



SI Swedish Institute

PROJECT PARTNERS

## BALTInnoSEC *Pan-Baltic Cross-Sectoral Innovation Forum in Societal Security*

### Interim Report

#### *Project background*

Project Partners are conducting a Baltic Sea Region focused (BSR) BALTInnoSEC project. The main goal of the above mentioned initiative is to **connect and match** civil security **practitioners** (responders, civil security administration) & **solution providers**: (businesses e.g. start-ups, SMEs, technology parks, centres and networks, researchers and academia) under themes & risks specific to BSR in a cross-sectoral environment.

The Baltic Sea Region is a region of well experienced civil security authorities, who constantly recognize challenges related to their work. At the same time, the Baltic Sea Region is characterized by advanced knowledge and innovative potential that comes up with a wide range of solution-providers who can fulfil those challenges. They can be start-ups developing technological solutions, higher education establishments and research institutes providing research and methodologies, or even civil security authorities themselves if they develop solutions than can be transferred e.g. to their counterparts in other countries.

In a long term, BALTInnoSEC is planned to be a problem – solving, solution – oriented and, what is important, innovation driven forum held systematically in the Baltic Sea Region. The formula of the forum initially assumes inter alia hackatones and 15 minutes “speed dates” of a pre-chosen subjects – so **we want to achieve something more than simple advertising of solution providers**.

In order to prove the right of its existence and the formula planned, project partners want to prepare **a physical Pilot Forum**.

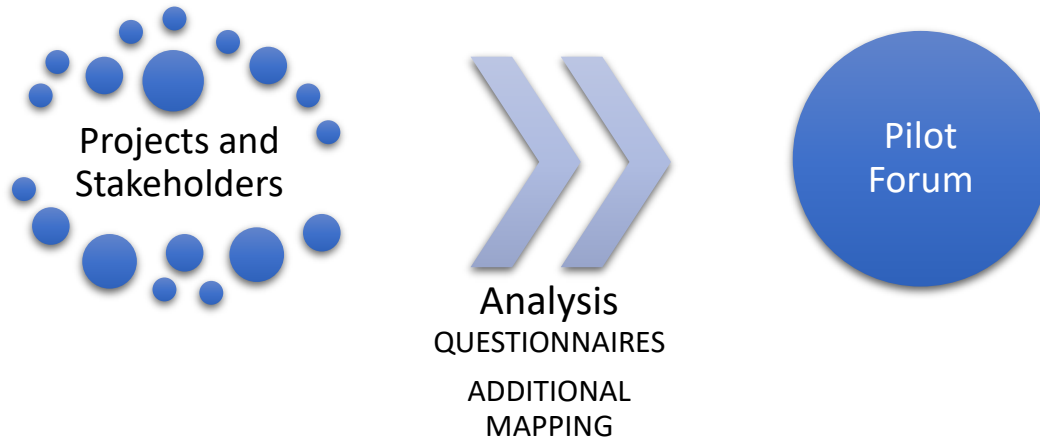
In order to do so, project partners need to **identify civil security challenges and possible solution providers around theme chosen for pilot forum (risk & crisis communication)**.

Mapping exercise have been conducted, covering:

- national and international (with participation of Baltic Sea Region states) projects that dealt with risk & crisis communication;
- challenges, answers and solution-providers identified within these projects;
- challenges, answers and solution-providers identified outside of these projects;
- needs and gaps as well as lost opportunities CBSS Civil Protection Network partners are able to pinpoint based on experience of their own organization or its partners in the civil security system.

The results project partners wanted to acquire are gaps, needs, ideas as well as spotted or lost opportunities both in the projects and among stakeholders.

The end product of answers is an analysis of challenges, possible answers and solutions providers in the BSR, that will enable project partners to organize a physical pilot forum in Warsaw in November 2022 with participation of civil security authorities and solution providers, tasked to solve and address specific issues.



### *Introduction to risk & crisis communication – chosen theme for the analysis & pilot forum*

#### **What we understand as risk & crisis communication?**

Risk & crisis communication is essential in the field of safety and security. It can make citizens feel safer and more secure and as well help authorities to manage the risk of day-to-day emergencies, reoccurring and extraordinary disasters and crises.

Risk and crisis communication is the **process of interaction** between different actors, including public authorities, international organizations, NGOs, citizens, the media, if appropriate, at local, regional, national, European and international level.

It covers, inter alia: awareness raising, warnings and alerts regarding actual or potential risks and threats, informing the public how to behave when such warnings or alerts are given.

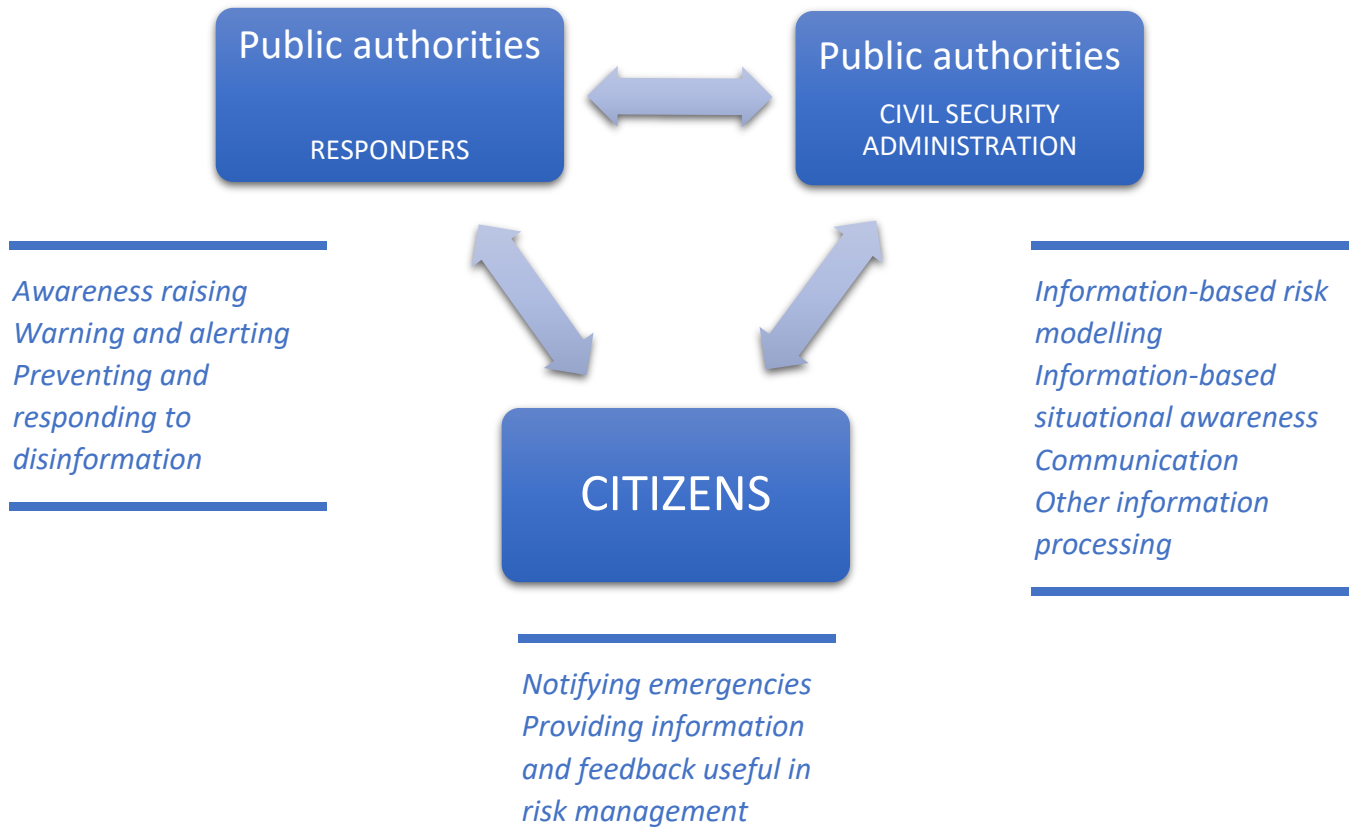
It is also about citizens informing public authorities: notifying emergencies (112, applications) or providing feedback during development of risk management plans.

It can also cover communication within civil security administration (before the crisis: e.g. risk modelling used in planning process, information-based cooperation platforms and during the crisis: e.g. communication between responders, information-based situational awareness tools).

Risk and crisis communication covers both **technological and non-technological** aspects: e.g. alerting tools would be effective only if we take into account psycho-social aspects of human reaction to alerts; communication between responders is not only about using handheld radios, as without solutions for communication management during major crises you risk being overwhelmed with overlapping and unstructured information flow; consulting journalists and external companies or having training with them might be important in developing effective awareness-raising campaign or combating disinformation; artificial intelligence and machine-learning needs to be supported with “human” factors.

Considering risk and crisis communication, one should have in mind also specific needs of vulnerable groups (children, elderly, people with disabilities, people digitally excluded, people of different nationalities and languages residing in your country etc.)

There is also a need to consider role of other risk and crisis communication actors, including media (TV/newspapers/social media), NGOs or partners from neighbouring states and international organizations.



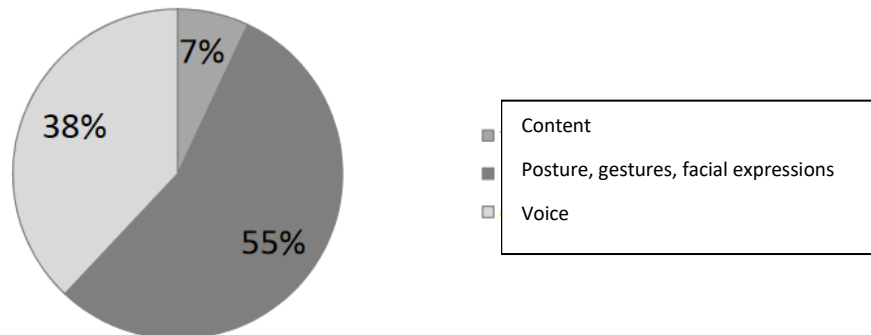
***What is the core of effective communication and how does it relate to a crisis?***

There are few basic principles, foundations of communication process.

- showing respect to your interlocutor, regardless the situation, for every discussion is as important;
- second: coherent, clear and factual manner of speech, one should communicate in a way that is clear to the other person;
- the content of the speech should be adapted to the situation with the use of commonly known vocabulary;
- do not make premature judgments; abandon the tendency to judge, deny, or confirm before you have understood the whole meaning of your interlocutor’s utterance.
- observation of the interlocutor’s non-verbal behaviour; it can be a source of valuable information about what the person feels about the situation; no signs of disagreement with the message should be ignored for it leads to lack of willingness to communicate;
- benefit from the difference in opinions – especially in crisis situations it is common that the interlocutors strongly defend their position and do not see other benefits; both sides have the right to differ in their views, however, it is important to remember that the other party may be right. It is worth accepting arguments of the other side while analysing them carefully.

- keep your word – communication in a crisis situation is a very complex process, often requiring quick decision making, promises making; however, each time you want to make a promise you should consider whether it is possible to carry it out.

Another important factor is the form of communication. A study by A. Mehrabian (1967), after K. Wójcik „Public relations. A credible dialogue with the environment.” shows that posture, gesture, and facial expressions are the most important, as well as voice, context is of a less importance.



As far as the voice is concerned, here the tone, manner of speaking is crucial as well as active listening, not interrupting, correcting, adding our own content, knowing your own truth, lack of interest, giving advice, assuming somebody is wrong, routine, reacting in a schematic manner, conducting an internal dialogue during someone's speech, answering too quickly or with a previously prepared statement not adjusted to the situation and other perfectly known.

Crisis communication follows the same, basic rules but takes into account the type of the crisis situation, crisis situation plan and many different actors. Effective communication during the crisis requires preparedness as well as good post event communication. **The message should build trust**, do not affect public confidence and undermine public authorities and their credibility, which is fundamental.

Communication goal is for the right information to the right people, at the right time so the right decisions can be made and the right communication issued and it needs to be effective and timely.

This kind of [communication consists of](#):

1. Communications governance document detailing who approves what message, when and how.
2. Crisis communication plan that notes clear roles and responsibilities.
3. Pre-written and approved templates for prompt communication (for example what is the first message, what happened and what is being done).

The information we want to share with the environment should **speak the language of its recipients** without difficult formulations, unclear statements. Extremely important for saving the good name of the organisation in a crisis situation is to provide its actors with access to strategic, well-chosen information, which will reach all groups of recipients also taking into account all kinds of vulnerabilities. It should bear clear purpose of the message and the wording of statements, choice of communication tools and systematic monitoring of effectiveness of actions, as well as drawing constructive conclusions from them together with quick reaction to any events occurring during the crisis.

If the situation requires negative feedback, there is always danger that negative emotions will arise and that the relationship will be disturbed. Therefore, it is advisable to use forms of feedback that do not cause tensions between the interlocutors.

Prof. Ann Enander (Swedish National Defence College) during her lecture on psychological aspects of crisis communication (Polish Presidency in the EU workshop on risk, emergency and crisis communication 2011) stated that three basic needs in crisis situations are concerned with **coherence** (understanding the situation and the measures being taken to deal with the crisis), **control** (being able to act and influence one's personal situation) and **social connectedness** (maintaining significant relationships and societal trust). Understanding public reactions also involves developing **preparedness among leaders and communicators** to recognize and support the needs of different groups.

#### *Mapping of challenges for risk and crisis communication, based on:*

- *questionnaire for the CBSS Civil Protection Network (answers received so far from: Estonia, Germany, Lithuania and Sweden)*
- *additional mapping of projects and initiatives with participation of the BSR states*
- *recommendations from concrete case study report: floods in Poland 2010*

#### **ESTONIA**

Estonian Rescue Board has not participated in any projects directly related to risk and crisis communication.

The main challenges related to risk and crisis communications are (based on professional experience and knowledge):

- **Too much various information** and campaigns from different public authorities and also from private sector.
- Cross line – **people know basic crisis behaviour, but do not act accordingly**, because they have no direct experience of the crisis. Although it has now drastically changed since the pandemic, the Ukrainian war and the refugee crisis.
- The receptivity of audience is different in times of peace than in times of crisis. At the same time, risk communication cannot be ignored, because if there is a crisis, it is too late.
- **The abstraction of risk communications**. i.e. if there is no indication of an acute ongoing problem, the media does not tend to be very interested in covering the topic, also people lack of receptivity.
- Problem in finding novelty in dealing with same topics. The constant need to find new angles.
- Local governments have very different levels of capacity in risk and crisis communications, and crisis management in general.
- **Language problem, also media space problem**. Part of the population watches TV channels where state messages do not reach.

#### **GERMANY**

Hamburg Fire and Rescue Service has been working on several international projects dealing with a large variety of disaster management related topics, among them as well risk and crisis communication in civil security. The projects mentioned below identified challenges resulting from gaps in communication. The projects described solutions. Deepening information to the projects, including publications, final reports etc. can be found in the attachment to this questionnaire and / or on the respective websites.



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Some projects of the last years were:

**14.3 Project:** Working together on Macro-Regional Risk; focusing on an all-hazard approach with the thematic blocks Flood Protection, Forest Fires, Nuclear Hazards. for more information please see the attachments (including links, lists, etc.)

**From Gaps to Caps:** Risk Management Capability based on Gaps Identification in the BSR; a follow-up project of 14.3. The purpose of the project was to build knowledge on disaster risk management capability assessments and to develop a more common understanding of such assessments at national level in the BSR. <https://www.bsr-secure.eu/tag/from-gaps-to-caps/>

**Hazard Project:** The project aimed at mitigating the effects of emergencies in major seaports in the Baltic Sea Region. During the project duration the practitioners within the consortium conducted a large number of exercises. Especially these exercises uncovered problems and gaps within the communication during an emergency. More information can be found in the attachments and on the project's website <https://blogit.utu.fi/hazard/>

**CASCADE Project:** The project aimed to bring together civil protection specialists and climate change adaptation experts to build resilience in the Baltic Sea Region. More information can be found in the attachments and on the project's website <https://www.cascade-bsr.eu/>

**ResQU2 Project:** The platform aimed to increase the preparedness and the coordination of rescue operations. More information can be found in the attachments and on the project's website <https://blogit.utu.fi/ResQU2/>

Challenge: HFRS is regularly confronted with the phenomenon, that it is **extremely difficult to reach the most vulnerable groups** in a case of disaster. For example, Hamburg is quite often hit by storm tides and we are not able to reach all the endangered inhabitants, especially those people with a migration background (due to possible language barriers, different communication lines etc.)

## LITHUANIA

Under the Latvian presidency in the EU (2015) Council conclusions on **disability-inclusive disaster management** were adopted. We think they are relevant to the BSR: <https://data.consilium.europa.eu/doc/document/ST-6450-2015-INIT/en/pdf>

In addition to that, there are still gaps in communication with the public – what are the ways of **transmit the message to different social groups** how to prepare for a disaster or how to behave during a disaster. It is challenging to reach all the social groups: young /elderly people; town/village; people with different kind of disabilities, etc.

We cannot only depend on networks as they are not always reliable. We need also **non-network solutions**.

## SWEDEN

During the last twenty years, research, studies and projects have been carried out in Sweden and also together with other countries. It has been about news reporting, the digital development and use of the media in crises, trust perspectives, rhetorical aspects in crises, opinions, journalists' working methods in crises, case studies in several areas to name a few. The results have also been presented in international journals. Method books and training materials have also been produced. Most of the method material is in Swedish. No names and projects that are completed or ongoing will not be reported in this text.



In the area where there is a shortage and which needs to be developed is described below.

### Need for crisis communication research in new arenas and media platforms.

In crises, the crisis communicative ability and credibility of responsible actors is put to the test. In the same way, the credibility of the methods we use in crisis communication is tested. The methods have been based on research and analysis in the subject for many decades.

The digital development in the media area means that another communicative forum must be mastered by the authorities. The area is under constant development and there is no one who can say what the future will look like in the area. What we can certainly point out is that development is rapid and that users play a very large role, even if the established news organizations, authorities and organizations keep a grip on the agenda because they are actors in various events in the event of accidents and crises. We can for the most part see the development as positive in the digital world.

**The authorities must follow developments and be active in the areas where we reach our partners and citizens.** Designing your own technical system solutions is hardly a success factor in the area. It rather contributes to building one's own obstacles, but more important is to be in the daily used forums where communication flows between different actors and the general public. This area is an important arena for the authorities to make themselves heard in order to establish and maintain communication with various clusters of the public.

Crisis communication requires a great deal of work and resources in terms **of coordination between, for example, various societal actors involved in events**. An important area that must be developed further is how coordination can be implemented in order for the crisis communication that is requested to be fast, comprehensible and correct. In the event of accidents and crises, it is important that the actors in the state area do not speak with a split tongue. To avoid this, **management organizational skills are required** for coordination to work.

Results from research and studies that have been conducted believe that a very large part of a crisis work is about crisis communication. We can currently mention the extent of the need for the Corona pandemic and the Russian invasion of Ukraine. It is therefore important to investigate and clarify connections about how a crisis has taken shape and to see what types of information initiatives have been taken by municipalities, regions and authorities as well as organizations. It is easy for an image or thought to represent a crisis in general and the extensive flow of information that formed the backbone comes in the shadow of the most dramatic. For example, it can be about analyzing the media's reporting, examining citizens' trust in authorities and political leadership through opinion polls. To investigate crisis actors' different communication internally, externally and in the event of coordinated efforts by authorities. Studies that mainly focus on investigating crises or phenomena that have occurred can later be deepened in research to go more in depth.

Sweden sees a need for crisis communication research in new arenas and media platforms. An internal work to identify more needs will be carried out.

Crisis communication at heightened preparedness and war.

### - Training, planning, practice, implementation, evaluation and learning...

In crises that threaten our sovereignty, there is always an extensive demand for information and measures. This demand becomes more extensive when there is war in our vicinity. At the time of writing, we can see how communication between citizens, authorities and the media has become extensive before and especially after the Russian invasion of Ukraine. The elected representatives and the citizens have an awareness of these fundamental values that must be upheld in the same way in

security policy crises and wars. It is about creating an approach to how authorities and others shall communicate at readiness and war. Trust between citizens, authorities and the media is ultimately about trust in democracy. **The democratic values are a basic foundation in crisis communication,** which must be a prerequisite in the planning process that must exist and function in the exercise of authority in the event of preparedness and war. Effective crisis communication aims to maintain a well-deserved trust among actors such as municipalities, regions, authorities, the government and other parties such as organizations and the business community. Crisis communication is about communicating to a group of citizens or a wider public on a collective level.

### **FIRE-IN – Fire and rescue innovation network (2017 – 2022)**

Specific risk & crisis communication challenges as described in D1.3 Report on current and future common capability challenges (CCCs and FCCCs) #2 of FIRE IN project:

#### **Anticipate vulnerability, and communicate to the public (TOP CHALLENGE AS IDENTIFIED BY FIRE-IN)**

- Boost the public information function. Develop a specific communication strategy to maintain credibility, including social media.
- Psychological support
- Boost the support/advisory/analyst function to focus on key relevant intelligence to anticipate relevant changes.
- Prioritise response and resources allocation to avoid the collapse of the emergency response system:
  - **There is a need to shift the focus from minimizing potential damages to reducing the collapse of the emergency response system for the final scenario, considering different values, applying triage techniques.** (TOP CHALLENGE scored 7/12 among 12 best FIRE-IN challenges)
  - Anticipate probable alternative final scenarios.
  - Prioritize to grant the availability of responders, logisticians, other resources and key specialists (mobility, effort management, external aids, responders' health...) and also grant a shared understanding.
- Identify, differentiate and deactivate critical points that can propagate the emergency, especially those vectors of propagation that could lead to domino effect.
- Integrate feedback from community.

#### **Distribute decision-making (TOP CHALLENGE AS IDENTIFIED BY FIRE-IN)**

- Identify roles and capabilities from the different agencies and stakeholders in the emergency.
  - Build a shared understanding concerning the scenario and strategy across responders to synchronize simultaneous decision-making. Manage complex information focusing on the multiple levels of decision-making.
  - Distributed decision-making based on assigned missions, on common objectives and a shared understanding on situation.
  - Management by objectives, giving flexibility and autonomy in decision making.
  - Lower decision making.
- **Identify points of coordination in the different zones: from local (hot zone, warm zone ...) to regional and to national. Establish different levels of liaison officers, translators, communication; entrance points; and infrastructures as needed.** (TOP CHALLENGE scored 6/12 among 12 best FIRE-IN challenges)
- Establish the level of command, coordination and support to intervention and identify the standards for information exchange
- Be aware and know the cultural diversity and your role in the situation



### Strategies choosing safe, resilient scenarios, and maintaining credibility

- Strategies shift from minimizing damages towards increasing resilience, choosing scenarios where efforts will work safely, reducing potential chain events, involving safely stakeholders and reducing complexity.
- Focus on maintaining or restoring initiative in decision-making, on providing a predictable environment for operations. Build an organizational structure to overcome uncertainty, based on anticipating the scenario probable evolution and strategies and tactics to deal with it.
- Adapt warning systems and strategies to probabilistic forecasted scenarios.
- To reduce the uncertainty that could appear if the decision-making is taken with out of date information (decision-lag), it is necessary to lower the decision-making to commands on-field that have the real situation at sight, bet for a management based on objectives assigning missions to different teams that will need to synchronize between them (mission-command).
- Collapse. There are sequences that lead to catastrophes so detecting the critical points that lead to the final collapse could represent opportunities to operate/to action. It is necessary to negotiate ways to deactivate critical points for catastrophic scenarios.
- Maintain credibility and reach affected population specifically and all the public.

### Focus on governance and capacity building towards more resilient societies

- Promote quick adaptation to changes in scenario through situation assessment and decision-making structures.
- Focus on small window of opportunities to change policies and governance processes.
- Pre-plan communication management for specific scenarios. Include post-accident procedures.
- Promote the growth of sustainable, risk-decreasing activities via policies, certifications, insurances...
- Involve key stakeholders (risk owners, control owners...) in action-based strategies, considering integral risk management opportunities. Identify strategic ownership.
- To be resilient in front of uncertain risks, the development own skills and community skills should be encouraged fostering habits focused on the adaptation to risk scenarios and on the robustness in front of the risk. Communities should get ready tools alternative to technology that allow them be resilient when technology fails.
- Plan improving the resilience among responders to maintain their response capacity.
- Identify and reduce bureaucracy and other inhibitors that slow progress.
- Pre-plans should be flexible, focused on indicators of key changes and providing tools for alternatives and contingency plans.

### Information cycle

- Compile and validate dynamic data flows. Focus on having a big-picture view, on a timely verification of too-much information, on distinguishing noise from useful information, and on identifying targets and sources of key information.
- Provide clear instructions to potential victims.
- Do specific communications with the participation of responders, stakeholders, politicians and media.
- Improve the ability to extract useful information from crowd-sourcing, from the field and from other sources (distinguish useful information from noise).
- Create interoperable sharing platforms to circulate common information and to establish a common framework for the decision-making.

### Manage key information focused on decision-making

- Circulate information to develop legal standards for prevention and response
- Be prepared to extract useful information from crowd-sourcing.

- Build systems (persons-tools-processes) to integrate and analyse information from different channels, to manage information overload, to anticipate probable scenarios. Build them with comparative results. The aim is to provide a shared understanding of the scenario and operations focusing on anticipated risks and opportunities, and on tracking resources, actions and damages.

#### Define common information management processes between agencies

- Define the information to be shared among agencies, and share a database (cartography, plans, lessons learned,...).
- Define the evaluation process and each agency role on it.
- Relevant procedures and terminology should be known by all responders.
- Share needs and limitations from different agencies (format, procedures, legal aspects...).
- Standardize the shared information between the Call Centres, Dispatch Centres and the Command Post.

#### Provide an efficient, flexible flow of information for a shared understanding

- Manage information in scenarios with domino effect which are time-constrained, or scenarios of risk that could lead to collapse, in order to avoid disinformation that could result in to panic and to the system collapse.
- Identify the uncertain scenario and sources of uncertainty by way of monitoring the situation.
- Share key intelligence to facilitate synchronized actions and to maintain the initiative on a changing scenario.

#### Develop public self-protection to minimize responders exposures (TOP CHALLENGE AS IDENTIFIED BY FIRE-IN)

- Focus on prevention, self-protection and risk awareness of population. Encourage self-protection measures (subsidy, exceptions in regulations...) Create a culture of emergency.
- **Train/educate/inform general population starting from scratch and in a basic and easy way, about knowledge of risk and appropriate behaviours, specially targeting those more exposed and vulnerable. Address all phases of emergency and the different levels of risk. Provide tools to facilitate adequate decision-making: checklists, emergency kits ...** (TOP CHALLENGE scored 1/12 among 12 best FIRE-IN challenges)
- Agree with public and private stakeholders on accepted risk and self-protection measures reaching pacts and deals. Do mandatory exercises financed by the owners of high risk activities. Focus on crowd management and panic. Disseminate instructions to apply in case of risk, in order to strengthen the appropriate population reactions.

#### Involve communities in preparing population for the worst scenario before it happens (TOP CHALLENGE AS IDENTIFIED BY FIRE-IN)

- **Change of paradigm. From 'We, authorities, will protect you' to 'You, citizen, should be actively involved'. These affirmations mean that you should be prepared to be self-sufficient concerning to your own protection and your community protection always inside the framework of the emergency. Be used to this sort of situations normalizing them.** (TOP CHALLENGE scored 3/12 among 12 best FIRE-IN challenges)
- Educate kids and the young ones.
- Explain clearly that responders cannot protect everybody in case of major incident. Self-protection and prevention are keys.
- **Build trust involving communities and key stakeholders in risk management permanently: from risk awareness to the preparation of scenarios, to the decisions and behaviour during the emergency, to verifications, to drills and exercises.** (TOP CHALLENGE scored 4/12 among 12 best FIRE-IN challenges)

- Perform communication campaigns targeted to specific communities, with messages, exchanges and media carefully studied. Generate multi-language apps, with standardized symbology. Consider community's lessons learnt by past disasters, collective memory, community's values.
- Manage and involve mass media. Perform training on means for mass information (social media, smartphones...).
- **Be prepared to provide massive alerts to population.** (TOP CHALLENGE scored 12/12 among our 12 best FIRE-IN challenges)
- Plan and prepare the involvement of volunteers and other civil society members in the emergency.
- Identify key stakeholders and increase their understanding about the risk, either those with power to create opinion and those that take key decisions.

### Cultural changes in risk tolerance and resilience

- Encourage the change culture of risk in an integral way:
  - Educating children and the young ones.
  - In an integrated way: at home, inside the community, at work, free time, ad campaigns, journalistic information.
  - Understanding how risks could affect the citizens, assuming the implications of their own decisions.
  - Transforming the memory of historical catastrophes in values for the most resilient communities.
  - Training/educating the next generation of technicians that will take decisions about planning, education, management, risk culture and risk management.
  - Broadening the scope of the first-responders towards the proactive management of risk: risk knowledge, encouraging community self-protection, prevention...
- Use all opportunities for cultural changes in risk awareness and policies.
- Communication in uncertain events (chained events, dynamic environments...) is crucial; it has to be prepared, trained and stakeholders should be involved.
- Focus on credibility and resilience.
- Empower communities and stakeholders. Recognize and partner with existing civil-society initiatives addressing critical issues.
- Reach population that has no trust in government authorities through non-governmental stakeholders.

### Use technology to assess risks and minimize responder's engagement (TOP CHALLENGE AS IDENTIFIED BY FIRE-IN)

- Tools for situational assessment and risk awareness.
- Locate responders (and victims) at all times, anywhere and be aware of how long they can sustain efforts (I.1.b).
- Identify and map the exposure.
- Unmanned terrestrial and aerial tools to assess the risk and unmanned tools to transport equipment on the field.
- **Technologies used in interventions should be:**
  - Useful.
  - Simple, intuitive and easy to use.
  - Easy to integrate and interoperable.
  - Easy to transport, deployable on field, light, with high autonomy.
  - Robust, resistant, long duration, able to tolerate severe/harsh conditions.
  - Open access.
  - Usable by people with disabilities (TOP CHALLENGE scored 2/12 among 12 best FIRE-IN challenges)

- Have available and reliable tools for rapid diagnostic.
- Assure the maintenance/continuity of the energy (electricity, fuels...) and communications.
- Intelligence applied to materials and tools used in operations.
- Responders should invest in the development of new technologies (procurements of innovation, public-private network...).
- Involve the users from the beginning, at the designing phase of new tools and services.
- Adequate forecasts and simulations to local scale and microscale, including smoke/evacuation modelling

#### Forecast and simulate complex scenarios

- Tools and mechanism to monitor that the operation/response progresses as planned.
- Tools to massively alert population in real time.
- Quick screening tools for triage.
- It is necessary to have Big Data and certified artificial intelligence (AI) tools and validated models that simulate the evolution of the scenario, both for the decision-making process. It is necessary to develop processes to assess, validate and/or certify the level of TRL and the operative application level of services and tools used by responders (EPIS, models of behaviour, AI, etc.). End users should be an active part of this process.
- Virtual reality to train responders.
- Crowd-sourcing and multiform data integration tools

#### MASSCRISCOM - The Mass Crisis Communication with the Public Project (2009-2011)

MASSCRISCOM has considered carefully the immense paradigm shift of crisis communication which has taken place, from the traditional way governmental organizations have worked with crisis communication, i.e. only issuing warnings and disseminating information, which is becoming more and more obsolete. This is due to globalization, the technological development, a new media landscape, new communication needs and demands and increased transparency, etc. There has been a move from one radio channel to both direct and indirect communication through multiple channels, i.e. media, web sites, telephone services, social media, etc., which leads to a need to rethink on how to conduct the crisis communication.

All of this formed the background to the report of MASSCRISCOM Project Results, which consists of two parts: An analysis of demands on the communication system that have to be fulfilled to handle one way or two way crisis communication between authorities and the public, including an information number and capability for disseminating warning and information messages to the public within a particular limited geographical area as well as general requirements on robustness, and examples on what communication channels that can fulfil these identified requirements. A **coherent generic crisis communication model** based on an all-hazards approach and existing conditions in order to improve communication between the public and media and reduce the burden on the European 112 Emergency Call Number is the more significant result.

#### BeSeCu – Human behavior in crisis situations: A cross cultural investigation to tailor security-related information (2008-2011)

BeSeCu project focused on behaviors of people in emergency situation, taking into account the issue of communication and cross-cultural perspective.

As stated in the Final Report Summary, some suggestions for further work are:

- A study on how theoretical and practical emergency knowledge could be given to inhabitants in the best way, and what elements should be included in this education and training.
- A study on how to improve communication at the scene of the emergency to people involved in an emergency.

- Design of communication guidelines adapted to specific countries. This work could for example include guidelines on what can be applied as a standard across countries and also to identify if there are specific needs for certain countries.
- Results of trials suggest that the response phase behavior may be strongly culturally dependent.

#### Recommendations of the Final Report Summary for emergency communication:

- People should be given education, theoretical as well as practical (drills), on how to manage an emergency situation. Training programs, e.g. held by emergency services, should be given in schools, pre-schools and workplaces.
- People should be given the available information during an emergency. People have a need to know about what they are expected do, about the nature of the incident, and about the type of threat the incident pose to them.

#### Core findings of the Final Report Summary:

- Evacuation procedures can be improved on the basis of the findings of the BESECU evacuation trail. While at this stage it is difficult to quantify the long-term impact of the project, it is estimable that the impact will be considerable since new equations will go into evacuation procedure planning.
- Crowd managers and evacuation managers, as well as other first responders can integrate key findings into their educational programs. These results are shown in the deliverable (communication standards, education silent evacuation).

#### CASE STUDY FINDINGS: POLAND-FLOODS

Floods in Poland in 2010 so far have been the only natural disaster that led to the need for activation of the Union Civil Protection Mechanism and seeking assistance from abroad. 25 people died and at least 23000 were displaced as a result.

Number of conclusions and recommendations referring to risk and crisis communication have been identified by the state authorities:

- At the beginning of a crisis It is reasonable to determine the frequency, method and format of reports between stakeholders and to avoid duplicating information and requesting the same information by different entities.
- A method of selecting, verifying and analysing all data flowing from the whole country should be developed in the form of a procedure.
- It is necessary to create a database of resources to be used in a crisis situation at a central level.
- It is also justified to create an effective tool for the exchange of information in close to real time between all entities of crisis management in the form of an IT system that enables the ongoing introduction and verification of data.
- It is necessary to systematically modernize the communication system throughout the country in order to ensure uniform, compatible communication and easy access to digital data (resources databases, maps, etc.). The need to provide dedicated telephone lines for victims and for those taking part in operational activities should be taken into account.
- It is necessary to improve the hydro and meteorological information system in order to improve the speed and coordination of information flow, enable the use of IT tools. Weather forecasts should be more precise, easier to access (e.g. on the website), more frequently updated and sent in a form that is easy to further edit, e.g. for processing into clear messages for the public.
- It is justified to improve the process of informing the public about the need to evacuate and to educate the public about the appropriate procedures to ensure the safety of people.

- It is reasonable to designate responsible personnel to cooperate with the media and to limit contacts with the media of people directly involved in the activities. The organization of daily briefings and the issuing of periodic official announcements by provincial governors are assessed as good practice.
- It is necessary to build an IT system that collects and processes information in the field of water management. The task is also to obtain flood hazard and flood risk maps, as well as an IT system for map management and all information in the field of meteorology, hydrology and water management (based on this recommendation the [ISOK](#) project have been implemented.
- It is necessary to equip all services and entities involved with a reliable wireless communication system. The flow of information between the services directly involved in the flood control operation (between the commanders of individual sections, staff members, etc.) was correct. However, shortcomings were identified as regards the insufficient number of command and communication vehicles. The problem was also the lack of an integrated radio communication system for emergency services. During the operations, mainly mobile phones were used, which were unreliable, especially in the event of storms.

**Mapping of solution providers for identified challenges for risk and crisis communication, based on:**

- *questionnaire for the CBSS Civil Protection Network (concrete examples received so far only from Germany)*
- *additional mapping of projects and initiatives with participation of the BSR states*

## GERMANY

Hamburg's ministries and other authorities and agencies are cooperating with universities (e.g. flood simulation software) and solution providers (e.g. mobile dyke protection systems), not only as a way to support our crisis communication, but as well to assist the city's units in dealing with disasters.

→ [HoRisk - Hochwasserrisikomanagement für den Küstenraum | WB \(tuhh.de\)](#)

→ [MOBILDEICH GmbH - Das innovative Sandsack-Esatzsystem im mobilen Hochwasserschutz](#)

We are cooperating with federal authorities and agencies (BBK, THW), which are in contact with private companies (solution providers)

→ [Homepage - BBK \(bund.de\)](#)

→ [THW](#)

## ADDITIONAL RESEARCH

Social media is becoming an increasingly important data source for learning about breaking news and for following the latest developments of ongoing news. This is in part possible thanks to the existence of mobile devices, which allows anyone with access to the Internet to post updates from anywhere, leading in turn to a growing presence of citizen journalism. With the massive use of social networks, people are generating their digital trace which provides plentiful features of their behaviour, social tier, and finally urban dynamics. People are now sharing their space-time information with others, read and follow the posts of other people in various social network platforms such as Facebook, Twitter, LinkedIn, etc. It can be used for recommendation system, and analysis of sentiment and different social features as well as geo-referenced, geo-tagged messages (such as [Galileo EWS](#), [Alert RCB](#)) can be sent or geo-density of population checked.

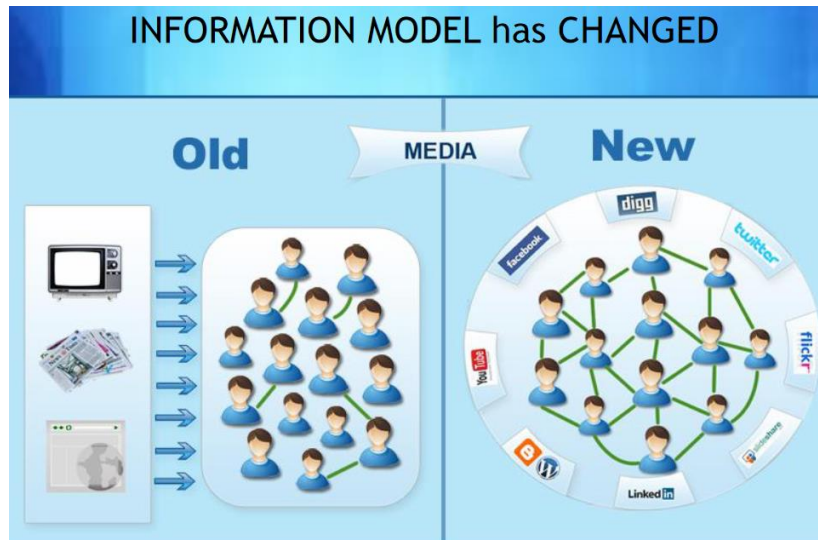
On the other hand, social media and their mechanisms are suitable for spreading fake news, disinformation and that divides societies and undermines trust in authorities.

The huge [Facebook vs Cambridge Analytica scandal](#) showed how our online data and the content we see online can be manipulated for political purposes. A [study](#) from 2016 shows that 25% of Americans cited fake news website weeks before the 2016 Presidential election. This was not the only case but shows how big are the risks that new technologies bring. Companies like Google and Facebook decided



to fight the amount of fake news on their sites (for example Google extension „Fake News Alert” or Chrome and Facebook “[B.S. Detector](#)”). After the previously mentioned Cambridge Analytica scandal, Facebook and other tech giants took data protection and fake news battling seriously.

On Instagram, you’ll get a warning to fact-check your post before sharing. There are dedicated fact-checking networks like [Poynter](#) allowing to perform an international [fact-check](#). Companies use for example [Mediatools](#).



**A tailor-made trainings** are important to be provided for the authorities and administration on all levels. Although every institution has their public relations specialists it is crucial to hire an external company which will analyse the procedures and prepare guidelines adjusted to the situation and groups of people, preceded by questions concerning for example the accepted level of panic. A simulation of the crisis situation shall be provided together with custom made set of words to be used and those to be avoided, ways of shaping the message, communication, gestures, voice, etc. A tailor-made training for organizations should be an advanced one and the basics already well-known. On the basis of the Prime Minister’s Office „Effective communication with special focus to crisis situations” (Appendix 1), comparing to for example MSB’s [Crisis Communication Handbook](#). The handbook focuses on realistic trainings meaning emergency management and chain of command exercises incorporating communication issues one can certainly state we need to move forward. Critical incidents exercises should arrange employees and the people responsible for emergency management to train communication channels (probably together with the PR company) and information flows between public authorities, public authorities and the public as well as the public authorities and the media. Another example of tailormade communication regarding to the risk type is “Communication with the Public in a Nuclear or Radiological Emergency” by the International Atomic Energy Agency (see Appendix 2).

The statements and trainings should be supported by **guidelines** provided by the appropriate authorities. In Warsaw, for example, it is the Security and Crisis Management Office of the Municipal office of Warsaw providing the [„A guide on how to deal with emergencies”](#) and all [crucial educational materials](#).



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PR companies of course also provide communication plan and information for the media and social media, depending on the agreement. They too need to be up to date with newest technologies and both sides of them, i.e. the Surface Web and Deep Web and for the latter even [Dark Web](#).

Those who come to Poland will automatically receive text message called „[Alert RCB](#)” from the Government Centre for Security (RCB). One gets the text when a life threatening situation emerges in their area of stay. The text are triggered by the forecasts prepared by the Institute of Meteorology and Water Management. It is a short text message (SMS) received on the cell phone with information on

the type of emergency along with the location, as well as the source of the warning. No matter the operator. The amendment to the Telecommunications Law and certain other laws on June 11, 2018 requires all operators to immediately send a message to all users in the area determined by the RCB director. Messages are issued only in exceptional situations that can realistically threaten human life and health.

**Research** and its results’ application is of importance too. As an example, the Main School of Fire Service (SGSP) has done research on existing hand signals/non-verbal signs for communication between survivors and emergency responders. As a language, culture and ethical background might pose a barrier in effective communication (e.g. during evacuation), after thorough analysis, the following 12 handsignals have been identified in the international survey to be understandable across cultures: 1. Stop; 2. Follow me; 3. Run, Hurry up; 4. Go this way; 5. Calm down; 6. Come to me; 7. Move back; 8. Crawl; 9. Jump down; 10. Lay on the floor; 11. Help me; 12. Do not do it.

The last events, COVID-19, Russian aggression on Ukraine shows the importance of many different organizations, authorities working together. A visible need for the cross sectoral approach cross-country approach with a linkage made by especially technical innovations, IT (AI, Internet of Things, 5G) which open a new dimension of tackling crisis situations and communication. The events of the last years show that organizations, administrative level need and are able to change the approach to benefitting from all actors. Innovation is risk based. Crisis knows no boundaries and at the same time brings solutions. To make the cross sectoral approach work there is a need for: cooperation, communication, lack of boundaries and a team of open minded people eager to act as an entrepreneurs, most of the time out of the box. The response to the questionnaire shows we, ourselves need to communicate eagerly and openly among our organizations and reach for contacts in other offices, for example in the field of innovations or dealing with SEM or entrepreneurs in general. The last events are also a great background to gather information and identify the gaps in the sphere of communication.

[Hack the Crisis](#) – movement which began in Estonia has shown a new approach to tackling crises. It reached 40 countries and more than 100,000 participants. It was the public and private sector to organize a two day online hackaton to develop systems, applications which will support the government in the rough times.

As a result few technological solutions were created: <https://koroona kaart.ee> -a map which displays current data about the spread of the virus; SUVE <https://eebot.ee/> – a chatbox, the source of reliable information about the crisis; <https://coronatest.ee> – a health questionnaire helping to asses one’s risk of infection, <https://vaab.ee> – a platform helping to connect volunteers with medical background.

Lithuanian made app [Act On Crisis \(AOC\)](#) – provided emotional support tools for lockdown people such as breathing techniques, anonymous support communities and free therapy sessions with certified professionals. Alike app was made by Polish team – [Mindgram](#), an online platform and application for

employees individual psychological and coaching support as well as group one delivered 24/7, payed by the employer. Another is ReApp.

Polish medical sector (Instytut Matki i Dziecka – Mother and Child Institute) has just started „[Mother and Child Startup Challenge](#)” first of this type in the healthcare system. Four Clinical Hospitals wish to

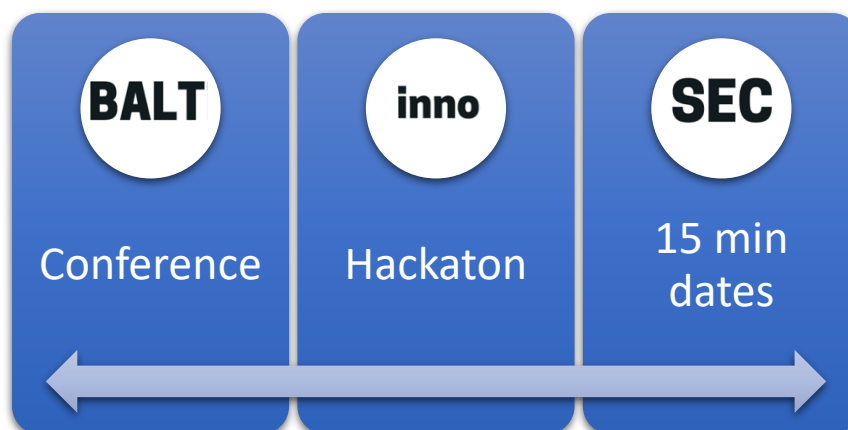
acquire innovative solutions or new processes that can be implemented in the sector. [Tooploox](#) company during the HackTheCrisis hackathon created „[Visual Crowd Detector](#)”, an AI and machine learning based algorithm allowing for crowd detection and places needed to be disinfected. The application detects human encounters in images. Its goal is to help combat COVID-19 by pinpointing the most crowded areas using the monitoring system. It is being used by the municipal city of Gdynia. [GovTech Poland](#), government based, organizes in Poland the biggest gov hackathon „[HackYeah](#)”.

The examples multiply. For more broad view and networking purposes, as one of our colleagues suggest we could make a research to see what types of information initiatives have been taken by municipalities, regions and authorities as well as organizations to see what was most suitable, well organized as well as which actors should not be taken into account due to occurrence of issues of any kind.

A source of information on how to approach crisis cross sectoral communication can be the [The Center for Excellence in Disaster Management and Humanitarian Assistance](#) (CFE-DM), a United States (U.S.) Department of Defense (DoD) organization comprised of nearly 30 subject matter experts that provide academic research, civil-military coordination training, and operational insights to support decision making before, during, and after crises. The Center is designed to bridge understanding between humanitarians, civilian, and military responders. CFE-DM partners with a diverse group of governmental and nongovernmental actors, as well as academic institutions to increase collaborations and capabilities in humanitarian assistance and disaster response.

### SOLUTION PROVIDERS

The Pilot Forum is planned to be organized in one day with an approximate duration of 5 to 6 hours, and three pillars of international, BSR specific, cross-sectoral meeting of professionals under one type of risk.



First pillar – the Conference, as an exchange of experience, new ideas, approaches, studies, lessons learned, moderated by pre chosen civil protection professional in the field of crisis and risk communication. Second, a hackaton consisting of teams of developers, IT professionals who shall be



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given a predefined task based on the need or gap collected from the Baltic Sea States to be coded into an IT solution. The

The third pillar is planned as a networking of pre-chosen representatives from the authorities, academia, business, researchers, end users, and other stakeholders whose goal is to search for synergy of the needs, ideas and solutions. They shall be given 15 minutes each for one meeting after which the participants are to decide whether they see the synergy and would like to meet again.

In order to achieve effective and optimal matching of the actors, tasks to be tackled, solutions to be coded under the risk and crisis communication theme an analysis of the market was carried out. The key to the approach was to make it corresponding to the three pillars. Therefore, a broad research was made in the below mentioned entities:

- 1) Technology Parks
- 2) Think Tanks
- 3) Investment Companies
- 4) Venture capitals
- 4) Developers
- 5) Universities, Centres for Technology Transfers
- 6) Conferences
- 7) Fairs
- 8) PR companies
- 8) University of Psychology
- 8) Projects
- 9) Developers' meetups

The list of the solutions is included in Appendix 3. Nevertheless, risk and crisis communication theme requires personal contacts, number of phone calls which will only then lead to finding synergies and matching stakeholders.

At the halfway point 81 e-mails were sent to technology parks, think tanks and investment companies with an enquiry for solutions and solution providers in civil protection field, connected to risk and crisis communication. It started to be visible that some of the companies do not want to share their contacts referring to GDPR, some offered their services in organizing the event, some were not interested in cooperation, some offered consulting, some proposed they can insert an article on their webpage (mamstartup.pl).

It was clear that the online market analysis is not enough for the process of choosing the right solutions and providers. There is a need for a dedicated personnel to make direct, sustainable, contacts.

One of the answers:

Dzień dobry Pani Bożeno,

Niestety zgodnie z RODO nie możemy udostępnić takich informacji.

Pozdrawiam

Reading “Good morning, Mrs Bożena, unfortunately considering DGPR we can not provide you with such information”.

Such three pillar approach co-created and co-developed among professionals allows to focus on a concrete risk and brainstorm through the scenarios of possible events and, identify challenges what is most important work on response to them during the peacetime. And the Risk and Crisis Communication is the fixed position in every crisis situation.

**Expected benefits from BALTInnoSEC project, pilot forum and future forums. Possible added value of the project and forums in comparison to already existing “networking” projects in civil security.**

#### **ESTONIA**

Since we are not participating in any risk and crisis communication projects at the moment, the benefit of forums are exchange of experiences and collection of ideas for possible solutions to the problems listed above.

#### **GERMANY**

We (HFRS and the other German actors within BSR) have already rather well functioning national and international networks, but we are mostly meeting the same persons from the same organisations and with similar professional backgrounds. Therefore, we are eager to widen our network, meeting experts from other organisations and with other professional backgrounds and expertise and to work on the already identified risks. We would like to discuss our problems with colleagues from other parts of the BSR, if there might be other and / or better solutions for us.

#### **LITHUANIA**

IT Technologies are developing very fast, therefore the public sector is not aware of all possible innovative solutions. We would see the Forum as an educational tool to get acquainted with possible new solutions for communication with the public, and transmitting messages. The companies could present newly available tools or propose innovative solutions for challenges we face (best, innovative ways of communication with different social groups, between different sectors etc.). We could identify the most common challenges we face in the region and ask the companies to present possible solutions.

#### **SWEDEN**

Suggestions on how questions may be of interest in a future project. The results should provide knowledge of, guidance within, tools for and recommendations.

- The authorities and others shall already in peacetime plan for and build an ability to conduct crisis communication around the clock during all days of the year when a security policy crisis prevails.

- The authority and others shall carry out planning that is adapted before, during and after a crisis. The construction means creating conditions for a high capacity already in peacetime.
- Authorities etc, Regardless of the state of the country, it must provide citizens with fast and accurate crisis communication that can be crucial for their lives and health.
- Authorities etc, shall plan for and be able to conduct crisis communication in the event of minor incidents to that which concerns an extensive war situation.
- Authorities etc, must continue to work to ensure that a vital debate and exchange of opinions must continue within the public debate even when a security policy crisis prevails.

The project will be implemented if possible within a multinational collaboration to create common conditions. The performers consist of researchers in crisis communication from the member countries.

The aim is to gain a broader insight into the area where the goal is to find a broader consensus on heightened preparedness or war. When it comes to inviting different actors, it is about finding the right people who know the questions. Many companies have interesting cases to share experiences about.

## Conclusions and next steps

- Questionnaire, project mapping and case study analysis confirm wide range of challenges related to risk & crisis communication.
- Majority of identified challenges relate to non-technological aspects of communication, although technology still might be a bottleneck for effective crisis management .
- Technology is showed rather as a facilitator of effective communication that enable empowering of soft skills, guidelines and procedures.
- Project Partners have investigated a range of solution providers coming from civil security entities, academia, business, startups, entrepreneurs. This has been done mostly via project mapping and contacting accelerators, seed capitals, start-up boot camps, innovation platforms, Startup Poland, Aula Polska, Startup Hub Poland, Hudge Think and other.
- Innovative solution-providers seem to be mostly unknown for questionnaire responders. There might be a need to engage additional personnel (strictly risk&crisis communication practitioners, innovation departments) from CBSS CPN into further project activities
- Innovation accelerators, seed capitals, start-up boot camps, innovation platforms might be so far underestimated facilitators of relations between solution-providers and end user and should be further explored also in term of their possible role in BALTinnoSEC forum
- Contacts will be maintained between solution-providers and end users in term of development of the BALTinnoSEC forum to prepare the event in a cost effective way from which both solution-providers and end-users will benefit.