

D913.52 – TRAINING MODULES FOR SOCIETAL IMPACT ASSESSMENT

SP91 - PROJECT MANAGEMENT

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The DRIVER+ project

Current and future challenges, due to increasingly severe consequences of natural disasters and terrorist threats, require the development and uptake of innovative solutions that are addressing the operational needs of practitioners dealing with Crisis Management. DRIVER+ (Driving Innovation in Crisis Management for European Resilience) is an FP7 Crisis Management demonstration project aiming at improving the way capability development and innovation management is tackled. DRIVER+ has three main objectives:

- 1. Develop a pan-European Test-bed for Crisis Management capability development:
 - a. Develop a common guidance methodology and tool, supporting Trials and the gathering of lessons learnt.
 - b. Develop an infrastructure to create relevant environments, for enabling the trialling of new solutions and to explore and share Crisis Management capabilities.
 - c. Run Trials in order to assess the value of solutions addressing specific needs using guidance and infrastructure.
 - d. Ensure the sustainability of the pan-European Test-bed.
- 2. Develop a well-balanced comprehensive Portfolio of Crisis Management Solutions:
 - a. Facilitate the usage of the Portfolio of Solutions.
 - b. Ensure the sustainability of the Portfolio of Solutions.
- 3. Facilitate a shared understanding of Crisis Management across Europe:
 - a. Establish a common background.
 - b. Cooperate with external partners in joint Trials.
 - c. Disseminate project results.

In order to achieve these objectives, five Subprojects (SPs) have been established. **SP91** *Project Management* is devoted to consortium level project management, and it is also in charge of the alignment of DRIVER+ with external initiatives on Crisis Management for the benefit of DRIVER+ and its stakeholders. In DRIVER+, all activities related to Societal Impact Assessment are part of **SP91** as well. **SP92** *Test-bed* will deliver a guidance methodology and guidance tool supporting the design, conduct and analysis of Trials and will develop a reference implementation of the Test-bed. It will also create the scenario simulation capability to support execution of the Trials. **SP93** *Solutions* will deliver the Portfolio of Solutions which is a database driven web site that documents all the available DRIVER+ solutions, as well as solutions from external organisations. Adapting solutions to fit the needs addressed in Trials will be done in **SP93**. **SP94** *Trials* will organize four series of Trials as well as the Final Demo (FD). **SP95** *Impact, Engagement and Sustainability*, is in charge of communication and dissemination, and also addresses issues related to improving sustainability, market aspects of solutions, and standardisation.

The DRIVER+ Trials and the Final Demonstration will benefit from the DRIVER+ Test-bed, providing the technological infrastructure, the necessary supporting methodology and adequate support tools to prepare, conduct and evaluate the Trials. All results from the Trials will be stored and made available in the Portfolio of Solutions, being a central platform to present innovative solutions from consortium partners and third parties, and to share experiences and best practices with respect to their application. In order to enhance the current European cooperation framework within the Crisis Management domain and to facilitate a shared understanding of Crisis Management across Europe, DRIVER+ will carry out a wide range of activities. Most important will be to build and structure a dedicated Community of Practice in Crisis Management, thereby connecting and fostering the exchange of lessons learnt and best practices between Crisis Management practitioners as well as technological solution providers.

Executive summary

This deliverable describes the training approach including the modules and training materials that form the content of the training on Societal Impact Assessments (SIAs). It utilizes inputs gained from the DRIVER+ Trials and training sessions, to make the modules usable and relevant beyond the project.

This deliverable is designed to be used by the trainers who will train crisis management practitioners in how to carry out SIAs. Such assessments are advised to reveal the way in which innovative crisis management (CM) solutions might create (unintended) negative or positive impacts on society at large. The target group of this deliverable is the trainers who will lead the sessions that train crisis management practitioners in undertaking societal impact assessments. In Section 1, the development of the training modules is explained, including the feedback received from the trainings conducted within the framework of the DRIVER+ project. These trainings included practitioners from the project and external participants, and were intended to improve the content and approach of the training. The section also details the changes that this feedback has led to.

The core of this deliverable is the training modules (provided in Annex 2 [33] and Annex 3 [61]), which not only combine contents with training methodology, but also include concrete examples, illustrations, presentations and work sheets, i.e. materials that can be used to organise future training sessions. These are explained in Section 2. This deliverable builds on the Societal Impact Assessment framework (delivered in **D913.31** *Societal Impact Assessment Framework Version 2* – Annex 2.2[37]). This deliverable presents three modules necessary for conducting training sessions:

- Module 1: A presentation of the concept of SIA and why this is crucial to European CM.
- Module 2: A presentation of the DRIVER+ methodology for doing SIA.
- Module 3: A presentation that allows learners to implement the methodology themselves via group work.

The training modules are a combination of online presentations and group work/ individual assignments. By following the SIA training modules, as described in this deliverable, CM practitioners, researchers, endusers, solutions providers etc. should be able to better understand, as well as mitigate, the undesired effects specific CM solutions might have on society and enhance the positive effects.

The direct purpose of the SIA trainings within DRIVER+ was to train the consortium partners by using a concrete methodology which has been developed after study of academically accepted teaching methods and research papers on the concept of societal impact (see **D913.31** for further explanation of the research), focusing on how to carry out a SIA of the crisis management solutions available through the Portfolio of Solutions. The purpose is to avoid negative societal side effects and to foster positive societal impacts. Based on the insights gained from the SIA trainings carried out within the DRIVER+ project, a final training approach has been developed. This final result is presented in this deliverable and is ready for use beyond the project.

Within DRIVER+, the SIA training sessions were conducted by the authors of this deliverable. However, the ultimate goal of the work on societal impact in DRIVER+ is to create a sustainable and usable methodology that can be used as a means to integrate SIA practically into CM beyond the scope of DRIVER+.

Specifically, the training methodology and the training components presented here allow the SIA framework (as described in **D840.11** and **D913.31** [37]) and a set of example assessments that were developed using the final version of the SIA framework (delivered in **D913.41**[39]) to be conveyed to the DRIVER+ consortium partners and ultimately to other crisis management professionals. This will be achieved through the SIA training being incorporated into the Training Module that accompanies the Trial Guidance Methodology, in which the SIA framework is included. This documentation will be available from the project's website, the CMINE online platform, and the Centre's of Excellence that the DRIVER+ project is trying to establish.

Concretely, this document can be viewed in two parts: Section 1 provides information on the creation of the SIA training and the revisions that it has been through, to give the trainer confidence that the trainings are based upon significant research and are usable within the learning environment, based upon the refinements made after four deliveries of the training in different contexts.

Section 2 and 3 describe how to deliver a training course: the structure of the course, the materials that can be used and the preparation required and introduce the presentations that contain the core of the training: the three Training Modules. For trainers that simply wish to prepare for a training, they can begin studying the document at Section 2.

For further reference to the training material, users can also refer to the Trial Guidance Methodology (TGM), in which the SIA Framework is incorporated and which is accompanied by a TGM Training Module, in which the SIA Training is incorporated, that provides explanations on the full process of preparing and executing a Trial.

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List of Acronyms

Acronym	Definition
СМ	Crisis Management
CoW	Collaborative Workspace
DoW	Description of Work
Dx.x	Deliverable
EU	European Union
FP7	Framework Programme 7
NEPA	National Environmental Policy Act
PBL	Problem-Based Learning
SIA	Societal Impact Assessment
SP	Sub-project
SOTA	State of the Art
TBL	Team-Based Learning
UAV	Unmanned Aerial Vehicles
WP	Work Package

1. Introduction

1.1 Objective of this deliverable

This deliverable is designed to be used by trainers who will train crisis management practitioners in how to carry out Societal Impact Assessments (SIAs), i.e. assess the way in which crisis management (CM) solutions might create (unintended) negative or positive impacts on society at large.

The training sessions have been tailored to provide solution providers, practitioner organisations/end-users and researchers with a practical method for conducting SIAs on the CM solutions that they are working with. This methodology has been developed and improved through delivery of four separate training sessions within the consortium of the DRIVER+ project and has been modified based upon the feedback received after each training. The content of this deliverable explains the feedback received from each session, and then introduces the final version of the training modules, which are now ready to be used by CM practitioners external to the DRIVER+ project. The example assessments set out in **D913.41 [1]** can be read by both the trainer and the learner prior to the training and demonstrate the expected output of undertaking a Societal Impact Assessment of a CM solution.

Through the SIA training, the objective is for the CM practitioners to be able to conduct such assessments themselves on the solutions they are developing or employing. This will be done by following three training modules which are the key parts of this deliverable:

- 1. A short presentation of the DRIVER+ methodology for doing SIA.
- 2. A description of the SIA training modules
- 3. The presentations and supporting materials used to conduct the SIA training

This deliverable presents the final version of the SIA training modules, as included in the Annexes. The modules been improved throughout the project via the dissemination of the sessions and took the learners' feedback. These modules are based on the SIA framework version 2 presented in [2] and on the second set of societal impact assessments (by using the SIA framework) presented in [1].

The design and implementation of the SIA approach, as developed in the DRIVER+ project, serve as a vantage point for innovation in CM. They provide a SIA framework that can be used to carry out SIAs [2], a set of example assessments [1] and finally, relevant training modules that can be used to train CM practitioners in how to use the SIA framework to carry out assessments themselves. Since the final SIA training modules (as presented in this deliverable, and as integrated in the TGM Training Module) will be available in open access through the DRIVER+ website, they will be ready for implementation in future CM projects. The ultimate goal is to contribute to making SIA a standard procedure in CM at large, by making the DRIVER+ approach a basic reference model for SIA in European CM.

1.2 List of Documents Related to the Development of the Societal Impact Assessment Training

Document Name and Reference	Function	Annexed
D840.11 Societal Impact Assessment Framework - Version 1	First version of the Societal Impact Assessment Framework.	No
D840.21 A Guide on Assessing Unintended Social Impacts of	First set of assessments carried out by using the SIA framework.	No

Table 1.1: List of Documents Related to the Development of the Societal Impact Assessment Training

Document Name and Reference	Function	Annexed
Different CM Functions - Version 1		
D913.31 Societal Impact Assessment Framework Version 2 [2]	Second version of the assessment framework (update of D840.11).	(partially)
D913.41 A Guide on Assessing Unintended Societal Impacts of Different CM Functions – Version 2 [1]	Second set of assessments carried out by using the SIA framework (update of D840.21).	(partially)
D913.51 Report on the Training Sessions for Societal Impact Assessments in the Consortium	Review of the progress of trainings at M37.	No
D913.52 Training Modules for Societal Impact Assessment	Review of final versions of the training modules and their development, as well as instructions for their use (this document).	No

1.3 Glossary of Terms Related to the Societal Impact Assessment Training

Term	Description
Training Module	A guide available from the Centres of Expertise and the EASS website that informs the preparation of a Trial and explains how to apply the Trial Guidance Methodology.
Training Booklet	Document that is sent to learners and trainers supporting the SIA training.
SIA Training Module	The SIA training is composed of three Modules.
SIA Training Session	A Training Session is a meeting in which one or more of the SIA Training Modules are delivered to learners.
SIA Training Course	The meetings that allow for the delivery of all three SIA Training Modules. A SIA Training Course is typically comprised of two Training Sessions, the first of which delivers Module 1 and the second of which delivers Modules 2 and 3.
E-lecture	The first module is available online in the form of an e-lecture.
Contact Phase	The second and third modules must be delivered in person; this is the 'contact phase' of the training.
Supporting Document	These are documents found in the training booklet that aid the delivery of the training. They either provide explanations of concepts, background information or structure for the modules.
D####	Deliverables (documents) submitted as part of the DRIVER+ project and that are relevant for the SIA training.
Worksheet	Supporting document. Used to guide group work and gives structured space for the learner's answers.

Table 1.2: Glossary of Terms Related to the Societal Impact Assessment Training

Term	Description
TGM	Trial Guidance Methodology.
Five-Steps Method	The five analytical steps required to carry out a societal impact assessment.

1.4 Training Methodology

The full methodology that has informed the creation of the training modules was analysed and explained in **D913.51 [2]**. To briefly recap, the deliverable analysed 'active learning' – the initial concept for the SIA training approach – by comparing two specific active learning methods: 'problem-based learning' (PBL) and 'team-based learning' (TBL).

As explained in **D913.51**, Active Learning is based upon 5 attributes: Relevance, Realism, Engaging, Challenging and Instructional. The deliverable explains how the DRIVER+ trainings delivered by EOS at the time of delivery of **D913.51** addressed each of the five attributes. The SIA trainings delivered between M45 and M62 followed to a large extent the same logic, although some lessons were learnt on the way. These lessons are reflected in the final version of the training modules in Annex 3 [61], and in the remainder of this deliverable. For example, when delivering trainings beyond the scope of the DRIVER+ project, it is important that the trainer is aware of the specific composition of the group, so that the examples and case study work can be tailored to the experience of the group, therefore respecting the 5 attributes. As mentioned in **D913.51**, engagement is fostered using techniques taken both from the PBL and TBL teaching methods, which will be further elaborated below.

D913.51 describes PBL as "an instructional method of hands-on, active learning centred on the investigation and resolution of messy, real-world problems", while TBL is described as "an evidence based collaborative learning teaching strategy designed around units of instruction, known as 'modules', that are taught in a three-step cycle: preparation, in-class readiness assurance testing, and application-focused exercise.

When designing the SIA training, the two methods were merged into a hybrid approach, as the nature of the training course (time, number of instructors, number of sessions, amount of pre-study) meant that strictly following one approach was not possible, nor indeed desirable. Combining the two approaches into a hybrid methodology allows for the best features of both approaches to be adopted, such as the structured feedback and team study from the PBL approach, and the group discussions before reading and the team-generation of case studies from TBL. The tables below detail the characteristics, and how the training sessions that were delivered between M45- M62 aligned with the characteristics.

Instruction characteristic	PBL	TBL	Implementation
Materials	Learning by addressing professionally relevant problems. All students work on the problems.	Learning by addressing professionally relevant problems. All students work on the problems.	Examples use a variety of CM situations. Group work structured to allow full participation and learners to bring relevant examples.
Format	Learning in small groups.	Learning in small teams.	Group work phase in small teams.
Rooms	Groups work in different small rooms.	Teams work in the same large room in teams.	Teams all in the same room
Pre-class reading/exposure to new content	No mandatory pre-class reading assignment before group discussion. Exposure to new content after initial group discussing during self- study and during final group discussion.	Mandatory pre-class reading assignment before team discussion. Exposure to new content before the team discussion.	Pre-course reading material offered. Exposure to concepts before group work, and exposure to case studies during group work.
Teacher versus student initiated decisions about content to be studied Students define what is not yet well understood after an initial group discussion of professionally relevant problem.		Teacher defines content for pre-class study based on knowledge required for application problems that will be given during the unit. Teacher decides, on the basis of the group test, which issues are not yet well understood.	Teacher defines content to be studied; learners can indicate which issues are not well understood.
Group activities and self-study Group activities and self-study Group activities and self-study Group activities and self-study All students study the same set of learning issues during individual self-study. Thereafter the group meets again to discuss findings.		Students start with mandatory pre-assigned reading during individual study. Students fill out a test (individually). Thereafter students discuss the exact same test terms to reach team consensus and receive immediate feedback.	Students introduced to SIA through pre- assigned documentation. Once in groups, each group works on the same case studies and receives ongoing feedback from instructors.

Table 1.3: Main characteristics of PBL and TBL	and how they were implemented ¹
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¹ D. DOLMANS, L. MICHAELSEN, J. VAN MERRIENOBOER, C. VAN DER VLEUTEN "Should we choose between problem-based learning and team-based learning? No, combine the best of both worlds!" Medical Teacher newspaper, April 2015.

Instruction characteristic	PBL	TBL	Implementation
Group characteristics	Six to 10 students per group. Students are randomly assigned to the groups. Group members stay together in a group for six to 10 weeks and discuss severe problems.	Five to seven students per team. Students are purposefully assigned to the teams. Group members stay together in a teal for at least the duration of a course.	4-6 learners per group in the different sessions.
Other curricular activities	A limited number of supplementary lectures are included which take place after self-study and after the final discussion in the small group.	There are no traditional lectures. Students initial exposure to the content is through pre-class study assignments and instructors' input is either corrective or confirmatory in nature and occurs: At the conclusion of the team readiness tests. At the conclusion of the plenary class discussions, in which teams have challenged each other's answers.	Pre-course documentation is offered to help learners familiarise themselves with the material. Training documentation is provided so that if learners wish so they can undertake SIA assessments individually outside of the course structure. Instructor input is received during and at the end of the group work session.
Feedback	Feedback (both confirmatory and corrective) from peers during the final group discussion and if necessary from the teacher. No testing and no inter- group discussions.	Feedback (both confirmatory and corrective) from peers and the teacher during team test, but also from inter- term discussions after teals have revealed their choices, challenged others and attempted to defend their won.	Feedback from instructor during quiz on criteria. Feedback from peers during group work and from instructor and other groups during presentation of results after group work.
Peer feedback	No structured peer evaluation/ feedback.	Structured peer evaluations/feedback.	Feedback can be received from peers, but not structured.
Problems	Reasoning around problems with no specified questions.	Reasoning around problems with associated questions.	Reasoning around SIA criteria with specific questions

As the table shows, for the creation of the training components we did not specifically choose to follow either the TBL or PBL exactly, but rather combined parts of both in order to optimise the learning strategies and activities undertaken by the learners. When planning sessions, it is important to be aware of the specific context of the training: the number of learners, the number of trainers, the ease of working in groups during the training session, the access to the supporting documents which should be shared at least two weeks prior to the session so that the learners are already familiar with the material. The trainer can also adapt the content so that it is more relevant to the participants of the training, as it will be easier for the learners to understand the subject if it is presented in a context that they are familiar with. This is done through the case studies, the choice of examples and the choice of solutions that are being assessed.

The questionnaire in Annex 2.5 [60] can be used to receive structured feedback from the participants. If the trainer intends to deliver the training multiple times, with different groups perhaps, this will allow for constant improvement of the training course and in particular, if components are adapted from the final DRIVER+ versions that are contained in the annexes of this document, it will allow the trainer to assess the success of the adaptation and whether it requires further refinement.

1.5 Summary of the Training Sessions Carried Out and Feedback Received

Within the scope of the DRIVER+ project, the SIA training has been delivered four times by EOS. The first was in The Hague, in 2016, then in 2018 in Warsaw, and then in Paris and Copenhagen in 2019. In addition to this, the structure and content was discussed with other partners in Tallinn involved in the construction of the TGM Training Module.

The first SIA trainings were carried out by EOS in summer 2016 in the frame of DRIVER, in The Hague with the project partners in the former SP5. This SIA training session used the original version of the SIA framework, which has later been thoroughly revised into the current and final **D913.31**[2] which is the basis for the SIA trainings and related discussions taking place in 2019.

After the I4CM organized in Warsaw on the 3-4/09/2018, the DRIVER+ consortium was reunited for a twodays meeting. Here, the first SIA Training was delivered in the frame of DRIVER+. Two workshops were organized in the morning of the 5th and the consortium was divided into three groups, to facilitate better interaction with the trainer and to match the three group exercises in the training module. The SIA's training gathered 16 people coming from 16 different organisations.

In 2019, the training was discussed in Tallinn with the other partners that were part of **SP92**, as they were also creating training modules for other areas of the Trial Guidance Methodology. The structure of the modules was presented, and several sections were discussed in more detail with partners, who provided advice for the development of the SIA training modules based on their own trainings and module design.

In May 2019, the training was delivered to a group of DRIVER+ partners at the Thales office in Paris. The audience was mostly aware of the SIA concept, having participated in previous training in Warsaw and being internal to the project, also understood and acknowledged the idea behind the framework. The training was delivered very briefly, as the transportation of the trainers was delayed. Due to the training being delivered in one session, the e-lecture was integrated into the contact phase module, rather than being a separate module.

The training was delivered for a final time at the I4CM conference in Copenhagen in June 2019. For this training the audience was comprised of both DRIVER+ consortium members (some of whom had already experienced the training) and external CM practitioners from outside DRIVER+ who were unfamiliar with the concept of SIA and the training. The feedback received from the meetings in Paris and Tallinn was incorporated into the course, so the structure, content and supporting documents were significantly different to the previous versions delivered at those meetings, and more similar to the final versions that are annexed to this deliverable.

The nature of the event (no sign-up in advance) meant that it wasn't possible to share the preparatory documents with the participants which therefore meant the learners weren't as familiar with the concepts and the course as the training intends. However, this was mitigated by some participants being already familiar with previous versions of the training.

Once again, this training delivered both the e-lecture and contact phase sessions in one day, split up over the course of two sessions. The first session delivered the theoretical and instructional part of the training, while the second session delivered the group work component.

Throughout the project, changes were also made to the SIA framework as well, which resulted in different versions being present in the training modules. For an explanation of the changes made to the SIA framework, please refer to Section 3.3 of **D913.31**.

1.6 Feedback Received and Changes Made

When the training was delivered, feedback was sought from the participants through the questionnaire attached in Annex 2.5 [60]. The feedback resulted in many changes to the content and structure of the training course, which are set out below alongside a summary of the feedback. The original feedback can be viewed upon request from EOS.

The training was also developed based upon a discussion with other DRIVER+ partners that are part of the creation of the TGM Training Module in Tallinn. During the discussion on structure and training best practices, it was suggested that more examples should be used to illustrate the concepts such as societal impact and the various criteria, and whether it would be possible for trainers to introduce their own examples or case studies, to make the training more relevant to their expertise. Feedback was also given for the questionnaire that learners are asked to complete once they have finished the course, suggesting a maximum of 6 questions and to keep them open so that the participants can elaborate on their answers.

This feedback led to the questionnaire being rewritten; reinforced the need for more examples in the explanations and to an update to the invitation letter that is intended to be sent to the trainers that introduces them to the course materials.

1.6.1 Warsaw – 5th September 2018

The training was relatively well received, with some very interesting comments emerging from the feedback, such as the fact that not sufficient examples were given in the general introduction, the complexity of the Excel sheet used and representing the SIA framework, or the real necessity to harmonize the CM functions used by the SIA framework with the official DRIVER+ taxonomy of CM functions (**D934.10**).

The feedback regarding the taxonomy was considered as crucial and led to a change in the SIA framework itself, meaning that the two taxonomies were harmonized in the final version of the SIA framework, delivered in M62.

Other changes made to the SIA framework itself (based on feedback from the SIA training) are elaborated in section 3.3 of **D913.31**[2].

1.6.2 Paris – 14th May 2019

Feedback from the session was comprehensive, identifying several areas for improvement. Firstly, the time allowed for the session meant that the presentation was rushed, not allowing enough time to digest important information, a fact that was exacerbated by the travel difficulties that the trainers encountered. Secondly, importance of being familiar with all the content used in the training session was underlined during this training. Thirdly, the presentation of the CM functions and impact criteria (which are key elements of the SIA framework) was not clear enough, and the functions did not align fully with the official DRIVER+ taxonomy identified in the **D934.10**. Fourthly, the example of WhatsApp that was used to demonstrate the benefits of undertaking a SIA and the results it produced was not very clear. Finally, the

explanations of the criteria lacked interactivity and examples that could help the audience better understand and contextualise the information they are receiving.

As a result of this feedback, the structure of the presentations was significantly changed, and the supporting documents were updated. The changes are detailed below:

- A section was created dedicated to explaining the impact criteria used by the assessment so that the learners gain a better understanding of the concepts and impacts that they would be using to assess the solutions. This section was based on Annex 3 of D913.31[2] which defines the criteria and identifies examples. In this section the trainer will lead the learners through a quiz, so that they are able to test their understanding in a learning environment.
- The explanations for several slides were rewritten to make them more concise and therefore more presentable for the trainer. This meant reducing the number of complicated theoretical explanations, instead using the background material to provide this for the learners and improving the use of examples in the explanations and adding more visual material in the slides.
- Given that the original structure of the course called for 30 minutes for the first Module and 60 minutes for the second and third Modules and the experience of attempting to deliver both phases in one shortened session, the structure and suggested time allocation of each component was changed. Much of the theoretical knowledge was removed from the e-lecture and was replaced with a first look at the framework and an example of how it is used in practice, to give greater context to the introduction, and as a way to build anticipation for the second and third Modules. The time allocation was changed: it is now 15 minutes for the e-lecture and component 1, and a suggestion of two hours, with a minimum time of 90 minutes for the contact phase session. The reduction has been accommodated by utilising the background material to provide the more theoretical explanations of the concepts involved. The time for Modules 2 and 3 has increased significantly, to allow for the extra time required for the interactive session on the impact criteria and more time to discuss during the group work phase, as well as greater explanation of the methodology.
- The example of WhatsApp was rewritten so that it followed the five-step approach of the SIA framework, showing how each step applies to the WhatsApp scenario and detailing the process of undertaking the SIA.
- The structure and content of the supporting documents shared with the learners was updated. The previous spreadsheet that was used to show the impact criteria and functions was removed, and instead lists were create that also gave a brief definition of each item based on the definitions provided in **D913.31 Societal Impact Assessment Framework Version 2 Section 5** [2]. Worksheets were created to be used in the group work session to structure the thoughts and discussions of each group. A briefer explanation of the concept of SIA and the methodology was also added as well as a document detailing the example of WhatsApp.
- The use of functions and solutions was changed significantly in both the presentations and supporting documents. The functions listed for assessment were updated so that they aligned with the taxonomy identified in **D934.10** *Taxonomy of CM functions for classification of solutions* and were also listed alongside the appropriate solution, so that selecting the correct function to assess was simpler. A clearer explanation was included to help differentiate the role of solutions and functions in the framework.

1.6.3 Copenhagen – 13th of June 2019

Feedback from this session, which took place during the I4CM including also DRIVER+ external participants, was positive, especially with regards to the content and explanations, with the impact criteria and methodology more favourably looked upon. Nevertheless, areas for improvement were identified: the length of the training was still considered too short, as more time for the group work was requested. The use of the supporting documentation was quite confusing, as the order wasn't very intuitive, as it didn't fit with their order of use in the presentation (although this was partially due to the fact that some materials are intended to be read before attending the training). While the training is intended to be delivered by

one trainer, where two trainers are present (perhaps to help facilitate the group work sessions) it is advisable for both presenters to engage with the group to create greater dialogue.

Positive feedback was received on the presentation style and the engagement with the group, allowing the learners to develop a good rapport with the trainer and making the material more accessible and easily understood. This would suggest that it is helpful for the trainer to be really familiar with the material to allow for a good presentation style.

As a result of this feedback and the impressions of the trainers from the session, the following changes were made to the SIA training modules:

- Once again, the suggested timing was revised with the suggestion that the contact phase training be delivered in three hours, which allows for one hour for the explanation of the framework and the fivesteps, one hour on the first phase of the group work and an hour for the second phase of the group work. This assumes that the e-lecture has been followed in advance. A greater explanation on structuring the sessions is found below in Section 2.
- The structure of the group phase was reworked. Rather than the groups being given two case studies and working on them individually, the entire group will complete steps 1-3 together, being led by the trainer, before completing steps 4 and 5 in their groups. For the second phase of the group work, they will then create their own scenario and choose two solutions that would help resolve the crisis and undertake a SIA on these solutions. This was implemented during the training session and saw beneficial results, as it meant that the groups were able to first experience the five steps in a controlled teaching environment, where the trainers could help with each step. Allowing them to create their own scenario also allows the learners to apply the framework to a more relevant context for them as they can create a scenario based upon their own knowledge and experience.
- The structure of the supporting documents was changed. The order was updated so that it was clear which documents should be read before the training and which are to be used during the training. This is complemented by the invitation letter being rewritten to explain each document and its use.
- The role of the presenters and their interaction with the group was considered but it was concluded that it would be difficult to mandate more discussion and dialogue into the training, beyond the quiz and group work that is already foreseen. As the training is introducing defined concepts and framework, it is more difficult to facilitate dialogue. It is expected that by reading the pre-course material the learners will be more confident in contributing and questioning the trainers.

In general, feedback from all the sessions was based around three themes: the need for good examples to be complement the various explanations offered in the training; the need for more interactivity between the group and the trainer and more clarity on the role of the supporting documents in the training. The final version of the SIA training modules presented in this deliverable incorporates this feedback, creating modules that are based around teaching through examples, and that allows the learners to explore the SIA framework (and the five-step method to conduct assessments) by interactive teaching where they apply their knowledge to different scenarios, guided by the trainer.

A final change that was made was introduced by the trainers themselves: the structure of the training and the timing of each module was modified to give greater length to the second and third module as it was felt by the trainers, and reflected in the feedback, that more time could be given to explaining the criteria and developing the case studies. Upon doing so, it was noticed that the understanding of the learners greatly improved in the third module.

During the trainings, the Modules were delivered over the course of one or two sessions, within one day. This was due to the allocation of timing at meetings and the fact that the e-lecture was not available online at the time. Therefore, all three modules were delivered during the contact phases, which, given the results of the training, can be considered a valid structure for the delivery of the training. A further explanation of the recommended structure is found in Section 2.3.

Training	Feedback Received	Changes Made
Warsaw 2018	 Greater use of examples to illustrate explanations. Supporting materials (Excel sheet) not especially clear. Need to harmonise CM functions in SIA framework with official DRIVER+ functions 	 More examples included in explanations. Framework changed. Functions updated.
Paris 2019	 Better time allocation for training Better presentation of SIA framework and CM functions needed Supporting documents not clear. More interactivity during explanations. 	 Timings for Modules adjusted - 2 and 3 given greater time allowance. Explanations rewritten to make more concise and accurate. Supporting documents redesigned. Functions updated (finalised after training but began after Warsaw feedback) Quiz added for SIA impact criteria explanations. Structure of case study work changed.
Copenhagen 2019	 Length of the training was too short Supporting documents use wasn't always obvious. Two trainers could have helped interactivity 	 Suggested timings revised to give more time for group work Structure of group phase reworked – one case study for each group 'guided'. Supporting documents re-labelled and explanation of function added to training booklet
Tallinn 2019	Use of examples important for explaining concepts	Examples added to explanations

Table 1.4: Summary of Feedback and Changes Made to SIA Training

Once these changes were incorporated, the design of SIA training was finalised as shown below and explained in more detail in Section 2.

Table 1.5: Explanation of Final Modules

Module 1	Module 2	Module 3
Introduction of SIA concept and the research behind the framework. Briefly introduces the five-step approach explored in Module 2 and concludes with the WhatsApp Case Study so learners can see the practical application of the theoretical approach	Explores in depth each of the five steps that comprise the SIA assessment, with a focus on Step 4. The main part of Module 2 is an interactive quiz that explains the Societal Impact Criteria that inform the assessment.	This Module is comprised of phases of group work. The first phases see the group undertake steps 1-3 of the assessment under the guidance of the trainer, and then complete steps 4 and 5 in smaller groups. The second phase allows them to create their own case study, whereby they choose a solution

Module 1	Module 2	Module 3
		(based upon the selection offered in the supporting documents) and then apply all five steps of the assessment to this solution. They then feedback to the group.

2. Training Modules

This section details the training modules and their evolution towards the final versions. The previous versions can be found in **D913.51** *Report on the Training Sessions for Societal Impact Assessments in the Consortium*.

2.1 Description of the Training Modules

Each training modules is complemented by explanatory training material: a training booklet (Annex 2 [33]), a PowerPoint presentation with illustrative examples (Annex 3 [61]), worksheets to enhance discussions between the learners and between the learners and the trainers (Annex 2.4 [41]), and a questionnaire to collect feedback from the learners (Annex 2.5 [60]). The latter is considered as crucial for validity of the SIA training beyond the DRIVER+ project as it allows the training to be tailored to specific competences and needs, meaning that the training can be delivered to a wide range of audiences and practitioners from different fields, as well as giving the trainer ownership over the training and content, thereby increasing the likelihood of delivering a successful training.

Training Material	Related Training Module	Function	Annex	Audience
Training Booklet	All	Provide support to learner and trainer	Annex 2 [33]	Trainers and Learners
Training Module Presentations	All	Deliver Training on SIA	Annex 3 [61]	Trainers
Training Worksheets	Module 3	Structure group work and case study work	Annex 2 [33]	Learners
Feedback Questionnaire	All	Gather feedback from learners to allow for fine tuning of training	Annex 2.5 [60]	Learners

Table 2.1: Overview of Training Materials

The modules are developed in an easy-to-read shape and language, both for the trainer and for the learners. The learners will be introduced to the content of the SIA trainings mainly through the PowerPoint presentation (Annex 3 [61]) that is accompanying each module, and through the SIA booklet (Annex 2.2 [37]) that will be handed out before and at the training sessions. The presentations contain speakers' notes with instructions that will help the trainer and can provide structure to each the delivery of each module.

If it is not possible to share the booklet with the learners prior to the training, it will be beneficial to spend some time at the beginning of the training explaining each document and allowing the learners to familiarise themselves with the material. The trainers will use Section 2 of this deliverable and the supporting documentation to prepare and carry out the sessions in the most useful way.

A SIA training consists of the following structure of modules:

- 1) Societal Impact Assessment (SIA): A crucial concept for CM. (E-Lecture).
- 2) Societal Impact Assessment (SIA): Presentation of the method. (Contact Phase).
- 3) Societal Impact Assessment (SIA): Implementation of a method. (Contact Phase).

In this context, the e-lecture refers to the introductory part of the training. This can be undertaken independently by the learner, using the online material available on the e-learning platform of the EASS or delivered by the Centre of Excellence. Alternatively, it can form the initial part of the two-part training course. The contact phase is the second part of the training, which has to be delivered in person. This can be done in either one longer session or two individual sessions, corresponding to each module.

Module 1 – Societal Impact Assessment (SIA): A crucial concept for CM.

The first module is a lecture that can either be viewed online by learners or delivered in person by the trainer, using the same PowerPoint presentation. It serves as an introduction to the concept of SIA and is obligatory for all who take part in training sessions. As already stated, it is crucial that the learners understand the importance of societal acceptance. Module 1 emphasises this aspect and illustrates the unintended effects that CM solutions may have on society. In line with the methodology outlined above, it does so by drawing on concrete examples and a case study that are relevant to the key themes in crisis management e.g. cross-border tasking and resource management, high level coordination, involvement of volunteers and emergency supply to population.

If the trainer wishes to update the material with a new case study, the introductory letter offers advice on how to do so. The module finishes by introducing the five-step method of the SIA framework [Table 2.2], in order to link the concepts explored in Module 1 with the future training sessions which will be based on the five steps.

Step 1	Step 2	Step 3	Step 4	Step 5
Identify Stakeholder Groups/Communities	Collect Background Information	Get an Overview of Legislation and Policies	Identify and Predict Impacts	Describe Mitigating Measures and Follow Up

Table 2.2: Summary of the step-by-step method, as presented in detail in D913.31

Module 2 – Societal Impact Assessment (SIA): Presentation of the method.

The second module is a face-to-face activity, in the form of a workshop setting, where one or several trainers present the SIA framework in detail. Concretely, this means that after identifying the importance of societal impact assessments for CM from the PowerPoint presentation, the learners explore in depth the five-step method to conduct such assessments. The step-by-step method sets out the process to gather the necessary information and then use it to perform the assessment, in conjunction with the predefined impact criteria that are identified in **D913.31** *Societal Impact Assessment Framework V2* and explained as part of the Module 2 session.

In order to conduct the training based on this knowledge of the framework, learners are encouraged to discuss the framework among themselves, as well as the given example of the implementation of the framework and pose any questions them may have. This Module also includes a section that studies the impact criteria (a list of predefined criteria used to structure Step 4 of the SIA framework method) in-depth, through the use of an interactive quiz with participants, led by the trainer.

Module 3 – Societal Impact Assessment (SIA): Implementation of a method.

In Module 3, the learners apply the five steps in groups. This is done in two stages: the first stage provides the background information and context of each case study by working through steps 1-3 as a whole group and asks them to complete steps 4-5 with pre-identified CM solutions. This is supported through document 3.4 and document 3.5 [Table 2.3]. The second stage asks them to design their own case study, in which they can choose the CM solutions that they aim to assess and decide the context in which the solutions will be deployed (supporting document 3.6). They then apply the SIA framework (i.e. the five-step method) to this scenario (i.e. the relevant CM solution in a specific context- real or fictional) in a group.

The assessments are made using the information provided in the learner's handbook and in the supporting material, specifically the guiding questions included in the worksheets (Annex 2.4.7 [54], 2.4.8 [56] and 2.4.9 [58]). Trainers are encouraged to create their own case studies, since this allows them to use their knowledge and expertise to make the SIA training as relevant as possible for the learners.

Each module represents a standalone section of the Training Course, which is reflected in the structure of the accompanying two presentations (Annex 3 [61]). The first presentation (Annex 3.1 [61]) is can be sent to the learners with the training booklet prior to the training sessions, so that they can familiarise themselves with the concepts to be discussed in the Training Course. This Module will also be available online, through the EASS e-learning platform and the material delivered to each of the Centre's of Excellence. The second presentation delivers Module Two and Three, and is designed to be delivered in one day, over the course of two sessions.

Alongside the presentations, the training booklet sent to both learners and trainers prior to the session contains several documents that will help deliver the training. A description of their function is below:

Document Name (Number Corresponds to training booklet)	Audience/Function	Annex
1.1 Instruction Letter to Trainers/Invitation Letter to Learners	This letter sets out the programme for the training and provides a reference for the attached documentation as well. The letter to the trainers also provides advice upon delivering the training.	2.1 [34]
1.2 Introduction to SIA	This document provides a 1-page summary of the SIA framework that is used to carry out assessments.	2.4.1 [41]
1.3 Feedback Questionnaire	This questionnaire will be given to the learners after the trainings so that the course can be adjusted if needed.	2.5 [60]
1.4 Guide to the 5-Step SIA	This provides a guide to the five-Step process referenced above, for learners to use when undertaking the group work.	2.4.2 [42]
2.1 WhatsApp Case Study	This is a real-life example of societal impact, where the SIA framework is applied to assess WhatsApp as a CM solution.	2.4.3 [43]
3.1 Overview of Solutions	This document provides a brief description of solutions (found in the Portfolio of Solutions) that can be used in the group work session.	2.4.4 [45]
3.2 Overview of Functions	This document links the solutions identified in document 3.1 with the functions that will be assessed in the five-step approach	2.4.5 [46]
3.3 Societal Impact Assessment Criteria	List of the different pre-defined impact criteria, with a brief description of each.	2.4.6 [51]
3.4 Case Study 1 Worksheet	Worksheet structuring the group work for the first case study.	2.4.7 [54]
3.5 Case Study 2 Worksheet	Worksheet structuring the group work for the second case study.	2.4.8 [56]
3.6 Case Study 3 Worksheet	Worksheet structuring the group work for the third	2.4.9 [58]

Table 2.3: Overview of Supporting Documents included in Training Booklet

Document Name (Number Corresponds to training booklet)	Audience/Function	Annex
	case study.	

The figure below [Figure 2-1] illustrates to which part of the training each document relates to. This is also explained in the speakers notes attached to the presentations.

The documents can be modified to suit the specific competences of the trainer or field of the learners, so that the training is more relevant to the experiences of the learners and therefore is more likely to resonate and appear beneficial.

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Figure 2-1 Overview of supporting documentation usage

2.2 Preparation by the learners and trainers

As already stated in the introduction, the target audience of this current deliverable is the trainers, i.e. those who seek to carry out SIA trainings of their own in the future. Both the actual training components, the PowerPoint presentation (Annex 3 [61]) and all the documents related to them (**D913.31** *Societal Impact Assessment Framework V2* [37] and **D913.41** *A guide on assessing unintended societal impacts of different CM functions v2[39]*), this **D913.52** document, the training booklet (Annex 2 [33]) and the step-by-step trainer guide (Annex 3 [61]) are written in a way that guides the trainer through the material in an easy step-by-step way. Each slide of the PowerPoint presentation that accompanies the training components contains instructions to the trainers.

Based on the lessons learned from the trainings as presented above, the recommendations below are given for anyone wanting to carry out a SIA training.

The PowerPoint text can be read out or edited according to the trainer's competences and wishes. Each part of the training session starts with an overview of the time needed for the part, the method used and the teaching material that will be used in the respective session. The length of the sessions can be adjusted to the needs of the learners, and to the time slots available. The examples or case studies that are referenced can be updated to fit the specific competences or experiences of either the trainer or the learners, to make the course more relevant and specific, which feedback from the trainings show can be beneficial to for learners, as it places the trainings within a familiar context. Advice on how to do this is offered in the material provided to trainers.

The recommended minimum length of the course is approximately three hours, but this can be tailored to each group of learners. For more information on the structuring the course, refer to Section 2.3. In the letter to the trainers, it is explained that if they wish to increase the amount of time available for the group work, this is encouraged based on the experience of the trainings within the DRIVER+ project.

In preparation of the training sessions, the trainers should:

- Be familiar with all the material.
- Send relevant the supporting documents and invitation letter to the learners and encourage them to familiarize with them.
- Have copies of supporting documents
- Follow and respect the trainer's step-by-step trainer guide.
- Familiarize themselves with the learners and choose and prepare those components that are most relevant to the audience.
- Organize and bring the rest of the teaching material specific to the audience.
- Clarify with the meeting leader how much time they have available for the SIA training session.
- Ensure that they are comfortable with the case studies used and add their own if required (see below).

In preparation of the training sessions, the <u>learners</u> should:

- Be familiarized with the supporting documents, in particular 1.2 Introduction to SIA [41] and 1.4. Guide to the Five-Step SIA [42].
- Be present on time.
- Be actively involved during the sessions to make them interactive.
- Have considered the potential context in which they would implement the SIA with regards to their own experience of crisis management, particularly in relation to a specific solution that they are familiar with.

2.3 Structure of the Training Course

The Modules can be delivered through several different course configurations. The recommended method of this document is that the first Module is delivered via the E-Lecture that is available from the EASS learning platform and the Centre's of Expertise established by the project. The Learners will have the details to access this online lecture, as well as the supporting documents that provide background information on the SIA training and the concepts involved. Generally, this Module required no longer than 30 minutes to deliver.

The first module can also be delivered in-person by the trainer, either as part of the full course or in a training session. We would recommend that the learners take the first module online, so that they have time to understand the content and use the supporting documents to thoroughly understand the SIA concept, and can discuss with colleagues and then are more prepared for Modules 2 and 3. Likewise, this will also enable them to prepare any questions or clarifications for the second training sessions.

The second training session, which delivers Module 2 and 3, must be delivered in person. It is possible to deliver the training session for each Module separately, on different days, but we have found that for reasons of continuity and for the ease of understanding it is better that they are delivered in one day. This doesn't mean that they must be delivered in one session – at the I4CM Module 2 was delivered in the morning and Module 3 after lunch, while in Paris Module 2 and 3 were delivered in one session. Each approach is equally valid but given the length of delivering both in one session (potentially three hours) it may be preferable to allow time for a break, for both the learners and the trainer.

Regarding timing of each session, for the interactive sessions (the quiz on the SIA impact criteria in Module 2 and the group work in Module 3) it is important to allow enough time for the learners to thoroughly explore each activity and to have the time to adequately discuss among themselves in each case. Therefore, we would recommend that when planning the schedule, at least 45 minutes are allowed for the quiz in Module 2, and 30 minutes for each of the case studies in Module 3, as well as extra time for the groups to feedback to the rest of the learners and then for further discussion of their results. For these case studies, it is difficult to prescribe an exact amount of time for discussion, but the general rule is that it is preferable to allow more time and not use it than to interrupt interesting discussions due to time constraints.

It should be clarified that these are simply the recommendations based upon the training configurations and participants that were part of the trainings described in Section 1. Given different group compositions or experience levels, it may be prudent to shorten the explanations and give more time to the practical elements of the training, or conversely, if the group is unfamiliar with the concepts then allowing more time for discussion in Module 1 and Module 2 may be preferable. The trainer should be aware of this and remain flexible when planning the trainings.

3. Conclusions and the SIA Training post DRIVER+

The concept of societal impact, and Societal Impact Assessments, has been part of DRIVER+ since the beginning. Within the project, training and awareness raising have been understood as relevant steps for introducing this rather new, but crucial concept to the CM environment, and for improving the way in which the relevant stakeholders are currently working. Societal impact assessments are a crucial part of the evaluation of FP7 and Horizon 2020 projects, and the projects' positive impact on society is therefore a condition for success. Thus, the SIA training modules provided in this deliverable should be seen in the wider context of the work that has been taking place on Societal Impact Assessments during the DRIVER+ project (specifically, in **WP913** *Research ethics & Societal Impact Assessments*).

In short, the overall aim has been to create a framework that can be used to carry out Societal Impact Assessments beyond the project (submitted as **D913.31** *Societal Impact Assessment Framework- version* 2) and to develop training modules which can be followed to learn how to use the framework. In addition, a set of example assessments were made and submitted alongside the framework, to demonstrate what the results of using the framework can look like (**D913.41** *A guide on assessing unintended societal impacts of different CM functions- version 2*). In the development process, SIA trainings have been conducted to gather feedback that could be used to improve these training modules, as well as the SIA framework itself. The validity of SIA concept and trainings was proven during the I4CM, as the training sessions delivered there were open to practitioners from outside the consortium, of which half the attendees were, and received positive feedback.

The evolution of the training modules, based upon the feedback received from those that have undertaken the training, has seen the modules change significantly throughout their two years of development. The modules now feature a much greater use of real life examples when teaching the concepts related to societal impacts; the use of case studies has been expanded so that the learners are able to see the effects of undertaking a SIA earlier in the training, giving the entire course more relevance and applicability; the levels of interaction between the trainer and learner have been increased, both to ensure the full participation of the learners and due to its success as a teaching technique; and the group work phase has been redesigned to allow for a gradual increase in the scope and complexity of the group work, so that the trainer can guide the groups towards the successful completion of an independent SIA.

Although the SIA framework, as well as these SIA training modules have been developed within the scope of the DRIVER+ project, the ambition since the very onset of the project has been that these concepts and tools would be useful also beyond the project. While the SIA training modules that were delivered as **D913.51** *Report on the Training Sessions for Societal Impact Assessments in the Consortium* were aimed at the project consortium, the SIA training modules submitted in this final version are designed to be the useful starting point for understanding how to conduct SIAs useful outside the scope of the project.

Furthermore, the SIA framework, which the training modules in this deliverable is designed to convey, is being integrated into one of the main DRIVER+ project outputs, namely the Trial Guidance Methodology (TGM). The basic idea behind the TGM is that before adopting new solutions and investing time and money to figure out what fits best, the TGM provides step-by-step guidelines on how to assess solutions in non-operational contexts (such as a Trial) through a structured approach. Doing a SIA is also part of this structured approach. A closer description on how the SIA framework is integrated into the TGM (which is a candidate for standardization through a CEN Workshop Agreement) can be found in Section 5.1. of **D913.31** *Societal Impact Assessment Framework- version 2.*

The SIA framework will be ensured sustainability through the societal impact checks that are incorporated into the TGM. As users of the TGM prepare their Trial, each checklist contains an item for the impact assessment, for which the SIA framework is the tool to understand societal impacts. This methodology will be available on the DRIVER+ website until at least April 2022, and possibly extended when the Centre's of

Expertise take over or future funding is identified. The Training Module for the TGM, of which the SIA framework and this training is an essential part, will be hosted on the e-learning platform of the EASS who will coordinate the contact-phase courses of the various training sessions attached to the TGM. It is also possible that in the future, the Centre's of Expertise will also take over the management and hosting of the TM.

References

- [1] **DRIVER+ Project.** D913.41 A guide on assessing unintended societal impacts of different CM functions Version 2. 2019.
- [2] DRIVER+ Project. D913.31 Societal Impact Assessment Framework Version 2. 2019.

Annexes

Annex 1 – DRIVER+ Terminology

In order to have a common understanding within the DRIVER+ project and beyond and to ensure the use of a common language in all project deliverables and communications, a terminology is developed by making reference to main sources, such as ISO standards and UNISDR. This terminology is presented online as part of the Portfolio of Solutions and it will be continuously reviewed and updated². The terminology is applied throughout the documents produced by DRIVER+. Each deliverable includes an annex as provided hereunder, which holds an extract from the comprehensive terminology containing the relevant DRIVER+ terms for this respective document.

Terminology	Definition	
Civil society	The process by which people, organisations and society systematically stimulate and develop their capacities over time to achieve social and economic goals, including through improvement of knowledge, skills, systems, and institutions.	
Competence	Demonstrated ability to apply knowledge and skills to achieve intended results	
Research ethics	The ethics of the planning, conduct, and reporting of research; this pertains in particular to rules and guidelines for the participation and protection of individuals taking part in the research activities	
Risk Analysis	Process to comprehend the nature of risk and to determine the level of risk.	
Skill	Ability to perform a task or activity with a specific intended outcome acquired through education, training, experience or other means	
Societal impact	Dimension of crisis management that refers to its unintended positive or negative impacts on different societal groups or society as a whole, as well as on its core values and societal principles as captured for example in fundamental rights, constitutional laws, but also in public debate.	
Societal Impact Assessment	The process of identifying, analysing and managing intended and unintended (positive or negative) societal consequences.	
Societal resilience	Social entities and their abilities to tolerate, absorb, cope with and adjust to environmental and social threats of various kinds.	
System function	Broad category of activity performed by a system	
Training	Activities designed to facilitate the learning and development of knowledge, skills, and abilities, and to improve the performance of specific tasks or roles	

Table A1: DRIVER+ Terminology

² The Portfolio of Solutions and the terminology of the DRIVER+ project are accessible on the DRIVER+ public website (<u>https://www.driver-project.eu/</u>). Further information can be received by contacting <u>coordination@projectdriver.eu</u>.

Annex 2 – Training booklet to be used by learners and Trainers

The training booklet for learners consists of four elements which will all be shared with the learners:

- An invitation letter to learners (Annex 2.1 [34]).
- An instruction letter to trainers (Annex 2.1 [34]).
- The SIA framework, as part of **D913.31** and **913.41**. (Annex 2.2 [37] and Annex 2.3 [39]).
- A PPT presentation further introducing the training session (Annex 3 [61)
- Documentation and worksheets to support the training (Annex 2.4 [41])
- A questionnaire to collect feedback (Annex 2.5 [60])

The whole training booklet is available on the internal DRIVER+ Collaborative Workspace, and on the public DRIVER+ website: <u>http://www.driver-project.eu/</u>.

The documents attached in the annexes below are demonstrative of the content of each document, not necessarily for formatting. For example, the supporting documents attached in Annex 2.4 [41] will be sent to the audience with the DRIVER+ logo and the document refere number included in the document header. For ease of access, these have been removed so that the content can be seen in these annexes more clearly.

The Training Booklet for Trainers differs slightly. To avoid duplication, both letters are included below before the rest of the materials contained in the Training Booklet are shared.

The trainer guide consists of five elements which will all be shared to the trainers:

- An instruction letter to trainers (Annex 2.1 [34]).
- The SIA framework, as part of **D913.31** and **D913.41**.
- This deliverable, **D913.52**.
- A PPT presentation further introducing the training session (Annex 3 [61]).
- Documentation and worksheets to support the training
- A questionnaire to collect feedback from the trainees.

The whole trainer guide is available on the public DRIVER+ website: <u>http://www.driver-project.eu/</u>.

Annex 2.1 – Document 1.1 Invitation letter to learners and Instruction Letter to Trainers

Dear Learner,

You are about to experience the SIA trainings! Congratulations! This letter will introduce the course to you and the supporting materials that are provided to help you undertake the training successfully.

You should be aware that the training course is split into two sections: an online e-lecture that introduces the concept of Societal Impact Assessments and a second, in-person course that teaches you how to apply the framework methodology to assess societal impacts.

Alongside this letter, you have received the booklet before your session to help familiarise you with the content of the training and the concept of Societal Impact Assessment. The list of documents and their purpose is set out below:

Document Number	Title	Purpose
1.1	Invitation Letter	To welcome the learner to the course and provide the list of documents
1.2	Introduction to SIA	To provide a brief overview of what SIA is and why is it useful
1.3	Feedback Questionnaire	To register feedback upon completion of the course so that the teaching can be improved
1.4	Guide to 5 Step SIA	A guide to the 5 steps that comprise the SIA framework methodology
2.1	WhatsApp Case Study	Completed SIA Framework for the WhatsApp case study so that learners can follow
3.1	Overview of Solutions	An overview of the different solutions that are part of DRIVER+ that will be used for the case studies
3.2	Overview of Functions	A description of the functions that each solution serves
3.3	SIA Impact Lists	A list of the impact criteria that are used to perform the assessments
3.4	Case Study 1 Worksheet	A partially completed worksheet to fill in for case study 1
3.5	Case Study 2 Worksheet	A partially completed worksheet to fill in for case study 2
3.6	Case Study 3 Worksheet	A blank worksheet for learners to create their own case study

Table A2: List of documents for learners

Should you have further concerns, remarks or questions, please do not hesitate to contact [INSERT CONTACT OF TRAINER]. They will reply to you as soon as possible.

We wish you a successful Societal Impact Assessment Training!

Dear Trainer,

You are about to deliver the SIA trainings! Congratulations! This letter will introduce the course so that you are familiar with the material and are aware of the changes that you can make to modify the course as you like.

You should be aware that the training course is split into two sections: an online e-lecture that introduces the concept of Societal Impact Assessments and a second, in-person course that teaches you how to apply the framework methodology to assess societal impacts. You will be delivering the second part of the course, which is split into two parts: the introduction to the methodology and the group work based on case studies.

Alongside this letter, you have received the booklet before your session to help familiarise you with the content of the training and the concept of Societal Impact Assessment. The list of documents and their purpose is set out below:

Document Number	Title	Purpose
1.1	Invitation Letter	To welcome the trainer to the course and provide the list of documents
1.2	Introduction to SIA	To provide a brief overview of what SIA is and why is it useful
1.3	Feedback Questionnaire	To register feedback upon completion of the course so that the teaching can be improved
1.4	Guide to 5 Step SIA	A guide to the 5 steps that comprise the SIA framework methodology
2.1	WhatsApp Case Study	Completed SIA Framework for the WhatsApp case study so that learners can follow
3.1	Overview of Solutions	An overview of the different solutions that are part of DRIVER+ that will be used for the case studies
3.2	Overview of Functions	A description of the functions that each solution serves
3.3	Societal Impact Assessment Criteria	A list of the impact criteria that are used to perform the assessments
3.4	Case Study 1 Worksheet	A partially completed worksheet to fill in for case study 1
3.5	Case Study 2 Worksheet	A partially completed worksheet to fill in for case study 2
3.6	Case Study 3 Worksheet	A blank worksheet for learners to create their own case study

Table A3: List of documents for trainers

Below, we have provided some further notes that we hope will help you with the organisation of your training.

We wish you a successful Societal Impact Assessment Training!

Notes for Trainers

In Section 3, the learners should be split into groups. Ideally, each group will contain a minimum of 5 people. It doesn't matter if some of the groups work on the same case study or solutions.

It is important that you are familiar with criteria used to assess the societal impact.

It is important to emphasis the distinctions between solutions and functions. Solutions are tools that are used in a crisis. Functions are a description of the purpose that the solutions serve.

If you wish to change any of the examples used in the presentation, please feel free to do so!

If you wish to change any of the case studies, please feel free to do so as well!
Annex 2.2 – D913.31 - Societal impact assessment framework version 2 (training booklet)

The report will be sent to the learners as a complete document. Please find below the cover and table of contents from the document. Section 4 in this document is relevant for understanding the SAI framework more fully, and section 2 provides further validation of the SIA concept.





D913.31 – SOCIETAL IMPACT ASSESSMENT FRAMEWORK- VERSION 2

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Annex 2.3 – D913.41 - Societal Impact Assessment training guide version 2

The report will be sent to the learners as a complete document. Please find below the cover and table of contents from the document. This document can be used to understand the expected outputs from undertaking a SIA, through the assessments that make up the document, as well as the full list of social impact assessment criteria in Annex 2.4.6 [51].





D913.41 – A GUIDE ON ASSESSING UNINTENDED SOCIETAL IMPACTS OF DIFFERENT CM FUNCTIONS- VERSION 2

TABLE OF CONTENT

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2.	A guide for assessing the societal impact of Crisis Management solutions		
	2.1	Assessment from functional area "Mitigation"	
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	Annex 2 Template- A Guide for Assessing the Societal Impact of Crisis Management Solutions		
	Annex 3 DRIVER+ Taxonomy of Crisis Management Functions		
	Annex	4 List of societal impact assessment criteria	

Annex 2.4 – Supporting Documents

These documents will be sent to the learners prior to the course, as part of the training booklet.

Annex 2.4.1 – Document 1.2 Introduction to SIA

What is the Societal Impact Assessment?

The Societal Impact Assessment (SIA) framework allows crisis management practitioners to understand the potential positive and negative consequences on society of implementing various crisis management solutions.

In this context, societal impact refers to the social consequences, unintended and intended, both positive and negative of actions and interventions. Therefore, it implies looking beyond the impact of a solution on the crisis; instead the framework looks at the impact on individuals, on societal values, on different groups and communities and it allows practitioners to predict and manage these impacts.

So, it is important to note that the SIA framework does not seek to improve crisis management solutions by making them more efficient at their primary task. Instead SIA ensures that any negative social consequences that would hinder the effective implementation are minimised, while allowing practitioners to enhance any positive social consequences that can improve the implementation of solutions.

What will the Societal Impact Assessment produce?

As mentioned above, the SIA framework does not produce a direct recommendation on how to improve the effectiveness of a solution. Likewise, it does not attempt to create a quantitative ranking for each solution i.e. drone mapping is 48% positive. Rather, it provides a qualitative assessment of the areas of impacts and allows practitioners to plan to mitigate potential negative effects and enhance positive ones.

Why should the SIA be done?

Undertaking SIA can increase the long term viability of a solution by ensuring positive benefits are maximised, while negative impacts are minimised. It creates greater accountability for CM practitioners and allows for more informed decision making when selecting solutions to implement. It can also lead to a greater understanding of the potential weaknesses of a solution.

How is the SIA done?

The assessment itself is a five-step guide that can be used to analyse crisis management solutions. It can be applied at any stage of the solution development process, as well as to solutions that are already implemented and deployed. The five steps analyse the context in which the solution will be deployed and provide a set of impact criteria that can be used to assess the functions of each solution for their potential consequences (step 4).

Functions and Impact Criteria (Step 4)

The impact of a CM solution is analysed using a predefined set of functions, that represent the actions (or uses) of that solution. These functions are assessed using a predefined set of criteria that represent the different ways in which a CM action could affect society. When assessing a function, not every impact criterion is relevant; in fact, often only a few are. The purpose of step 4 is to assess which criteria are relevant and specify ways in which that function may have an impact in that area.

Annex 2.4.2 – Document 1.4 Guide to the five-step SIA

Undertaking the Societal Impact Assessment: Guide to the 5 Steps

Before starting, it is important to understand the functions of the solutions you will be assessing. For the purpose of the first two case studies, they are predefined. In the second part of the group work, you will be asked to choose two solutions (Document 3.1) and identify the relevant functions (Document 3.2). Based upon this knowledge, the 5 steps below can be completed on the worksheets.

1. IDENTIFY STAKEHOLDER GROUPS/ COMMUNITIES:

The first step would be to identify the stakeholders and the community that could potentially be impacted by the implementation of the solution. Here, relevant questions to ask would start with "how could this specific function that a CM solution has, have an impact on the stakeholder groups or communities?"

2. COLLECT BACKGROUND INFORMATION:

The next step would be to collect reference information covering key social issues of the identified impacted communities such as community history, culture and key events that have shaped the development of the community. Are there known vulnerabilities in the community? Specific social challenges? Who are the major industrial actors?

3. GET AN OVERVIEW OF LEGISLATION AND POLICIES:

The third step is to provide an overview of relevant national/ EU legislation and policies that are directly related to the CM function you are assessing. Which formal restrictions exist that will influence the use of the solution? What are the policy discussions in the field? Have new legislations been introduced to regulate crisis management efforts? Are you dealing with a situation where there are identified gaps in terms of legislation, e.g. when if you are dealing with new technologies?

4. IDENTIFY AND PREDICT IMPACTS:

The fourth step is the main part of the SIA, where a structured assessment, based on the information acquired in the previous steps takes place. The full aim is to identify potential direct social impacts and try to predict their significance, duration and extent. The SIA criteria (which is a list of how we think society *could* be affected by CM activities) listed in document 3.3 should be used to structure this step.

The idea is not to say something about each and every criterion. Read through the list of criteria and try to think about which impacts could be relevant for the CM function you are assessing. Are some of the examples listed related to the function?

5. DESCRIBE MITIGATING MEASURES AND FOLLOW UP:

As a fifth and final step of making an assessment, in order to lower the risk of negative unintended impacts, and/ or to increase the possibility for positive impact, a list of measures should be made. The list should be based on the potential impacts identified in the previous step and could include actions such as providing extra follow ups for volunteers, establish rapport with local community leaders, engaging with the communities and sharing more information about the CM solution at stake. A basic plan should be made to describe how the mitigating measures will be followed up on.

Annex 2.4.3 – Document 2.1 WhatsApp Case Study

WhatsApp as a Crisis Communication Tool

For the purpose of this example, we will suggest that WA is being considered as a tool for law enforcement agencies to communicate with the public en masse regarding hazards.

Step 1 - Identify relevant stakeholders

Firstly, we could identify the 'official broadcasters' – the people that send emergency messages out. The second stakeholder group can be described as 'unofficial broadcasters' – private individuals with no official capacity to send emergency messages but have a large audience to disseminate to.

The final group of stakeholders is the audience for the messages, which is likely to be very diverse. We can classify though, between those that simply receive the message and those that also contribute information back to the crisis managers.

<u>Step 2 – Collect Background Information</u>

Official broadcasters: language skills would be a consideration. Where are they headquartered and who is providing them with information to share?

Unofficial broadcasters: how have they gathered their audience i.e. what is their normal communication content, and what does this suggest about their audience? No responsibility to verify or authenticate information. If following comes from social media then they may be more likely to court a larger audience, regardless of consequences.

Audience: multiple languages and very diverse. Will make it very difficult to recommend emergency actions. No guarantee that the message will be received. Certain communities may be more likely to have children in the street. Also quite possible that the message will be ignored or not received at all.

WhatsApp 'broadcasting' is a key feature of WA use in Indian society, so attempting to alter this is likely to receive strong pushback. Largest market for WhatsApp and very popular in Indian society. So it makes sense that it could be used as a dissemination tool, but also can't be heavily modified or usage practices changed.

<u>3 – Overview of legislation and policies</u>

Very relevant to specific context and experience. New laws in India are proposing that internet companies have to screen messages to ensure that no unlawful content is shared. This would have a large impact on privacy and data protection, lead to further issues regarding trust. Policing this law would require companies to hand over individuals private data and enable tracing of content origination.

Also requires automated tools to identify and remove public access to unlawful information or content.

Policy to be aware of: WhatsApp end to end encryption for users.

4 – Identify and Predict Impacts

Which functions does WhatsApp serve as a crisis management tool?

Crisis Communication and Information Management: Provide information to media and the public

Which of the impact areas could these functions affect?

Fundamental Rights, Legitimacy and Secondary Insecurities

Privacy and Data Protection: Trying to authenticate information sources, or verify the origin of content will impact on individual privacy.

Technology Dependency – Flexible Solutions: it is certainly a popular tool but relies on internet access and an account. It should also be considered that WA is used by many parties to disseminate information en masse, and so any alerts received could be affected by that context or drowned out.

Suspicion – Trust and Misuse/Protection: Trust and suspicion will be affected by the reliability of the information, the source it is perceived to originate from and the context in which it is received. Given the publicity surrounding the violence from 2017, perhaps there is greater suspicion about group messages.

There is considerable scope for these messages to be misused, either by agents who replicate with malicious intentions, or through any advice being wrongly interpreted. On the other hand, it could lead to an early warning about a possible danger and good advice to leave the area.

State - **Citizenship Relationship:** using WA as a CM tool to engage the population, particularly if the relationship is two-way, could be considered transferring the responsibility of the state (protection) to the citizen, which, depending on the context, may not be well received. This could be exacerbated by any privacy issues that may also occur. In this context, given the rural nature of many villages and towns, citizens may welcome the chance to directly communicate with authorities when the need arises, without believing that the state is 'avoiding' its duty.

5 – Mitigating Measures and Follow Up

To avoid the negative impacts of WA being used as tool, it is important the source of the information is clear. Prior communication introducing the tool so that citizens are aware of it would help, and could also shed light on the impact of the technological dependence, as other means of communication could be shared at the same time, so there isn't a technological exclusion.

Regarding the chances for misuse and suspicion, this could be mitigated by either proactively screening for false messages, or, in times of crisis, regular messaging so that information is constantly updated so there is less scope for misuse or suspicion.

Annex 2.4.4 – Document 3.1 Overview of Solutions

This is the list of solutions that you can choose from in Part 2 of the Group Work

LifeX Cop - Lightweight web-based COP that provides share situational awareness based on a CIS MDA Command and Control - Management of the complete mission cycle for crisis management SMAPS – content mining and data processing for social media to improve situational awareness 3Di – flood forecasting via 3d modelling CrowdTasker – manage and instruct large numbers of volunteers PROTECT – web-based alert and emergency warning system for civil protection Airborne and Terrestrial Situational Awareness – aerial surveillance and data gathering Rapid Mapping – enables rapid mapping of an area via drone. SOCRATES OD – COP software to enhance decision making and information sharing

IODA – models crisis management stakeholders for potential mobilisation

Annex 2.4.5 – Document 3.2 Overview of Functions

LifeX COP

FUNCTION	DESCRIPTION
Determine the principles of information exchange.	Determine the principles of exchange of CM information among agencies and levels of authority.
Map the hazards per geographic area.	Map the hazards for each geographic area, distinct in the planning process.
Detect pending emergencies and provide early warning.	Detect pending emergencies or other threatening situations and provide early warning.
Maintain shared situational awareness.	Achieve and maintain shared situational awareness.
Conduct damage and needs assessment.	 Conduct damage and needs assessment, i.e.: a. Collect human and sensor data from the field and from airborne platforms. b. Conduct situational analysis. c. Conduct first damage and risk assessment. d. Identify the immediate needs of affected populations.

MDA C&C

FUNCTION	DESCRIPTION
Activate crisis management bodies.	Activate the crisis command and management bodies and centres.
Manage Volunteers.	Manage organised and spontaneous volunteers.
Conduct incident or emergency response.	Conduct incident or emergency response.
Deploy First Responders.	Command and manage deployment of first responders.
Develop and Sustain COP.	Develop and sustain a common operational picture (COP).

SMAPS

FUNCTION	DESCRIPTION
Detect and debunk deception and rumours in social media.	Detect and debunk deception and rumours in the social media regarding the crisis situation.
Provide for crowd sourcing.	Create opportunities for application of relevant modes of crowd sourcing; disseminate the information on such opportunities.
Maintain shared situational awareness	Achieve and maintain shared situational awareness

FUNCTION	DESCRIPTION
Address the needs of vulnerable populations.	Address the needs of vulnerable populations, paying special attention to big families, people with disabilities, and relatives to victims.

3Di

FUNCTION	DESCRIPTION
Assess vulnerabilities to hazards.	 Assess vulnerabilities to hazards and threats, i.e.: a. Define infrastructure and assets affected by hazards and threats. b. Set vulnerability assessment criteria. c. Identify critical infrastructure and assets. d. Quantify the infrastructure and assets' value.
Raise awareness and anticipate	Conduct analysis to raise awareness and anticipate emergencies, crises and their impact.
Provide communications and information support to C3.	Provide operational communications and information support to command, control, and coordination.
Support C3 decision making.	Support decision making to the processes of command, control, and coordination.

CrowdTasker

FUNCTION	DESCRIPTION
Conduct coordinated tasking and resource management.	 Conduct coordinated tasking and resource management, i.e.: a. Define, prioritise and assign tasks. b. Monitor and position resources. c. Pool and share resources. d. Assign resources to tasks. e. Exchange information on tasks and resources.
Manage spontaneous volunteers.	Manage the on-site spontaneous volunteers.
Task volunteers.	Provide preliminary tasking to organised volunteers across scenarios.
Organise volunteers and communities for recovery.	Organise activities of volunteers and communities in recovery operations.
Maintain public awareness on hazards and respective services.	Maintain public awareness on hazards, availability of respective services, and the means by which they can be accessed.
Conduct systematic monitoring and data collection.	Conduct systematic monitoring and data collection.
Establish organisation for spontaneous volunteers.	Establish organisation to identify and register spontaneous volunteers and to assign them to teams and coordinators.

FUNCTION	DESCRIPTION
Communicate directly with media and citizens.	Involve crisis managers in direct communication with media and citizens.

PROTECT

FUNCTION	DESCRIPTION
Establish resource management and mutual aid system.	 Establish resource management and mutual aid system, including: a. Build decision support information capability for collecting, updating, and processing data, and tracking resources. b. Define acquisition/ procurement procedures. c. Establish a system for provision of mutual aid between different levels of crisis command and management. d. Determine flow of requests and responds at national (interagency), regional, and local levels.
Maintain shared situational awareness.	Achieve and maintain shared situational awareness
Communicate operational information across chain of command.	Communicate operational information across the crisis management chain of command.

Airborne and Terrestrial Situational Awareness

FUNCTION	DESCRIPTION
Determine the nature of the crisis.	Collect information, determine and evaluate the nature of the crisis
Conduct monitoring and anticipation.	 Conduct continuous monitoring and anticipate emergencies and crises, i.e.: a. Scan continuously hazards and threats and exchange information in relevant regional, national, and global frameworks. b. Gather and store required raw data using sensing, detection, and surveillance technologies. c. Share systematically information, analyses, and emergency reports.
Provide decision support.	 Provide decision support, i.e.: a. Prepare information for decision-making. b. Provide scientific support to decision-making. c. Translate information into actionable formats for crisis management users.
Conduct SAR operations.	Conduct search and rescue operations: Search for missing people,

FUNCTION	DESCRIPTION
	rescue the victims, provide first aid, and move the people to safety.
Maintain shared situational awareness.	Achieve and maintain shared situational awareness.
Conduct damage and needs assessment.	 Conduct damage and needs assessment, i.e.: a. Collect human and sensor data from the field and from airborne platforms. b. Conduct situational analysis. c. Conduct first damage and risk assessment. d. Identify the immediate needs of affected populations.
Plan, organise and resource transportation logistics	Plan, organise, and resource transportation logistics for protection, crisis response and recovery
Conduct flights to collect information	Conduct flight planning and operations to collect information and make an airborne sensors-based assessment

Rapid Mapping

FUNCTION	DESCRIPTION
Maintain shared situational awareness.	Achieve and maintain shared situational awareness.
Manage environmental recovery.	Manage environmental recovery.
Monitor the affected area.	Establish comprehensive monitoring of the affected area, focusing on the people, critical infrastructure and assets, and vital functions.
Provide information to media and the public.	Prepare and provide relevant and adequate information to media and the public.
Conduct flights to collect information.	Conduct flight planning and operations to collect information and make an airborne sensors-based assessment.

IODA

FUNCTION	DESCRIPTION
Conduct coordinated tasking and resource management.	 Conduct coordinated tasking and resource management, i.e.: a. Define, prioritise and assign tasks. b. Monitor and position resources. c. Pool and share resources. d. Assign resources to tasks. e. Exchange information on tasks and resources.
Provide decision support.	Provide decision support, i.e.:

FUNCTION	DESCRIPTION
	 a. Prepare information for decision-making. b. Provide scientific support to decision-making. c. Translate information into actionable formats for crisis management users.

SOCRATES OD

FUNCTION	DESCRIPTION
Conduct coordinated tasking and resource management.	 Conduct coordinated tasking and resource management, i.e.: a. Define, prioritise and assign tasks. b. Monitor and position resources. c. Pool and share resources. d. Assign resources to tasks. e. Exchange information on tasks and resources.
Maintain shared situational awareness.	Achieve and maintain shared situational awareness
Support C3 decision making.	Support decision making to the processes of command, control, and coordination

Annex 2.4.6 – Document 3.3. Societal Impact Assessment Criteria

Core Societal and Ethical Principles	Legal Values	Fundamental Rights
 Social Cohesion and Solidarity Participation Diversity Open Control Society Cultural and General Sensitivity 	 Suitability, Necessity and Proportionality Injustice and Inequality 	 Dignity and Autonomy Non- discrimination Privacy and Data Protection Freedoms and Protest

Core Societal and Ethical Principles

Social Cohesion and Solidarity: the capacity of a society to ensure the wellbeing of all its members, minimise disparities and avoid marginalisation. Solidarity refers to the feeling or action that produces a community of interests, objectives and standards. Both positive benefits and negative burdens are shared equally among groups in society.

Participation: understood as public participation, the belief that those affected by a decision have the right to and an interest in the decision process.

Diversity: the inclusion of different types of people in a group, organisation or country, involving various differing factors like religion, ethnicity and culture.

Open – Control Society: An open society is characterised by flexible structures, freedom of speech and widely shared information and respect for core societal values, creating a feeling of trust. Control societies use technology to establish security, but this creates security based on distrust.

Cultural and Gender Sensitivity: CM solutions should show sensitivity to different genders and cultural background as certain groups may be more vulnerable to crises, and perhaps disproportionately affected.

Legal Values

Suitability, Necessity and Proportionality: Tools used must be appropriate for the stated goal of the solution; the necessity of a solution should be assessed by examining alternative methods that may be less restrictive and equally effective; the effects of the solution should not disproportionate or excessive in relation to the interests affected.

In/justice and In/equality: Just CM means that activities are equitable, fair, non-partial and proper. Just and equal solutions facilitate the treatment of all individuals in the same way and that discrimination between

different groups is avoided. This allows for CM resources based on need and effectiveness, not other factors.

Fundamental Rights

Dignity and Autonomy: CM solution treats individuals with respect and preserves their independence and ability to be self-reliant.

Non-discrimination: solutions should be equally applicable to all individuals affected by a crisis. A CM solution discriminates if it enhances the security of a certain group but not others in the same situation.

Privacy and Data Protection: Individuals should retain control over how personal data is catalogued and shared.

Freedoms and Protest: protecting and fostering societal values can make populations more resilient against shocks.

Secondary Insecurities	Sustainability	Legitimacy	Political and Administrative Principles
 Unease- Calmness Suspicion - Trust Misuse - Protection New Vulnerabilities - Progress Technology Dependency - Flexible Solutions Function Creep- Specialised and Controlled Use 	• Sustainability	 State Citizenship Relationship Political Reputation 	 Accountability Transparency Integrity Negative - Positive Standardisation International Relations

Secondary Insecurities

Unease-Calmness: the level of anxiousness, agitation or strong emotion present within an individual, group, organisation or society.

Suspicion-Trust: the feeling that something (a person, state, organisation, event etc.) is possibly dangerous or malicious, or rather if it is secure, reliable and honest. High levels of trust are beneficial for society.

Misuse-Protection: the ability of an action or institution to protect society or individuals, versus the ability for misapplication of a solution to undermine its ability to protect.

New Vulnerabilities – Progress: this assesses whether development of a new solution or technique will expose new risks or avenues for harm.

Technology Dependency – Flexible Solutions: Responses can be flexible and delivered via a number of means, or can be dependent on one specific technological solution, which becomes a risk if the technology is unavailable.

Function Creep – *Specialised and Controlled Use:* whether the use of a technology or a function gradually extends beyond its original purpose, or if a solution is tailored for use only in special conditions and with limited functionality, to prevent misuse.

Sustainability

Sustainability: the endurance of an organisation or community, and the maintenance of certain values and how they can be upheld or defended.

Legitimacy

State-Citizenship Relationship: states derive legitimacy by citizens accepting the state's authority to exercise power.

Political Reputation: the social opinion and evaluation of a political entity can impact the way in which its decisions and policies are accepted and consequently their level of success in crisis management.

Political and Administrative Principles

Accountability: the obligation of individuals or organisations to be held responsible for their actions, especially by those affected by their actions.

Transparency: societal acceptance of solutions is increased by information disclosure, shared with clarity and accuracy.

Integrity: the commitment and adherence to a set of ethical principles and displaying this publicly. This increase trust and reliability.

Negative – Positive Standardisation: the process of implementing standards that have a positive effect can be overshadowed by the overarching social process of accepting a certain solution as the norm, although it has negative effects.

International Relations: international cooperation can have spill-over into other areas of international relations and vice versa.

Annex 2.4.7 – Document 3.4 Case Study 1 Worksheet

Applying the Societal Impact Assessment Framework – Part 1: Case Study 1 Forest Fire

Case Study 1 examines a forest fire. This sheet shows a partially completed SIA. Your task is to complete step 4, by suggesting how each function of the potential solutions may have an impact, and to what degree, and then to complete step 5.

<u>Step 1 – Identify Stakeholder Groups and Communities</u>

Who is directly affected by the crisis? Who is indirectly affected?

- Local emergency services
- Local civilians. Can be divided into local residents and holidaymakers
- National emergency services
- Foreign emergency services
- Foreign citizens. Can be tourists visiting the region, or those affected across the border.

Who will be implementing the solution?

- MDA Control and Command first responders
- LifeX COP Emergency services coordinators
- SMAP Emergency services communications teams

Are there any other groups connected to the solution?

- Other response services. General public can receive information via dedicated apps.
- Other users of the system can also contribute information
- Social media users. Local/national media

Step 2 – Collect Background Information

Do the groups identified above have any special characteristics or vulnerabilities?

- May not have specialist training, nor sufficient resources. On the other, may have better local geographical knowledge and knowledge of local conditions.
- Not experienced with crises. Maybe inclined to panic or make irrational decisions.
- Larger resources and more specialised but will be slower to deploy. May lack local knowledge.
- Will be willing to contribute but may have own processes and protocols to follow. Coordination may be difficult.
- Not experienced with crises. Maybe inclined to panic or make irrational decisions.

Are there any social, cultural or historic factors within the communities that may affect the crisis or solution?

This can be very context dependent. Factors to consider would be any local connections such as family and friends living in the area; the language that the affected communities speak, as tourists may not speak the local language; the remote nature of certain groups living in the area; any previous experiences with forest fires or evacuations; local residents may be reluctant to leave possessions; previous experiences with cross-border cooperation could affect the emergency services interaction. In urban centres, particularly port settlements, it could be assumed that there may be a larger immigrant population, some of which may be undocumented or have higher suspicions of emergency services.

Does the location of the crisis have any significance?

The dispersed nature of civilians in this area may make it more difficult to account for their safety. The transport networks available, and their quality, in more rural areas may affect their ability to evacuate safely, and for emergency services to travel effectively.

Has the solution been used before in this context or with this community? Were there any issues with previous use?

Context dependent – for this example, we will assume that it has not.

Step 3 – Provide an overview of legislation and policy

Are there formal restrictions that can influence the use of the solution?

- SMAP sharing of personal data restricted by GDPA.
- MDA shares information with users of relevant app, should be covered by consent. Cannot contact those that have not consented.

What are the policy discussions in the field?

- Context dependent, but as a closed system LifeX COP shouldn't have any policy concerns.
- SMAP and MDA may be affected by privacy rules, depending on their interactions with private citizens.

Are there any identified gaps in terms of legalisation, perhaps related to new technologies?

None

Has any new legislation or regulation been introduced, that might impact the use of the CM solution?

None

Step 4 – Identify and Predict Impacts

What are the functions of the identified solutions? (These are identified in the document 3.2)

Are any of the functions of the solution likely to have an impact in the identified areas (document 3.3)? Try to identify the type of impact, and how strong it could be, in both positive and negative terms.

For example, does implementation of the solution have an impact on the social cohesion in the communities identified above? Does the function impact on an individual's right to privacy or autonomy?

Step 5 – Describe mitigating measures and follow up

How can the negative impacts identified above be mitigated through preventative measures?

How can any positive impacts be emphasised?

How can the measures listed above be followed up?

Annex 2.4.8 – Document 3.5 Case Study 2 Worksheet

Applying the Societal Impact Assessment Framework – Part 1: Case Study 2

Case Study 2 examines a 2-stage terrorist attack in an urban environment. This sheet shows a partially completed SIA. Your task is to complete step 4, by suggesting how each function of the potential solutions may have an impact, and to what degree, and then to complete step 5.

<u>Step 1 – Identify Stakeholder Groups and Communities</u>

Who is directly affected by the crisis? Who is indirectly affected?

- Local citizens can be commuters, residents or staff.
- Emergency services first responders, counter terrorism, crisis management experts
- Family members, colleagues and groups related to the perpetrators will all be indirectly affected.

Who will be implementing the solution?

- Emergency services
- Belgian Crisis Centre (government organisation)
- Individuals

Are there any other groups connected to the solution?

• Tech company (Facebook)

Step 2 – Collect Background Information

Do the groups identified above have any special characteristics or vulnerabilities?

- International characteristics (airport and business district). Potential lack of language skills.
- Given Belgian language division, emergency services may also lack ability to clearly communicate.

Are there any social, cultural or historic factors within the communities that may affect the crisis or solution?

- Recent memory of similar attacks may induce further panic.
- International aspect may make official information dissemination harder.

Does the location of the crisis have any significance?

- Metro station is underground, which may make communications/emergency response more difficult.
- Business district is international and political hub. High value targets, and difficult to calculate population levels. Large number of office buildings.
- Airport is end destination for public transport. Victims here may not have mobility or ability to act upon advice.

Has the solution been used before in this context or with this community? Were there any issues with previous use?

<u>Step 3 – Provide an overview of legislation and policy</u>

Are there formal restrictions that can influence the use of the solution?

None.

What are the policy discussions in the field?

None.

Are there any identified gaps in terms of legalisation, perhaps related to new technologies?

None.

Has any new legislation or regulation been introduced that might impact the use of the CM solution?

None.

Step 4 – Identify and Predict Impacts

What are the functions of the identified solutions? (These are identified in the document 3.2)

Are any of the functions of the solution likely to have an impact in the identified areas (document 3.3)? Try to identify the type of impact, and how strong it could be, in both positive and negative terms.

For example, does implementation of the solution have an impact on the social cohesion in the communities identified above? Does the function impact on an individual's right to privacy or autonomy?

Step 5 – Describe mitigating measures and follow up

How can the negative impacts identified above be mitigated through preventative measures?

How can any positive impacts be emphasised?

How can the measures listed above be followed up?

Annex 2.4.9 – Document 3.6 Case Study 3 Worksheet

Applying the Societal Impact Assessment Framework – Part 2

This sheet can be used to guide your thoughts while applying the 5-step process in part 2 of the implementation phase. In Part 2, you can choose your own crisis and solutions and undertake a SIA.

Preliminary steps: define your crisis and choose two solutions from the list in document 3.1. The crisis can be as small or large as you wish, from your own experience and field or unrelated.

Once you have defined your crisis and solutions, you can proceed through the 5-step process to apply the SIA. Remember, these questions are for guidance! If you have any further thoughts or ideas, they are certainly relevant.

<u>Step 1 – Identify Stakeholder Groups and Communities</u>

Who is directly affected by the crisis? Who is indirectly affected?

Who will be implementing the solution?

Are there any other groups connected to the solution?

Step 2 – Collect Background Information

Do the groups identified above have any special characteristics or vulnerabilities?

Are there any social, cultural or historic factors within the communities that may affect the crisis or solution?

Does the location of the crisis have any significance?

Has the solution been used before in this context or with this community? Were there any issues with previous use?

<u>Step 3 – Provide an overview of legislation and policy</u>

Are there formal restrictions that can influence the use of the solution?

What are the policy discussions in the field?

Are there any identified gaps in terms of legalisation, perhaps related to new technologies?

Has any new legislation or regulation been introduced that might impact the use of the CM solution?

Step 4 – Identify and Predict Impacts

What are the functions of the identified solution? (These are listed in Document 3.2)

Are any of the functions of the solution likely to have an impact in the identified areas (Documents 3.2 and 3.3)? Try to identify the type of impact, and how strong it could be, in both positive and negative terms.

Step 5 – Describe mitigating measures and follow up

How can the negative impacts identified above be mitigated through preventative measures?

How can any positive impacts be emphasised?

How will the measures listed above be followed up?

Annex 2.5 – Questionnaire about the trainings (training booklet)

(Please note that the full version of the questionnaire includes several blank pages for answers. These have been excluded for formatting reasons).

Societal Impact Assessment Training Feedback Form

Before leaving, we would kindly ask you to answer the following questions, to help us improve the next sessions:

- 1. Which stakeholder group do you belong to (Research and Technology Organisations, policy makers, CM practitioner, etc.)?
- 2. Was this session relevant to you? Please explain why/why not.
- 3. Based on your expectations in advance of the session, did you achieve the expected output? Please explain why/why not.
- 4. Did you understand what we mean by SIA? If some sections required more information, please list them.
- 5. During this session, were you able to identify challenges related to societal impact in your work? Please explain why/why not.
- 6. Do you think the SIA Training you just attended could help you identify and solve such challenges in the future? Please explain why/why not.
- 7. Would you use the SIA methods before developing / Implementing / choosing a solution? (Y/N)
- 8. Do you have other comments or suggestions?

Please answer below:

Annex 3 – Presentations – Trainer Guide

The presentation will be sent to the learners as a complete document, with speakers' notes in the presentation format.

Annex 3.1 E-Lecture Presentation

Slide 1



Speakers Notes

This presentation aims to introduce the Societal Impact Assessment training which is integrated into the Trial Guidance Methodology. This framework was developed by PRIO, the Peace Research Institute Oslo and EOS, the European Organisation for Security.

	STRUCTURE OF THE COURSE
1.	Part 1: SIA - a crucial concept for crisis management
2.	Part 2: SIA - introducing the methodology
3.	Part 3: SIA – implementing the methodology
	OBJECTIVES OF THE COURSE
1.	To gain a greater understanding of societal impact and its relevance to crisis management
2.	For learners to be able to apply the framework to their own solutions

Speakers Notes

This course is split into three sections:

The first section will introduce the concept of SIA and explain why it is a necessary component of the solution development process and is a crucial step for setting up a Trial. This will be addressed in this electure.

The second and third section will be delivered through an in-person training session.

The second section will introduce the methodology of the DRIVER+ SIA framework.

The third section will put the SIA into practice, as learners and participants will apply the framework to case studies.

Objectives:

The objectives of the session are therefore: to enable the learners to apply SIA to their own work and context, and more generally, for the implementation of the framework and to lead to a cultural change, an objective that is at the core of the aim of facilitating a shared understanding of crisis management across Europe.

As the trainers, we also have an objective to give feedback on the session, and how it can be improved. So if you have any questions or comments please let us know, and we will also have a questionnaire for feedback at the end.



Speakers Notes

We shall begin the first section: SIA - A Crucial Concept for Crisis Management

The objectives of part 1 are twofold: to develop your understanding of SIA and to explain why this is important for your work.

Slide 4



Speakers Notes

We can note several definitions of societal impact, with variations from field to field. The *International Principles for Social Impact Assessment* defines as SIA (**on screen**).

- Social impact can be seen as how organizations, businesses or individuals' actions affect the surrounding community.
- Can be the result of an activity, project, program or policy and can be intentional or unintentional, as well as both positive or negative.
- It can be experienced by people directly associated with that organization or individual, or have a more far-reaching effect on people in different communities, states or even countries.

Two points to note on this definition

Research Ethics

Societal impact does not mean research ethics, in this context. Research ethics can have societal impacts, but for this session we are distinguishing between the two – we are thinking more about long term, conceptual and abstract issues relating to society, rather than the administrative issues that may affect society (e.g. GDPR or informed consent).

Efficiency

The purpose of doing a SIA is not to directly improve the efficiency of CM solutions. Rather, it is to increase the positive impact that CM solutions can have on societal values and principles and mitigate negative impacts. It is about understanding the risks and consequences of using a specific CM solution.

As an example, doing an SIA on public announcements by governments regarding a potential terror threat to the population is not intended to improve the means of communication, or help the message be disseminated more widely; but undertaking a SIA may flag the potential impact on the public trust in government if this type of communications doesn't provide accurate information and concrete advice.

This could then indirectly improve the efficiency of the solution – as government warnings are shown to be trustworthy and reliable, citizens are more alert and conscious of a potential threat.



Speakers Notes

- Societal impact is important because it looks at determinants, perceptions, attitudes and behaviours that are associated with the safety and well-being of a population. Evoking positive change in these determinants can be a step towards sustainability.
- As it becomes easier to address root causes and promote behaviour types that support sustainable change research and investments can become more valuable and more effective
- CM solutions don't take place in a vacuum, so taking society into account is crucial to ensure acceptance of solutions by general public and practitioners. Taking society into account makes solutions themselves more resilient and future proof as society and CM evolves.
- It can help develop more rounded and effective solutions by highlighting weaknesses and allowing for more informed decision making when choosing a solution to implement.
- CM practitioners and participants have a base level of accountability and responsibility for their actions and solutions and undertaking SIA can strengthen accountability, as it gives greater proof for the validity of a certain solution.

All of these factors contribute to the sustainability of CM solutions, as keeping broader societal context in mind improves the chances of offered solutions being adopted and can therefore make implementation more effective.

AN EXAMPLE OF SIA IN ACTION

SOCIAL MEDIA: THE USE OF WHATSAPP IN CRISIS COMMUNICATIONS





Speakers Notes

To give a brief example of SIA in action: WhatsApp has been considered for use as a crisis communications tool in India. However, rumours that spread via WhatsApp caused the death of dozens of people in India, as a tragic consequence of the use of the group chat function. Therefore, its use as a crisis management communications tools through participation in large group chats should be considered.

- In 2017, the use of WhatsApp was very different. Far more one directional, broadcast messages relayed through large group chats, often in the form of videos, that, for example, would call for charity for certain events or warn against local criminals.
- This latter practice has led to the spread of unverified and uncontextualized rumours, which caused the death of several people. One video that was shared shows a child being kidnapped in the street by two people on a motorbike. This was an advertisement being filmed in Karachi, Pakistan for an awareness campaign, but was shared indiscriminately across parts of India, leading to recriminations against people 'identified' as being part of the kidnapping gang.

How is SIA relevant to this case?

The case clearly shows:

- The need for reliable, responsible informed crisis communications tools and unintended consequences of encouraging the use of social media as tool for disseminating information
- Possible consequences of involving citizens more actively in management of crises.
- Social media enables citizens to participate more actively in crisis management providing, for example, situational analysis. Without standardised and transparent mechanisms to verify information, rumours that spread on social media can make Crisis Management more difficult.

SIA is relevant to this case as without the recognition of the potential consequences, and taking steps to mitigate the risks, a valuable tool can have negative consequences and reduce its effectiveness in future situations. Undertaking a SIA would allow practitioners more thoroughly assess a tool for its likely impact.

HOW TO DO A SOCIETAL IMPACT ASSESSMENT OF A CRISIS MANAGEMENT SOLUTION

METHOD TO APPLY

- 1. Identify Stakeholder Groups/Communities
- 2. Collect Background Information
- 3. Get an Overview of Legislation and Policies
- 4. Identify and Predict Impacts
- 5. Describe Mitigating Measures and Follow Up



Speakers Notes

Now that you understand the concept of SIA, and why they are important, we can demonstrate the process that you will learn in the next session and put it into practice, to give context for today's session. The steps that are undertaken to perform a SIA are as follows:

1) Identify stakeholder Groups/Communities:

The first step would be to identify the stakeholders and the community that could potentially be impacted by the implementation of the solution. This includes the groups affected by the crisis and the stakeholders involved in implementing the solution.

2) 2- Collect background information: The second step is to collect reference information covering key social issues of the impacted communities. This is information such as community history, culture and key events that have shaped the development of the community.

3- Get an overview of legislation and policies: Provide an overview of relevant national/EU legislation and policies that complement the mitigation measures (Step 5) that are directly related to the trial. In this context, they don't have to be specific.

4) 4- Identify and predict impacts:

This is the main part of the SIA. In this step, using the information gathered in steps 1-3 and the description of the functions of each solution, the societal impacts of the solution will be considered. To structure this exercise, a list of criteria has been defined upon which the function should be assessed. These are grouped around different themes, and will be explained in more detail in a moment. The criteria are not all relevant – the idea is to choose the ones that are the most relevant and to try to predict how the solution will impact those criteria, and the significance, duration and extent of the impact.

5) 5- Describe mitigating measures and follow up:

Having identified which criteria may be affected, action can be taken in order to either mitigate effects or enhance them. Step 5 asks you to list some potential measures and actions, such as providing extra follow ups for volunteers, establish rapport with local community leaders, engaging with the communities and sharing more information about the activity. A plan should then be made to describe how the mitigating measures will be followed up on.

ARLIER CASE OF WHATSARP	
ANDER CASE OF WHATSAFF	
. Who are the relevant stakeholders?	4. Identify and Predict Impacts
Official broadcasters	 Fundamental Rights
Audience	Legitimacy
	 Secondary Insecurities
. Background Information	5 Milliosting Measurer
Language skills	Clear information source
Location	Well introduced
Audience Composition	wei introduced.
. Legislation and Policies	
End to end encryption	
Private data ramifications	
Iment 2.1	

Explain example using Document 2.1.

Annex 3.2 Contact Phase Presentation

Slide 1





Speakers Notes

This presentation constitutes the second session of the Societal Impact Assessment Training, the first half of which was delivered via an e-lecture session. This session will explain in detail the Societal Impact Assessment Framework and how to use it, before allowing the learners to put the methodology into practice via the use of group work and case studies.

Slide 2



1) The first section will introduce the concept of SIA and explain why it is important. This was already done in the e-lecture.

The training session today will cover section 2 and 3.

- 2) The second part of the course will introduce the methodology of the DRIVER+ SIA
- 3) The third and final section of the course will put the SIA into practice, as learners and participants will apply the framework to case studies.

Objectives:

The objectives of the session are therefore: to enable the learners to apply SIA to their own work and context, and more generally, for the implementation of the framework and to lead to a cultural change, an objective that is at the core of the aim of facilitating a shared understanding of crisis management across Europe.

Slide 3



Speakers Notes

In part one you will be introduced to the framework, which consists of 5 steps. These will be explained, before we take a deeper look at the impact criteria used to assess CM solutions.

The objectives of part one are:

- To understand the practical steps taken to produce an SIA
- To understand how the framework can be used to assess CM solutions

THE SOCIETAL IMPACT ASSESSMENT (SIA) FRAMEWORK

WHAT IS IT?

- · A research- based, systematic and comprehensive assessment method.
- · Assesses both unintended negative and positive societal impacts.
- Is the result of a systematic screening of the project, as well as approximately one hundred references from both literature and research.
- Aimed at producing societally robust knowledge about the impacts CM can have on society.



Speakers Notes

Before we begin, a brief reminder of what the societal impact assessment framework is and what it hopes to achieve.

Read from slide.

Societal impacts, of course, refer to a change to a value, principle or norm that is considered important for a healthy, well-functioning society.

Slide 5

HOW TO DO A SOCIETAL IMPACT ASSESSMENT OF A CRISIS MANAGEMENT SOLUTION

- 1. Identify Stakeholder Groups/Communities
- 2. Collect Background Information
- 3. Get an Overview of Legislation and Policies
- 4. Identify and Predict Impacts
- 5. Describe Mitigating Measures and Follow Up



Speakers Notes

1) 1- Identify stakeholder Groups/Communities:

The first step would be to identify the stakeholders and the community that could potentially be impacted by the implementation of the solution. This includes the groups affected by the crisis and the stakeholders involved in implementing the solution.

- 2- Collect background information: The second step is to collect reference information covering key social issues of the impacted communities. This is information such as community history, culture and key events that have shaped the development of the community.
- 3- Get an overview of legislation and policies: Provide an overview of relevant national/EU legislation and policies that complement the mitigation measures (Step 5) that are directly related to the trial. In this context, they don't have to be specific.
- 4) 4- Identify and predict impacts:

This is the main part of the SIA. In this step, using the information gathered in steps 1-3 and the description of the functions of each solution, the societal impacts of the solution will be considered. To structure this exercise, a list of criteria has been defined upon which the function should be assessed. These are grouped around different themes, and will be explained in more detail in a moment. The criteria are not all relevant – the idea is to choose the ones that are the most relevant and to try to predict how the solution will impact those criteria, and the significance, duration and extent of the impact.

5) 5- Describe mitigating measures and follow up:

Having identified which criteria may be affected, action can be taken in order to either mitigate effects or enhance them. Step 5 asks you to list some potential measures and actions, such as providing extra follow ups for volunteers, establish rapport with local community leaders, engaging with the communities and sharing more information about the activity. A plan should then be made to describe how the mitigating measures will be followed up on.


Speakers Notes

We're going to look a bit deeper at Step 4, as this is where the analysis takes place.

- In Step 4, the functions of each solution are assessed by a set of impact criteria that represent different possible effects on society.
- Functions of crisis management solutions are a description of the purposes that the tool serves, based upon a pre-identified taxonomy (these are identified in the documentation for you).
- The reason that the assessment is based on functions instead of solutions is because one CM solution can have several functions. Assessing *functions* rather than *the overall solution* will allow for a greater understanding of the cause of societal impacts and how they can be mitigated or enhanced.

For example, simply saying that "WhatsApp (as a solution) could have an impact on the trust that societies have in crisis management communications" is less informative than saying "WhatsApp, in its function to 'Provide information to media and the public' can have an impact on the trust that societies have in crisis management communications".

• The impact criteria are the focal point for the assessment of each function. They are arranged around several core themes and allow practitioners to consider the effect that each function would have on various issues related to societal values and principles.

The basic approach is to choose several relevant criteria and explain "what is the impact of Function X on Criteria Y"?

As mentioned previously, this will not lead to one single, definite answer – i.e. WhatsApp is 65% positive. Rather it should show that a range of outcomes may occur and allow for reflection on how to mitigate these risks or accentuate the positives.



Speakers Notes

These are the different thematic groups under which the criteria are grouped. Grouping criteria together based around these groups makes it easier to provide an initial assessment of whether a criteria group will be relevant, without having to look at each individual one. For example, if considering a solution that uses drones, it is likely that criteria under legitimacy and political/administrative principles won't be relevant; but secondary insecurities may be more relevant, as well as legal values.

Slide 8



Speakers Notes

Unease-Calmness: the level of anxiousness, agitation or strong emotion present within an individual, group, organisation or society.

New Vulnerabilities – Progress: this assesses whether development of a new solution or technique will expose new risks or avenues for harm.

Suspicion-Trust: the feeling that something (a person, state, organisation, event etc.) is possibly dangerous or malicious, or rather if it is secure, reliable and honest. High levels of trust are beneficial for society.

Technology Dependency – *Flexible Solutions:* CM responses can be flexible and delivered via a number of means, or can be dependent on one specific technological solution.

Misuse-Protection: the ability of an action or institution to protect society or individuals, versus the ability for misapplication of a solution to undermine its ability to protect.

Function Creep – *Specialised and Controlled Use:* whether the use of a technology or a function gradually extends beyond its original purpose, or if a solution is tailored for use only in special conditions and with limited functionality, to prevent misuse.

Slide 9



Speakers Notes

DNA Database – information systems such as forensic DNA databases are a very flexible resource and due to progress in technology and analysis fields, it is now possible to perform familial searching in the UK forensic database, which means that while a DNA profile may not generate a match, it is possible to search for similar profiles. Leads to the possibility of surveillance and investigation of individuals with no relation or suspicion to a case. FUNCTION CREEP/Specialised and Controlled Use

Boston PD: during the Boston Marathon bombings the Boston Police District had to shut down the cell phone service in the affected area due to the potential for cell phones being used as detonators. They decided to use Twitter as their main communication tool to reach out to the public, therefore remaining flexible. Technology/Dependency

GermanWings – CEO was praised for his communications strategy after the 2015, as his briefings concerning the incident struck the right balance between being open and truthful but also only presenting the necessary amount of information to the public. In contrast, Malaysia Airlines were accused of create further panic and tension in 2014 by failing to communicate properly and not providing well-sourced and established information about the incident, leading to false rumours about the cause of an accident.

NodNett – Norwegian TETRA system (digital radio connection for emergency services only). In cases of bad weather the network collapsed and emergency services in small towns and villages have been unable to communicate. New Vulnerabilities – Progress

Fire Fighters using UAV's: UAV's have been used by firefighters when tackling forest fires to detect hotspots and coordinate efforts. However, use of UAV's by the public have forced firefighters to ground their craft due aerial safety laws and therefore have been unable to continue their work. Misuse/Protection

Boston PD: A trend in North America and Europe is for Law Enforcement Agencies to build relations with the public through social media and use these channels to spread information. This requires a long term effort to build a reputation. Boston PD used Twitter as their main communication tool in the aftermath of the Boston Marathon Bombing in 2013, sharing accurate and helpful information to the public. Suspicion – Trust.



Speakers Notes

Sustainability: the endurance of an organisation or community, and the maintenance of certain values and how they can be upheld or defended.

Disaster Risk Reduction is a good example of sustainability: a good practice to help build community resilience, allowing communities to anticipate, absorb and recover from shocks or crises. In this case, simple earthquake advice such as this can help minimise the loss of life during an earthquake.



Speakers Notes

Integrity: the commitment and adherence to a set of ethical principles and displaying this publicly. This increases trust and reliability.

Accountability: the obligation of individuals or organisations to be held responsible for their actions, especially by those affected by their actions.

Transparency: societal acceptance of solutions is increased by information disclosure, shared with clarity and accuracy.

Negative – Positive Standardisation: the process of implementing standards that have a positive effect can be overshadowed by the overarching social process of accepting a certain solution as the norm, although it has negative effects.

International Relations: international cooperation can have spill over into other areas of international relations and vice versa.



Speakers Notes

Automatic Number Plate Recognition: an advanced police surveillance technique that can be used to track citizen's movements. A study in the UK has shown that the public are concerned over the exact uses of the information gathered by this system. **TRANSPARENCY**

EFFIS: The European Forest Fire Information System is a collaboration between 40 countries to help with the prevention of forest fires by sharing of information and expertise. **INTERNATIONAL RELATIONS**

International Sign for Emergency Exit/Military Patrol on Belgian streets: The sign for emergency exit is internationally recognised, creating trust and giving citizens relevant information in all countries. On the other hand, since the attacks in 2016, Belgium has had military patrols on the streets of several cities, suggesting that this is necessary to create a normal level of security, with negative consequences for many factors – trust, state-citizenship relationship, dignity/ autonomy. **NEGATIVE/POSITIVE STANDARDISATION**

Uber: In 2016, Uber was fined for covering up a data breach. Given this decision by the company, subsequent measures and policy announcements with regards to passenger safety were not as well received, diminishing their impact. **INTEGRITY**

FEMA: the government response to Hurricane Katrina was heavily criticised as there was a lack of agreement as to who was responsible for responding to hurricane warning. This lead to conflict after the crisis as each organisation argued that they weren't responsible. **ACCOUNTABILITY**



Speakers Notes

State-Citizenship Relationship: states derive legitimacy for its action by citizens accepting the state's authority to exercise power.

Political Reputation: the social opinion and evaluation of a political entity can impact the way in which its decisions and policies are accepted.

Slide 14



Speakers Notes

Prime Minister Kan: during the Fukushima disaster, PM Kan was criticised for the handling of the situation; he did not hold the government accountable for the escalation of the disaster, instead blaming the fact that the tsunami was larger than anticipated, and his visit to the site caused the emergency work to be interrupted for two hours. He resigned shortly after the crisis.

Fukushima Nuclear Disaster: during the disaster, the Japanese government did not use an already existing system to predict the geographical spread of radioactive material, leading to the evacuation zone being wrongly established and therefore had to be enlarged three times in 24 hours. Radioactivity was subsequently found far outside the evacuation zone. Citizens were further affected when the US government announced a recommendation for its citizens to move further away than the Japanese evacuation zone.



Speakers Notes

Social Cohesion and Solidarity: the capacity of a society to minimise disparities between different groups and avoid marginalisation. Solidarity ensures that positive benefits and negative burdens are shared equally among groups in society.

Participation: understood as public participation, the belief that those affected by a decision have the right to and an interest in the decision process.

Diversity: the inclusion of different types of people in a group, organisation or country, based around factors such as religion, ethnicity and culture.

Open – Control Society: An open society is characterised by freedoms, widely shared information and respect for core societal values, which creates security based on a feeling of trust. Control societies use technology to establish security, but this creates security based on distrust.

Cultural and Gender Sensitivity: CM solutions should show sensitivity to different genders and cultural background as certain groups may be more vulnerable to crises, and perhaps disproportionately affected.



Speakers Notes

Queensland Evacuation Centre - to be used in the case of fire or flooding, a well-designed evacuation centre will take into account the different needs of the potential occupants and will attempt to recreate the amenities and functionalities that users would experience in their own homes. Special consideration of the need for security, comfort and privacy of different groups helps build resilience. i.e. for breastfeeding mothers, single parent families etc. **CULTURAL AND GENDER SENSITIVITY**

Police Camera Facial Recognition Trials: police have been trialling facial recognition software is several locations in the UK. The trials have led to no arrests so far and have been heavily criticised. There have been several reported incidents of members of the public being unhappy for the police to be surveilling them in this way. **OPEN CONTROL SOCIETY**

Muslims in Egypt Donate Blood: after the Palm Sunday attacks against a Coptic Christian Church, calls went out amongst the Muslim population to donate blood to support the victims. **SOCIAL COHESION AND SOLIDARITY**

Public Consultation on Influenza Outbreak Response by Seattle and King County Public Health Organisation. A public consultation into the procedures and underlying values that guide the response to an influenza outbreak helped create a more acceptable response plan, and also meant that the public would be more open to accepting certain decisions i.e. prioritising medical aid for one type of patient over another. **PARTICIPATION**

Brussels Terror Attacks 2016: the attacks in the Metro and at the airport took place in two very international environments – the metro station is in the middle of the EU district, where many foreign nationals work, and the airport is of course a hub for international visitors. In this context, there is no guarantee that safety information relayed in the local languages would be correctly received. **DIVERSITY**





Speakers Notes

Suitability, Necessity and Proportionality: Tools used must be appropriate for the stated goal of the solution; the necessity of a solution should be assessed by examining alternative methods; the effects of the solution should not disproportionate or excessive in relation to the interests affected.

In/justice and In/equality: Just and equal solutions facilitate the treatment of all individuals in the same way and that discrimination between different groups is avoided. This allows for CM resources based on need and effectiveness, not other factors.

Slide 18



Speakers Notes

FUKUSHIMA Evacuation Shelters: In the shelters set up for the evacuated citizens after the Fukushima disaster, women were expected to cook meals for the inhabitants of the shelter, while men were offered the opportunity to undertake paid work. **INJUSTICE AND INEQUALITY.**

Drones as a solution: airborne sensors in UAVs can be a suitable means for gathering data in an emergency. Alternative means such as manned helicopters may also gather the same data. Several factors can be considered, such as cost, the range of data required, the risk involved, the effect on the population of different tools being seen overhead. All of these factors effect which solution can be chosen. **SUITABILITY, NECESSITY, PROPORTIONALITY.**



Speakers Notes

Dignity and Autonomy: CM solutions treat individuals with respect and preserve their independence and ability to be self-reliant.

Non-discrimination: solutions should be equally applicable to all individuals affected by a crisis. A CM solution discriminates if it enhances the security of a certain group but not others in the same situation.

Privacy and Data Protection: Individuals should retain control, or be aware, of how personal data is catalogued and shared.

Freedoms and Protest: protecting and fostering societal values can make populations more resilient against shocks.



Speakers Notes

Crisis Centre Belgium. During the 2016 attacks, the Belgian Crisis Centre asked citizens to communicate situational information via social media. This needs reflection upon what type of keywords or hashtags are used in the data processing and categorising, to ensure that non-related data is not collected. **PRIVACY AND DATA PROTECTION**

Evacuation orders: it is not guaranteed that citizens will wish to leave their homes during a crisis. There needs to be a balance of allowing individuals to act with their own freedom and making their own choices based upon being given all necessary information, and acting swiftly and decisively to preserve live in the case of acute emergencies. **DIGNITY AUTONOMY**

Chilling Effect and Surveillance. Due to awareness of surveillance measures, without knowledge of the specifics, many individuals change their behaviour to avoid excessive intrusion into their lives. NSA surveillance has had this effect. This is a negative consequence of the lack of freedom. On the other hand, data collection through focus groups can allow individuals to register objections or protest against certain measures. **FREEDOMS AND PROTEST**

FEMA Hurricane Harvey Preparations: Federal Emergency Management Agency issued guidelines in Texas and Louisiana to effectively communicate with all parts of the affected populations. These guidelines included provision of sign language interpreters, crisis information translated into multiple languages and outreach to ethnic media organisations and making websites accessible. **NON-DISCRIMINATION**

You may have noticed the potential for positive reinforcement – when enhancing the positive side of an impact. I.e. transparency, this can have a spill over effect and enhance another criteria, such as trust. This is something to look out for and can lead to greater effectiveness. The reverse can also be true with negative effects though.



Speakers Notes

Now, we will put the framework into practice through case studies and group work.

Slide 22

SUMMARY OF PART 3

- · Group work to undertake SIA on 2 case studies
- Presentation of results and feedback
- Create your own crisis response: SIA of a created scenario, based upon given solutions.

Objectives of the learners:

- Undertake SIA
- Feedback to group



Speakers Notes

Part 3 of the course will allow you to test out the framework in groups.

In the first half of the session two case studies will be introduced that suggest a situation in which a solution can be deployed. We will first go through the scenario as a group, undertaking steps 1-3 together, before the groups individually complete steps 4 and 5 themselves, based upon the solution that they have chosen to assess.

In the second half of this session, the groups will implement the full methodology, applying steps 1-5 to a scenario of your own choosing.

For the sake of simplicity, the solutions for each part of the session will be predefined.

After each round of group work, we will feedback to the rest of the group to discuss the thoughts that the learners have on the process, and the results that they have seen from implementing the framework.

So, the objectives for this session are to undertake two SIA's in groups, and to provide feedback to the rest of the group.

Slide 23

APPLYING THE SIA FRAMEWORK TO CASE STUDIES - PART 1

- Split into groups
- Read through the scenarios in the following slides
- · Read through the documentation on the solutions
- · Complete steps 1-3 for each scenario together
- Then, each group will complete steps 4 and 5 individually, for the chosen solution(s).
- Feedback to whole group



Speakers Notes

Here, the learners should split into groups. There are two scenarios, each with three solutions. Depending on numbers, each group can assess one, two or three of the solutions.

- Split into groups.
- Read through the scenarios in the following slides.
- Read through the documentation on the solutions.
- Complete steps 1-3 for each scenario together.
- Then, each group will complete steps 4 and 5 individually, for the chosen solution(s).
- Feedback to whole group.

Each group has to identify a writer and a moderator who will present the results at the end of the session.

To begin, we will first look at the two crisis situations for which we will be assessing the solutions.



Speakers Notes

Case Study 1 is about a Forest Fire in a cross-border Mediterranean environment. The idea is to find identify which societal impacts are relevant in the solutions offered for the scenario.

Slide 25

EXPLANATION OF CASE STUDY 1: FOREST FIRE IN A CROSS-BORDER MEDITERRANEAN ENVIRONMENT

A large forest fire occurs in a cross-border Mediterranean environment and threatens rural and urban interfaces. The hazard is developing rapidly and the resources of the departmental fire brigade are quickly exceeded, requiring support from other fire brigades and deployment of national means.

airplanes.



As the fire is located near a border and the wind direction is oriented towards the border, a warning is given to the neighbouring country and terrestrial support is requested through a pre-existing bilateral agreement, established due to geographical proximity. Support from the EU Civil protection Mechanism is also requested for additional

ocument 3.4

Speakers Notes

Read from Slide or allow group to read.



Speakers Notes

- The below solutions to assess will be the following (detailed explanations also distributed):
- MDA Command and Control System: Management of the complete mission cycle for crisis management allocation of the site of the emergency situation, finding the right resource, tasking and follow up of accomplishment.
- 2) LifeX COP: Lightweight web-based COP that provides share situational awareness based on a CIS.
- 3) Social Media Analysis Platform (SMAP): Support Crisis Manager in the processing of Social Media for situation assessment purposes.





Speakers Notes

The second case study is the terrorist attack that took place in Brussels in 2016.

EXPLANATION OF CASE STUDY 2: TERRORIST ATTACK IN BRUSSELS



On March 22nd 2016, two bombs exploded in Belgium. One attack took place in Brussels Airport in Zaventem, and the other at Maalbeek metro station.

ISIS claimed responsibility for the attacks. The first explosion in this dual-attack took place shortly before 8.00 am local time at the airport, while an hour later the second bomb detonated on board of a moving metro as it departed from the station.



The attacks killed 32 people (excluding the attackers), and more than 300 people were injured. Belgium's Coordinating Unit for Threat Analysis placed the country on Terrorism Threat Level 3. This allowed security authorities to introduce new alerting measures and strengthened security measures throughout the city. There were various actors involved in crisis management



Speakers Notes

Read from slide or allow group to read.

Slide 29

SOLUTIONS TO ASSESS

1 - Social Media Analysis Platform (SMAP): Support Crisis Manager in the processing of Social Media for situation assessment purposes

- 2 PROTECT web-based alert and emergency warning system for civil protection
- 3 Rapid Mapping enables rapid mapping of an area via drone.



Speakers Notes

These are the solutions to assess concerning the second use case.



OVERVIEW OF CASE STUDIES

Case Study 1: Forest fire in a cross border environment.

Solutions to assess:

1) MDA Command and Control 2) LifeX COP 3) SMAPs Case Study 2: Terrorist attack at two urban locations.

Solutions to assess:

1) SMAP 2) PROTECT 3) Rapid Mapping



Speakers Notes

As a brief reminder, these are the scenarios and solutions. Each group should pick a solution and scenario to work on and assess in steps 4 and 5. First though, we will all work through steps 1 and 3 together for each scenario.

Slide 31

STEPS 1 - 3

	Stakeholder Groups and Communities	Background Information	Legislation and Policies
Forest Fire	Emergency services Citizens Coordinators/First Responders	Local knowledge Experience Geography	Personal Data Privacy Concerns
Terrorist Attack	Citizens Emergency services Govt. organisations	International dimension Geography	Privacy laws

Speakers Notes

We will go through steps 1-3 together for each case study mentioned above. This will help you begin to understand the process.



Speakers Notes

Now that steps 1 to 3 are complete, you should be able to use this information, and the information on the solutions to complete steps 4 and 5. For reference:

1) Identify stakeholder Groups/Communities:

The first step would be to identify the stakeholders and the community that could potentially be impacted by the implementation of the solution. Relevant questions to ask would start with 'how could solution X with all its functionalities have an impact on the stakeholder groups or communities included in this context?

2) Collect background information:

If relevant, collect reference information covering key social issues of the impacted communities such as community history, culture and key events that have shaped the development of the community. Are there known vulnerabilities in the community? Specific social challenges? Who are the major industrial actors?

- Get an overview of legislation and policies: Provide an overview of relevant national/EU legislation and policies that complement the mitigation measures (Step 5) that are directly related to the trial.
- 4) Identify an predict impacts:

This is the main part of the SIA, where a structure assessment, based on the information acquired in the previous steps takes place. The final aim is to identify potential direct social impacts and try to predict their significance, duration and extent. The SIA criteria listed in the framework should be used to structure this thinking, but the idea is not to say something about every criterion. In some cases, the impacts may be rather obvious and isolated maybe to issues of privacy and data protection, in which case only that one criterion might be relevant; yet in other cases the societal issues might be more complex.

5) Describe mitigating measures and follow up:

In order to lower the risk of negative unintended impacts, and/or to increase the possibility for positive impact, a list of measures should be made. The list should be based on the impacts identified in the previous step and could include actions such as providing extra follow ups for volunteers, establish rapport with local community leaders, engaging with the communities and sharing more information about the activity A plan should then be made to describe how the mitigating measures will be followed up on.

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PLENARY DISCUSSION

- Please reflect on steps 4 and 5 for the case study that you were working on
 - Have you found unexpected negative societal impacts ?
 - If yes, would you still use the solution developed ?
 - If yes, how could we mitigate them ?
 - Are there any beneficial impacts?

Speakers Notes

We would like each group (through their moderator) to briefly share what they found out on each step, in terms of the process you went through, and the type of discussion you had at each stage.

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GROUP WORK PART 2 – UNDERTAKING YOUR OWN SIA

- 1. Create you own case study based on the context and solutions of your choosing
- 2. Undertake the 5 Steps to produce a SIA for the functions of each solution.
- 3. Present Results to the Group



Speakers Notes

Now, you will be asked to undertake the full SIA in your groups. So that you are able to use your own experiences and knowledge, you will be creating the scenario entirely! This will allow you to put the SIA framework into a context that you understand and are comfortable with.

To begin creating this scenario, you can either:

- a) Choose two solutions from D3.1 and then think of a context (crisis) that you may deploy these solutions in. Then identify the functions that the solutions serve (D3.2) and undertake steps 1-5.
- b) Or, think of a scenario (crisis) that needs to be resolved. Then, looking at D3.1, choose two solutions that may help you resolve this crisis. Then identify the functions that the solutions serve (D3.2) and undertake steps 1-5.

Document 3.6 will help guide your thoughts and discussions.

Slide 35

PLENARY DISCUSSION

- What was your scenario?
- Which solution (s) did you choose?
- What were the results of the SIA?
- How could the impacts be enhanced or mitigated?



Speakers Notes

We would like each group (through their moderator) to briefly share what they found out on each step, in terms of the process you went through, and the type of discussion you had at each stage.



Speakers Notes

To help improve the training, if you wish to you can ask the learners to answer the following questions or complete the questionnaire

Through the questionnaire that you will have to fill, please try to reflect your thoughts regarding the following questions:

Was this session relevant to you and did you achieve the expected output?

What are the main difficulties for you in terms of self-assessment?

From your point of view, how can we make the SIA more relevant for end –users?