaviour & information expectations*

- How were people who were affected by a previous disaster actually informed at the time of the disaster?
- How do people want to be informed in the case of a disaster?
- What is people’s anticipated and actual information behaviour in the case of a disaster?

Selection of Disasters

The partner of the Opti-Alert consortium agreed upon the project’s shared definition of “alert”:

Alert: Messages warning of events that are happening or that are going to happen. There are concrete indications that something is likely to happen. Consequently, alerts do not address a vague or distant possibility, but encompass emerging or ongoing events where people’s mobilization needs to be very fast. Although alerting is part of disaster management, it is not disaster management as such.

Disasters could be characterized by their differences in duration and geographic space. Alerting systems need to be adapted to fit these characteristics:

	<i>Local/Regional</i>	<i>National</i>	<i>Transnational/Transboundary</i>
<i>Short Term</i>			
<i>Long Term</i>			

Opti-Alert partners within WP 2 have agreed upon the following types of disasters for which the main empirical emphasis will be given:

- Industrial accidents (a main focus): they require short term alerting. They could be local, national, or even transboundary man-made disasters.
- Severe weather conditions (a minor focus): alerting could be either short term (15 to 60 minutes for a local thunderstorm) or longer term (six to 24 hours for regional to transboundary storms, snow, rain, freezing rain, etc.).

Please note that these types of disasters are particularly relevant for the focus groups. Neither the biographical nor the expert interviews are bound to them. This is explained in the following “methods” section.

Methods

WP 2 is designed to get results from a “triangulation” of different yet complimentary social scientific methods. They encompass in-depth interviews with experts of crisis communication and alerting, explorative interviews with people who were victims of a previous disaster, and focus group research with citizens. Each method addresses different aspects of crisis communication and alerting, and sheds light on our subject matter from various perspectives. Our comparative study will not only show differences between countries, but also between different socio-cultural milieus within specific countries. For example, results of the focus group research will be validated in Austria by large-scale telephone interviewing of a random sample of respondents.

1. Social Scientific Methods in WP 2

In-Depth Expert Interviews

In-depth interviews with experts of crisis communication and alerting will inform us about not only actual organizational structures and strategies, but also about experience of crisis communication and alerting in the examined countries. Experts will be chosen due to their specific knowledge or expertise about the system in their respective country. These semi-structured interviews will be based on interview guidelines (see 3.1). The average duration of an interview will be about 60 to 90 minutes. The interviews will be taped, transcribed, and then analysed.

Explorative Interviews with “Survivors” of Disasters (biographical interviews)

Explorative interviews with those who were heavily affected by or have even survived disasters will give us insight into their personal reflections and interpretations of such an experience. This method will allow for an understanding of individuals’ socio-cultural perspectives on risk-communication and alerting. It will also substantiate similarities and differences of risk perception within different cultures, and will enable the research consortium to draw conclusions about improved alerting based on what they gather from individual experiences. Interviewees will be selected according to their personal involvement in a catastrophic event. The reported events will not just be industrial accidents and severe weather conditions, but they will could also include a diversity of disasters that includes epidemics, wild fires, and so forth. The biographical interviews will be based upon interview guidelines (see 3.2). The average duration of an interview will be between one and two hours, but they could run longer. The interviews will be taped, transcribed (and translated where applicable), and then analysed.

Focus Groups

We use focus group research as a method to analyse group perceptual patterns and knowledge structures related to alerting, coping strategies, mitigation capabilities, and media usage in disasters cases. Relevant socio-cultural clusters will be identified in each observed country. These clusters will be based on the results of in-depth and explorative interviews, and also on literature research about country-specific socio-cultural milieus. Focus group participants will be selected according to the relevance of their socio-cultural milieu. Focus group moderation will be based on focus group guidelines, and professional moderators will use, inter alia, scenario techniques to facilitate group discussions. The duration of each group discussion will be no less than 60 minutes and no longer than 90 minutes. Each group will consist of eight to ten attendees. In total, five focus group interviews will be conducted in each country. Group discussions will be taped, transcribed, and analysed and translated where applicable.

Telephone Interviews

We plan to validate the focus group results with large-scale telephone interviewing of randomly selected citizens in Austria. Telephone interviews are an economical and effective quantitative method to verify results produced by explorative, qualitative methods. Interviews will be based on a questionnaire, and they will be conducted via computer assisted telephone interviewing (CATI). Data preparation and analysis will be done under usual social scientific consistency and plausibility controls. Results will be representative of the Austrian population (n= 500). The duration of the telephone interview will be about ten minutes.

2. Selection of Interviewees and Focus Group Participants

sine will conduct all interviews and focus groups, except for those in Sweden, which will be conducted by UGOT. The project's partners support sine by identifying relevant interviewees in their countries. Research partners are also responsible for the selection of focus group participants according to the agreed upon socio-cultural clusters.

In-Depth Expert Interviews

The interviewees will be chosen from institutions or organizations that are responsible for crisis communication during disastrous events on a national scale. We look for individuals in senior positions who are responsible for alerting the population in the case of a disaster. For example, they would be from the Federal Office for Civil Protection or from relevant

companies (ideally people from a company with expertise of crisis management due to a former industrial accident), or interviewees will come from a combination of institutions and organizations. Two to three expert interviews will be conducted in each country.

Biographical Interviews

Five biographical interviews will be conducted with persons who were severely affected by a disaster. Ideally, their experience should not have been longer than five to eight years ago. The actual type of disaster could vary, and could be based on a range of events. It is up to the research partner respective to each sample country to decide upon a relevant and suitable disaster and to identify the interviewees accordingly. Although the interviewees do not necessarily have to be survivors of an industrial accident or severe weather conditions, these individuals remain relevant to the study as well.

Focus Groups

Focus groups will be set up after the analysis of the expert and biographical interviews. They will be based on the types of disasters to which the research consortium agreed (industrial accidents and severe weather conditions). The selection of the focus groups will also be based on the identified socio-cultural clusters, which are to be elaborated within the *Report on Socio-Cultural Clusters*, Deliverable 2.4.

Telephone Interviews

Large-scale telephone interviews will be conducted in Austria after the focus groups are analysed. The main unit are Austria's citizens who are aged 14 years or older and live in a private household with landline and/or mobile phone. In total, 500 persons will be interviewed. The population regarding both the household and the interviewee will be randomly selected, the latter by employing the "last birthday method," in which an interview is attempted with the person in the household who has had the most recent birthday. Interviews will be conducted between 16:30 and 20:30.

3. Guidelines

Guidelines for the in-depth expert interviews and explorative interviews to be employed in WP 2 have already been developed. The guideline for the focus group and questionnaire for the telephone interviews are pending the results of the former two kinds of interviews. Our research partners have shared ideas, contributed country specifications, and agreed upon the final version of the guidelines. The standard versions are outlined below.

3.1 Guideline for In-Depth Expert Interviews

(A) Personal Expertise

What is your profession and your training? What are your tasks within this organization?

(B) Description of Institutional Arrangements of Crisis Regulation

First of all, do you distinguish risk communication from crisis communication in your organization or company? If so, how? Can you please give examples for both?

Who specifies that an event is a crisis and not just a risk?

How is the process of crisis regulation organized? What happens in a crisis situation? Which part of the crisis regulation process becomes more important when compared to risk regulation? Can you please refer to a specific example to which this process has been already applied?

In case of governmental agencies, who takes the lead in dealing with a crisis? Are there differences when dealing with natural versus man-made disasters? If so, could you please explain?

What kind of expertise do you use to support your crisis management process?

Who will be involved in the crisis regulation process in the case of a disaster that has acute life-threatening potential? (Please consider different levels: local, national, international, and transnational)

Have the structures and procedures you've for us outlined been established for some time, or are they newer developments? In case of the latter, what were the motivations or catalysts and rationales of the changes?

From your experience, what is the most crucial issue in crisis communication?

(C) Description of the Institutional Arrangements of Crisis Communication

How is the process of crisis communication organized? What happens in a crisis situation?

How is the dissemination of information and alerting processes organised in the case of a disaster that has acute life-threatening potential?

What are your information channels? Do they vary between cases of risk and cases of crisis? If yes, how and why?

Who are the recipients of your information? (Please consider different levels: local, national, international, and transnational)

Do you distinguish different recipients in your crisis communication strategy? If yes, which kind of recipients do you distinguish? In crisis communication and alerting, which kind of strategies do you choose for addressing different recipients in regard to the content of the message, as well as the form, means, and instruments of sending the messages? Can you give us please an example? If not, do you feel that “one message fits all” is sufficient? Why or why not?

Are behavioural cues for the public an inherent part of your crisis communication? How do you evaluate the population’s compliance in following those behavioural cues? Are there differences in compliance concerning different target groups and / or communication channels?

In your view, who are the most important recipients for alerting? Who are the major risk groups, and why are they the major risk groups? Are there any differences in regard to evaluating major risk groups when considering man-made or environmental disasters?

From your experience, which recipients are the most difficult to reach, and why? Can you please elaborate on how you’ve tried to access them.

From your experience, which recipients are the most reluctant regarding compliance with the alerts? Why do you think that they are the most reluctant? What do you think are typical reasons for not complying? How can you best overcome this reluctance?

In your view, what are the main obstacles for sufficient alerting?

In retrospect, if you consider different disasters that actually happened in your country or company, where were the most significant differences in communication, and to which results did these differences lead?

What would you describe to be good governance in crisis communication? Can you please explain why?

In your perspective, what has to be done to improve alerting and increase compliance?

(D) Country Specificities

Is there anything specific to alerting and crisis communication that you would say is unique to your country? If so, could you please explain?

Do you have particular risk groups that need special treatment in regard to alerting and crisis communication? If yes, who and why? What exactly do you do to address these target groups?

Is there anything specific in the way the population of your country behaves in crisis situations that is different from other countries? If yes, what do you see as the reason for this?

From your experience, what has to be taken into account in your country in order to increase the population's compliance in the case of a disaster?

3.2 Guideline for Explorative Interviews with Survivors of Disasters

Note:

*The following guideline contains the central interview content; they are not questionnaires that enable one to ask the questions in order or according to **every detail**. With biographical interviews, the focus is on the person interviewed and his or her experiences and perceptions. An interviewer usually needs to adjust the types of questions as well as the conduct of the interview in order to learn about the experiences and perceptions of the interviewee.*

Therefore, the following questions are only a guideline for the interviewer. He or she has to always consider the specific situation and vary the questions accordingly.

Experiences

You were affected by the (...) catastrophe. Please start from the beginning.

- *What exactly happened?*
- *How did it happen? (Were the people surprised? Were there hints, warnings, or previous experiences from which you were able to draw?)*
- *To what extent were you affected?*
- *How long have you lived adjacent to the factory/volcano/river/etc. prior to the incident/crisis?*

Knowledge

- *You lived or have lived adjacent to the factory/river/industrial plant/etc. prior to the accident. What general knowledge did you have about the volcano/industrial plant/etc.? When did you learn that an accident could happen there?*
- *How did you learn about it? (Respectively from whom? Neighbours, the media, etc?)*

- *Were there any signs or hints of a disaster? What were they?*
- *Have there been any previous experiences with similar catastrophes in your region? How were they dealt with?*
- *Did you know how to behave appropriately? If so, from where did you learn how to act and react?*
- *How would it be if there was a similar incident today?*

Behaviour and Coping

- *What did you do when you heard that you might be affected by the catastrophe? What exactly happened when (...) occurred? What did you do?*
- *What situation were you in at that moment? (Were you on your own? Which other people were involved?)*
- *How did you react in the situation? To whom did you turn?*
- *What happened around you? What happened afterwards?*
- *How did you know how to react?*
- *Were you offered help? What kind of help and from whom?*
- *Whom did you ask for help?*
- *Which roles did family, friends, neighbours, and others play?*
- *How and where did you inform yourself about the catastrophe? (regarding how everything would continue, what you were supposed to do, whether there were further threats, etc.)? Did you know at the time to whom you should turn for information about further proceedings, and who is in charge of such a crisis?*
- *How would it be today?*
- *Would you know about it today? (Ask precisely: Who is in charge? What websites were visited? How does one know about those things?)*

Information Behaviour/Expectations

- *What information was crucial for you in order to know how to react? How did you get this information?*
- *How did you feel about the reactions of the public authorities or company when the incident happened? Why did you feel that way?*
- *What would you have needed to react better or faster? In which way would you have needed to receive information in order for you to react appropriately? What kind of information would you have needed to receive?*
- *In the case of a disaster that occurs close to where you live, which media source would provide the most useful information to you? What is the first media source to which you*

would turn for information about a disaster that occurs where you live – and why? Which media would you use to keep yourself updated during the following days – and why?

- *If you read the media reports about the incident / catastrophe, what is your opinion about the media content?*

Risk Awareness

- *You said that you had already lived here (...) years before the incident. Have you ever previously perceived the volcano/factory/river/etc. as a threat? To what extent did you expect such a crisis to happen?*
- *Why did you take the warnings as serious or not serious? Did they or did they not come from the right person or media source, etc?*
- *Which consequences followed from your interpretations of the warnings?*
- *How do you assess the threat now? Are you going to keep living here because you think the chances of getting into such a disaster a second time are very slim? Or do you instead think about moving to a safer area for the medium or long term because of the threat of another crisis (flooding, eruption, disturbances)?*
- *How would you evaluate yourself in regard to risk awareness?*
- *Has anything changed about that since the incident?*

Perception for the Crisis

- *How do you assess the impact that (...) had on you? (as misfortune, bad luck, your own failure, failure of others, etc?) and why?*
- *When you look back on your actions, in what ways would you say that you had acted correctly?*
- *What does this reflection mean to you for the future? Which consequences follow from your reflections?*
- *To conclude, I would like to know what you would recommend to the responsible persons(s) if you were facing such a situation again?*

End of Interview

Did we forget anything that you might want to tell me?

Socio-Demographic Questions

Finally, I would like to ask you for some personal data.

Age _____

Material

Status _____

Highest Educational

Qualification _____

Job

Qualification _____

Please ask the interviewee again at the end if there are any uncertainties either about any of our questions or the answers that he or she had provided.

3.3 Guideline for facilitating the focus groups

Guidelines can only be provided after the analysis of the former two.

3.4 Questionnaire for facilitating the large-scale telephone interviews

Questionnaire can only be provided after the analysis of the focus groups.

4. Analysis

The analysis of the whole empirical material except the data collected in Sweden will be done by sine. Analysis of the Swedish material will be performed by UGOT. The interviews and the focus groups will be analysed both according to each country's specificities, and also

comparatively to each other. The analysis will be based on templates that will guarantee comparability.

The results of the analysis will be displayed in three different reports: the *Report on Semi-Structured Interviews* (D 2.2), the *Report on Explorative Interviews* (D 2.3) and the *Report on Focus Group Interviews* (D 2.5).