



D942.11 – REPORT ON REVIEW AND SELECTION PROCESS

SP94 - TRIALS

MARCH 2018 (M47)

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

In order to achieve these objectives, five sub-projects (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 (from the former SP8 and SP9) 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. **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 standardization.

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, whose most important will be to build and structure a dedicated Community of Practice in Crisis Management, thereby connecting and fostering the exchange on lessons learnt and best practices between Crisis Management practitioners as well as technological solution providers.

Executive Summary

The deliverable on the review and selection process D942.11 reports on the definition and coordination of the transparent and end-user driven solution review process. It thereby fulfils the objectives of the corresponding project task to explain how the process has been implemented and how its components are assembled. Readers of this document will be able to follow the motivation and steps of the review process in order to create a Call for Application, evaluate the submissions and to select appropriate solutions for a Trial. The target audience are therefore members of a Solution Review Group, practitioners and Trial owners.

The DRIVER+ solution review is assembled out of the Solution Review Group, the solution review process and the Call for Application, which takes into account the evaluations executed between M1 and M26 of the project. To reach an end-user perspective, the core members of the Solution Review Group are practitioner organizations, who contribute with their insights on crisis management. To ensure a solution's applicability in a Trial scenario, the Trial owner also has a key role in the group. The group is completed by an organizer for the review process and advisories for dissemination and communication.

In order to have a transparent review, the process is based on blind reviews, which require an anonymization of the applications. The Call for Application is created around a set of review criteria, which have been defined by the end-users as well and resemble the most important aspects to be known about a new, potentially innovative, solution.

First experiences in the execution of the review process have been collected for the Trial 1 Call for Application. The document presents the creation and evaluation of the results for this Trial leading to a set of solutions, which have been selected by practitioners and Trial owners to be investigated in more detail. Due to strong relations and dependencies to other works in the project, the Trial 2 Call for Application is presented in an intermediate state. The review results of this and later calls will be presented in the updated deliverable D942.12.

Lessons learned are already drawn from the first iteration and are now implanted in the current and upcoming review processes. The review of solutions is strongly related to the timing and execution of tasks apart of the Trials. This includes for example communication and dissemination activities, which lead to a close collaboration with ARTTIC as advisory to the Review Group. First feedbacks have shown that practitioners and solution providers have sometimes different understandings about aspects they ask for, which might also be the case within these groups. Along the Call iterations, the terminology and information to both parties is improved and extended where needed. Also, Trial owner and practitioners have very different opinions on the applicability of a solution, which lead to conflicting reviews. It is therefore reasonable to let practitioners review specifically the Crisis Management capabilities of a solution and then later let the Trial owner utilize this input to decide on the applicability for his specific Trial. Further insights will be presented along the document and summarized in the end.

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List of Acronyms

Acronym	Definition
SRG	Solution Review Group
CfA	Call for Application
CM	Crisis Management
KoM	Kick-off Meeting
MX	Project Month X
DoW	Description of Work

1. Introduction

This deliverable describes the definition and coordination of the transparent and practitioner driven review process of the solutions to be applied within the Trials as well as the coordination and execution of the selection process.

To achieve the objective of this task, the solution review process is organized as follows.

1. The Solution Review Group representing the end-user and Trial perspectives has been formed. The end-user perspective covers all relevant crisis management bodies (local authorities, emergency services, Red Cross societies, and Non-Governmental Organizations) within the consortium. The Trial owners ensure the relevance of the potential solutions for the planned scenario. WWU is the WP leader and organizer of the Group.
2. The solution review process guiding the coordinated execution of the review is based on the outline presented in the DoW. A structured and fair review process with end-users as main stakeholder is the key element to fulfil the objective of a transparent and end-user driven review.
3. For internal solutions, the evaluations executed between M1 and M26 have been compiled and prepared to be assessed by the Solution Review Group. Main inputs to this part are the “tool evaluations” of the first round of experiments as well as the experiment reports.
4. The Call for Application has been designed and executed for Trial 1 and started for Trial 2. Therefore, review criteria have been defined based on the findings from former evaluations. Solutions which have been selected by the Call for Application are to be stored in the Portfolio of Solutions database and are updated after the Dry-runs and Trials.

Chapter 2 describes the details on the components shown above and how they have been implemented in DRIVER+. Next, chapter 3 presents the execution and results of the Call for Application for Trial 1 concluding on a set of solutions which are to be further investigated by the Trial Committee towards the Dry-runs. In chapter 4, a first overview of the Call for Application for Trial 2 is given, which needed to be delayed due to strong connection to other works in the project and especially the state of the Trial scenario design. Since the solution review is to be improved with every execution, chapter 5 lists the lessons learned, which have been observed so far and which are already implemented for the Trial 2 Call for Application. Finally, chapter 6 closes the deliverable with the conclusions drawn so far.

2. DRIVER+ Solution Review

The solution review process was designed in an iterative procedure to ensure two things: On the one side that the compiled results from the past solution evaluations are carried over and on the other that a transparent and end-user driven review is reached. This chapter will present the inputs and components of the solution review and how they have been designed.

A workshop was hosted by WWU during the DRIVER+ Kick-off Meeting in Rotterdam together with the practitioner organizations within the consortium. The practitioners are the solution end-users and hence the core members of Solution Review Group. An overview of all members of the Solution Review Group is given in section 2.1. The workshop followed three main objectives: (1) agree on the planned review process based on the outline described in the DoW presented in section 2.2, (2) discuss the compiled evaluation from M1 to M26 presented in section 2.3 and (3) define the contents and especially the review criteria to be included in the Call for Application presented in section 2.4.

2.1 Solution Review Group

The term “Solution Review Board” used in the DoW for the participants in the review process was experienced problematic for mainly two reasons. First, there already is a general Review Board on project level, which caused confusions in the communication. Second, although it was named “selection process”, it is not intended to perform a selection of solutions to be applied in the Trial. Based on the review, it performs a pre-selection step by excluding solutions irrelevant to the CM domain and the DRIVER+ innovation objective. The Trial Committees will utilize the reviews for a selection of appropriate solutions for their Trial afterwards. It was hence decided to change to the term “Solution Review Group”.



Figure 2.1: The Solution Review Group

The Solution Review Group is composed of four member sub-groups with dedicated roles and responsibilities:

- The practitioner organizations within the DRIVER+ consortium are constant members of the group and will remain throughout all Trials. It is their responsibility to provide blind reviews from the practitioner perspective in order to assess the general contribution of a proposed solution to crisis management.
 - This group has to be extended by external crisis management professionals. These persons function as sub-reviewers and are invited by the internal end-users to support the review and to complete the domain knowledge.
- The Trial owner of the respective Trial for which solutions are to be reviewed will change with every Trial and will provide a meta-review from the Trial perspective. This is based on the two blind-reviews in order to assess the fitness of a proposed solution to the Trial scenario.
- The WWU has the role of the group coordinator and is another constant member. They are in charge of managing the course of action for each Trial application.

1. Create the Call for Application together with the Trial owner,

2. publish the Call for Application together with ARTTIC from SP95,
 3. collect the submissions of solutions and assign reviewers and
 4. consolidate the reviews with the Solution Review Group.
- ARTTIC, as advisory, is a constant member, but not involved in the review of solutions. They are responsible for two tasks related to the review of solutions.
 - Support the dissemination of the Call for Application and manage the communication with external solution providers.
 - As External Cooperation Manager (SP91), manage the involvement of external solution providers.

The group was first assembled at the DRIVER+ KoM in Rotterdam (September 2017), at which the first draft of the review process was discussed based on the consolidated evaluations executed between M1 and M26. The following list shows the constant member organisations and their role in the Solution Review Group.

Table 2.1: Solution Review Group Members

Organization	Role
WWU	Solution Review Group Coordinator
ARC, DRC, MDA, THG, SRH, CSDM, SGSP, SRC, EASS, VALABRE	Solution Review Group Member
ARTTIC	External Cooperation Manager & Dissemination and Communication

2.2 Solution Review Process

The solution review process is in its concept based on the outline presented in the DoW of WP942 aiming to be transparent and end-user driven. The process is mainly split in two parts, which are (1) the preparation of the solution review and (2) the execution of the solution review.

The solution review **preparation** is depicted in Figure 2.2 and starts with the formation of the Solution Review Group, which has been explained in more detail in section 2.1. The compilation of the former reviews from M1 to M26, described in section 2.3, carries over insights from the initial phase of the project to the new solution review process. The design of the Call for Application will be shown in section 2.4. As an outcome, chapter 3 and chapter 4 present the Calls for Application for Trial 1 and Trial 2.

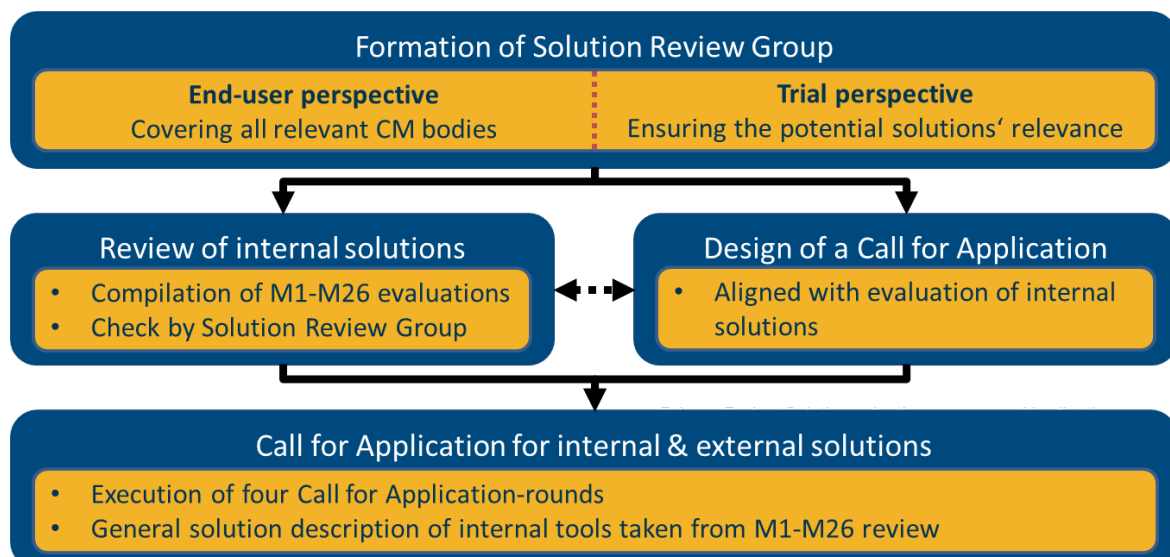


Figure 2.2: Preparation of Transparent and End-User Driven Solution Review

The solution review **execution** is a sequential process starting with the double-blind reviews, which will be explained in more detail below. The reviews are then consolidated in order to prepare a selection meeting. The External Cooperation Manager acts as an advisor to organize the cooperation with external solution providers. After the solutions have been investigated in detail, the information in the Portfolio of Solutions will be updated after each Dry run. The lessons learned will support the future identification of solutions and the adaptation of solutions in later work packages.



Figure 2.3: Execution of Transparent and End-User Driven Solution Review

The review process is for each Trial the same and is comprised out of the following steps (c.f. Figure 2.4).

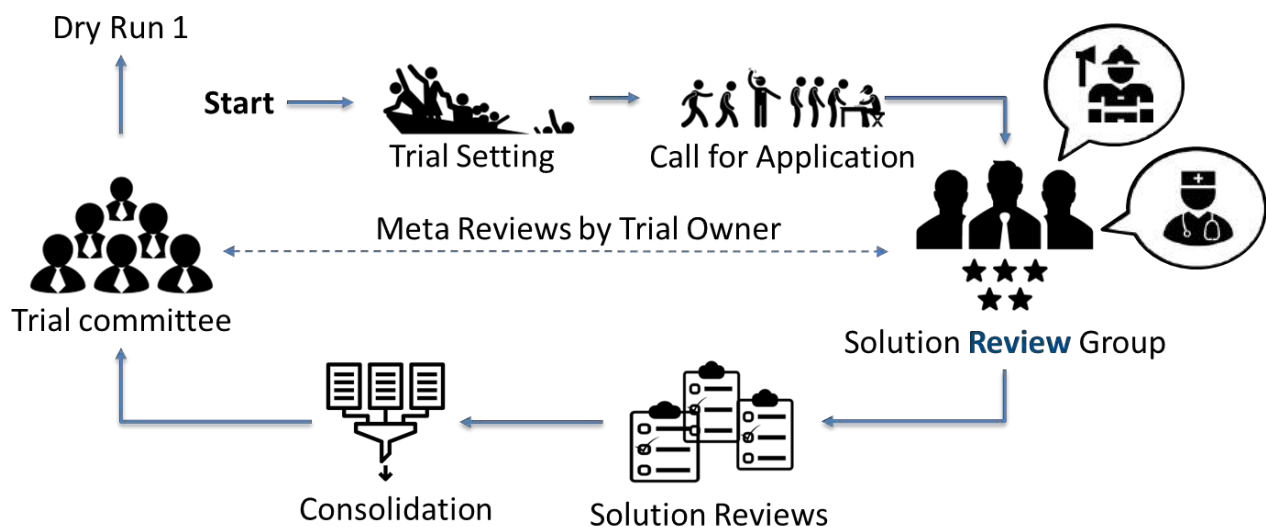


Figure 2.4: Solution Review Process Steps

1. It **starts** with the description of the general **Trial setting** on a higher level by the Trial owner. This can for example be the case of a large forest fire, earthquake or rescues at high sea. The setting is included to allow solution providers to assess from their point of view, if their solution can be applied. They can then refer to the setting in the answers to the review questions.

2. WWU combines this Trial setting with the other components of the call and creates the Trial specific **Call for Application**, which is then published and disseminated within and outside the DRIVER+ consortium. The collection of submissions to the call is organized using the review platform EasyChair, which manages the blind-review process. Each submission to the call is **anonymized** by WWU, removing all company and solution names in order to support the later blind-review.
3. WWU then assigns review group members to each submission with at least two **blind-reviews** from practitioners and one review by the Trial owner. Possible conflicts of interest are taken into account so that reviewers are not asked to assess a solution which is in any relation to them.
4. For each submission, at least three reviews will be available. In some cases, there will be additional reviews, for example if a reviewer was unsure about the required background knowledge or if the opinion about a solution was too deviating.
5. All reviews are then consolidated in the Solution Review Group. This leads to the **final scoring** over all submissions and a **quality check** on the reviews before they are send back to the solutions providers.
6. Finally, the complete set of consolidated reviews is provided to the Trial owner and the Trial Committee who will then use this information to **select potential candidates** of solutions for their Trials. Only after this pre-selection, the anonymization is revoked and the Trial owner receives the complete information about the solution and the solution provider in order to get in contact with them.

2.3 Compiled evaluations between M1 and M26

The executed evaluations between M1 and M26 where compiled regarding the review criteria, which have been recorded. A summary of the main evaluation criteria is presented in Figure 2.5. In discussion with the Solution Review Group, it was identified that the main downside was the feature driven evaluation by other solution providers from a technological perspective. First, a functionality or objective of a solution needed to be categorized to a predefined feature, before it could be assessed. This already limits the assessment innovation potential, as the feature list was not adaptive. In addition, the solution was only seen as a set of features, without taking into account that a solution might provide more value by a combination of distinct feature sets. Finally, the feature assessment was mainly from a technical point of view. This was due to the tool focus in the first phase of the project, which was replaced with the end-user driven solution approach. It was therefore decided to utilize the executed evaluations between M1 to M26 as point of reference in order to take over valuable information, while other aspects have been neglected in the discussion with the Solution Review Group. The solution reviews in DRIVER+ require a practitioner-driven perspective rather than the former solution provider view. Internal and external solution providers are required to answer the same review questions for the Call for Application in DRIVER+ to allow for a transparent and unbiased comparison. The former evaluations can still provide additional insights into internal solutions, but they cannot be compared to newly applying external solutions.

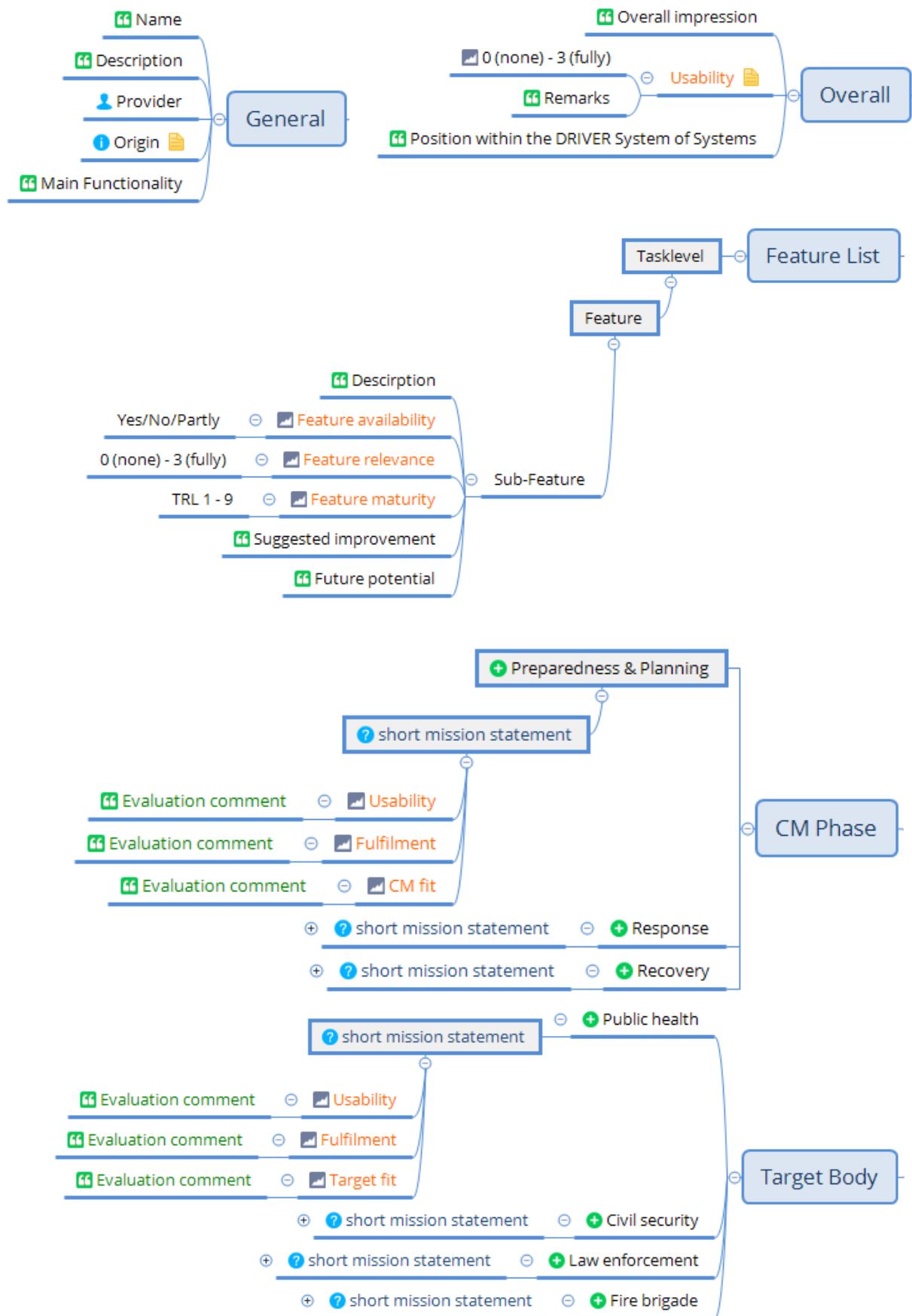


Figure 2.5: Overview of Evaluation Criteria M1 to M26

2.4 Call for Application

For each of the Trials, a dedicated Call for Application document is provided. This has a twofold target audience: The internal DRIVER+ solution providers and the public audience addressing also external solution providers. Thereby, internal and external applicants need to answer the same set of questions, which later on ensure a good comparability. Also consortium members who did not contribute as solution provider before, can now also apply via the call.

The call document is a combination of several parts (c.f. Annex 3 – Trial 1 Call for Application):

- Short DRIVER+ introduction with reference to the project homepage.
- Summary of what the Trials are about and why the call is issued.
- Advantages solution providers can gain by applying to the call.
- Summary of the overall Trial scenario and issues to be addressed.
- Solution review criteria including the questions to be answered.
- Organizational submission instructions.

Additionally, a one-page announcement is prepared, which contains a short overview about the opportunity of the Call for Application and points to further information on the project homepage. This one-pager can be shared via the social media channels.

2.4.1 Defining the Review Criteria

The Solution Review Group defined the review criteria in terms of questions, which are the core element of the later Calls for Application. The review should be based on criteria, which are fast to record, simple to understand and complex enough to get to know a solution; like an elevator pitch. After the discussion of the compiled evaluations between M1 and M26 presented before, the criteria have been collected in a structured step-by-step process presented in the following.

A brainstorming session during the workshop at the KoM was started, in which each practitioner was individually asked to formulate three questions to become more familiar with a solution. These questions have then been discussed in a wrap-up sessions among the group to identify similarities and to align the understanding of used terms. Annex 2 – Brainstorming Collected Questions presents the complete list of collected questions during the brainstorming, which have also been approved with the group after the meeting.

Based in this brainstorming, WWU then clustered the questions into groups, which address similar aspects. The amount of questions within each cluster then determined the importance of the cluster. For each cluster a review criteria and an evaluation question was formulated. Both, criteria and question, aim to resemble what the questions within the cluster were asking for.

The clustering highlighted two distinct groups of questions. Of highest importance are general aspects of a solution, like for example the objective or the motivation of a solution. In the other group with less importance are more technical aspects, like for example the technology behind a solution. It was therefore decided to separate the clusters into two sets, evaluation criteria and additional criteria. The review of solutions will focus on the first set of evaluation criteria, since they are most important to practitioners and of high comparability. The others are collected as additional criteria to gain more information on a solution, but they are excluded from the review, since they are less important to practitioners and very solution specific, thereby difficult to compare. A special role was the aspect of financial investments for a solution as it was seen as very important, but the Solution Review Group decided not to evaluate it within DRIVER+ as the objective is to find innovation and not to perform procurement.






As a final step, the resulting criteria have been discussed within the Solution Review Group again for approval. The two sets of criteria are further explained in the following sections.

2.4.2 Evaluation Criteria

The first set of review criteria consists of five clusters. These are selected as evaluation criteria, because they were the most important clusters comprising most of the questions. Furthermore they can be individually answered by any kind of solution, independent of the technical or organizational background.

1. The **mission** criterion addresses the aim of the solution and the way this aim contributes to crisis management. Based on this criterion, a solution can be set into relation to crisis management objectives.
2. **Integration** refers to the linkage to crisis management operations from an organizational point of view. It describes which operations are supported directly by the solution or to which other operations the solution is connected to.
3. **Readiness** explains the maturity of a solution in terms of its operational use. Solution providers can state whether the solution has been tested before or if there are proofs available that certify the correct operation of the solution.
4. **Motivation** addresses, in contrast to the mission, the aspect of why the solution was developed. This might for example be because of an identified gap, the unavailability of solutions or a unique capability the solution provider can offer.
5. **References** finally gives the opportunity to state former applications of the solution with practitioners in crisis management or if the solution provider himself has a certain expertise in the domain, for example from former solutions on the market.

Table 2.2: Solution Review Evaluation Criteria

Symbol	Criterion	Question
	Mission	How does the solution contribute to crisis management?
	Integration	How is it integrated into the existing crisis management operations?
	Readiness	How mature is the solution and has it been tested or proved?
	Motivation	How does the solution address problems of practitioners?
	References	Which references on the provider's experience and solution application exist?






2.4.3 Additional Criteria

The second set of review criteria consists of five clusters which are selected as additional criteria. This is because they are of lower importance and they refer to more solution specific aspects, like the resources needed or the techniques applied. While these criteria can still be answered by any solution, they are difficult to be compared depending on the nature of the solution. They are therefore part of the Call for Application to receive detailed information, but not assessed in the solution review.

1. **Resources** sums up the physical assets needed to apply the solution. This can range from facilities or training centres to special vehicles, machines and computer systems. If these are not part of the solution itself, end-users need to be aware of further needs.
2. **Know-How** addresses the expertise and knowledge needed for the solution. This is in contrast to resources an immaterial resource aspect. Some solutions might require additional training and guidance for the end-users before it can be applied in an operational context.
3. **Platform** refers to the nature of the solution. It defines if it is an organization concept like a training method or command structure, or a technical tool like a common operational picture or mobile application.

4. **Technique** provides more detail on the operation of the solution and describes which techniques are used to realize the solution. This can also range from social techniques like group work to technologies applied to create software.
5. **Investment** is in practice one of the most important criteria and refers to the cost, but also to other resources needed. The Solution Review Group decided that for the DRIVER+ project the investment would contradict the search for innovation and that it should not be evaluated.

Table 2.3: Solution Review Additional Criteria

Symbol	Criterion	Question
	Resources	Which resources are needed to operate the solution?
	Know-How	Which expertise is needed to operate the solution?
	Platform	On which platforms (e.g. technical/organizational etc.) is the solution available?
	Technique	On which technique (or technology if applicable) is the solution based on?
	Investment	Which investments are necessary to deploy the solution?

2.4.4 Criteria Assessment

Each of the ten questions from both sets of evaluation criteria need to be answered by the solution providers. The evaluation criteria receive a numbered scoring from (1) not convincing to (6) very convincing regarding the answer to the question. This score is complemented by a textual comment provided by the reviewer to explain the expression and the resulting score. Score and comment together aim to express the opinion of the reviewer to the complete Solution Review Group, the Trial owner and finally the solution provider. The second set of additional criteria can optionally be commented by the reviewer and does not receive a score as it is not taken into account in the review of the solution. The overall score of a solution is a sum of all five review criteria averaged over all reviews provided to the solution.

To support the review group in their task and to ensure the comparability between the reviews, a set of review guidelines have been distributed to the members. These guidelines explain the review process and criteria and which aspects should be kept in mind while assessing the submissions. It also introduces the scoring for the criteria. Reviewers are asked to explain their impression about the answer in line with the scoring and to provide polite and respectful comments. After the review process, the results of the review are sent back to the solution provider.

3. Trial 1 Solution Review and Selection

This chapter presents the Call for Application for Trial 1 and the results from the solution review. It starts with the timeline in which it was published and reviewed. The second part summarizes the solutions, which have been submitted. The third section presents the review and the consolidated results.

3.1 Timeline

The Trial 1 Call for Application started with the creation of the documents together with SGSP (Trial owner) and ARTTIC in November 2017. After the publication and submission phase, the deadline for submissions was extended because some internal solution providers were not informed in time due to communication issues. Also external solution providers requested additional time. After the review and the consolidation of results, a pre-selection was performed together with the Trial owner. Finally, the solution providers were informed about the results and they received the reviews to their solutions. The complete timeline is presented in the table below.

Table 3.1: Trial 1 Call for Application Timeline

Date	Action
30/11/2017	Finalization of call documents for dissemination
01/12/2017	Publication of Call for Application Trial 1
07/12/2017	Call opens for submissions
02/01/2018	First deadline for submissions
09/01/2018	Extended deadline for submissions & assignment of reviewers
07/02/2018	Review deadline
08/02/2018	Consolidation of reviews and pre-selection of solution candidates
09/02/2018	Notification of applicants on invitation to solution selection meeting
12/02/2018	Sending of solution reviews to the solution providers

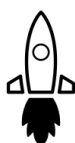
3.2 Submissions

In total 25 submissions have been received to the Call for Application. The submissions range from early developments to first products and system solutions, as depicted in Figure 3.1. Given the good, yet mostly textual information on solutions, it was not possible to give clear numbers for each class. But this indicates that the call was able to attract a wide range of solution providers and was open enough to enable solutions in every development stage to apply.



Early Developments

Solutions, which are not yet market-ready and are in their first application tests.



First Products

Solutions, which already are advanced developed and are trying to improve further.



System Solutions

Solutions, which already build on a working system and are ready to be applied in practice.

Figure 3.1: Solution Submission Types

Figure 3.2 shows the distribution of submitted solutions to internal DRIVER+ project partners and external solution providers. With 64% external solutions, the call achieved a good visibility and contribution outside the project

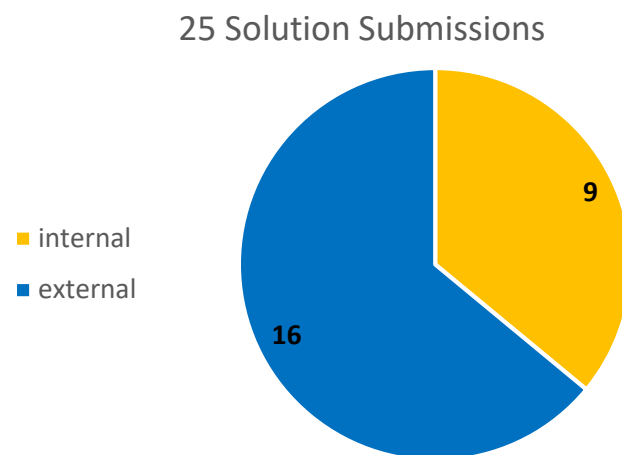


Figure 3.2: Total Solution Submission Share

3.3 Review Results

The consolidation of reviews led to a scoring of the solutions regarding their general crisis management support and their applicability in the Trial scenario. The Trial owner decided in advance that it would be feasible to investigate about 12 solutions in more detail. Therefore, it was decided for Trial 1 to pre-select all solutions, which are above the average score. Accordingly, 13 solutions have been pre-selected from which 7 are external and 6 originate from within the consortium. An overview on these results is given in Figure 3.3. The share of external solutions indicates that the Call for Application has achieved its objective to complete the DRIVER+ internal capabilities by external innovative approaches. Internal solutions profit from the advance experience and knowledge about the project, as the acceptance rate of internal solution is higher compared to the external submissions (44% external, 66% internal). As last step, the solution providers have been informed about the decision for their solution and the reviews were sent as feedback. The review process was finished after the complete de-anonymized information about the pre-selected solutions had been given to the Trial Committee. This was used for further investigation in a following selection meeting, which took place next to the Workshop 0 in Warsaw on February 26th and 27th 2018.

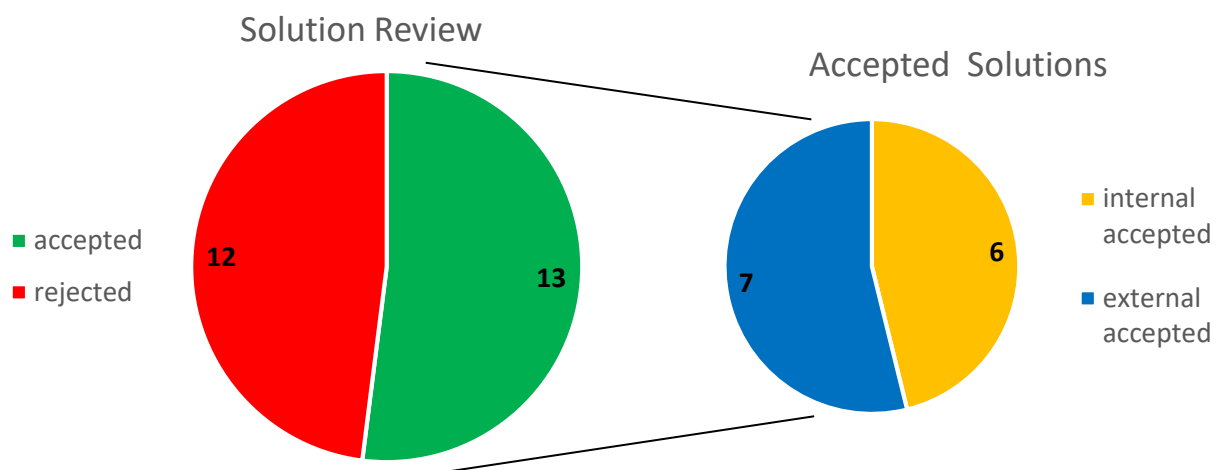


Figure 3.3: Solution Acceptance and Share of Accepted Solutions

4. Trial 2 Solution Review and Selection

The chapter presents the status of the Trial 2 Call for Application. It starts with the timeline for the call. Next, the reasons for the delayed publication to the original plan are given.

4.1 Timeline

The second Call for Application already implements the lessons learned made in the first call, which improve the creation of the documents and execution of the review process. To enable a better understanding of the scenario and to provide more insights into the addressed crisis management functions, the call has more details on the gaps and the crisis event. While the first call only laid out the general setting, the second call additionally mentions a list of crisis management issues to be addressed by the solutions and the actors involved in the Trial. Solution providers can use this information to provide more targeted answers to the review criteria and to assess their own applicability to the Trial. Additionally, the dissemination and review schedule was discussed among all involved partners also from the other sub-projects. This resulted in the following schedule.

Table 4.1: Trial 2 Call for Application Timeline

Date	Action
16/02/2018	Content finalization of call documents
23/02/2018	Finalization of call documents for dissemination
26/02/2018	Publication of Call for Application Trial 2 & continuous assignment of reviewers
26/03/2018	Deadline for submissions
23/04/2018	Review deadline
26/04/2018	Consolidation of reviews and pre-selection of solution candidates
27/04/2018	Sending of solution reviews and invitation to solution selection meeting

With the deliverable submission in M47 (March 2018), there are no intermediate results available at this point. The results from the call will be presented in deliverable D942.12.

4.2 Explanation on Delayed Execution

Based on the lessons learned and the identified relations to other partners and works, which will be presented in chapter 5, the Call for Application requires a more aligned publication with the state of the Trial design. Originally, the calls were planned in a rolling three-month rhythm independent of the actual Trial dates. It turned out that the call cannot be published too much in advance, because sufficient information about the scenario needs to be available. The call schedule will therefore be planned with the Trial owners individually. A restriction is that the call needs to be set up at latest 3 month before the Dry-run 1 to ensure that sufficient time is available for the review and selection of solutions. Based on the work package plan in the DoW, the calls for Trials 1 and 2 were supposed to be finalized for this deliverable D942.11, while the calls for Trial 3 and 4 will be presented in the D942.12. The delay of the Trial 2 Call for Application does not affect the overall work package schedule, but requires that the review results can only be presented in the updated deliverable.

5. Lessons Learned

The first execution of the review process highlighted several dependencies to other works in the project. Most obvious is the connection to the Trial Committee, which defines the basic setting of the Trial and formulates a description of the problems to be addressed. With every call, this part will be adapted to the Trial, while at this early stage a detailed scenario is not likely to be available yet. Second is the coordination with the public relations and social media activities in SP95 to ensure that the call is in line with the project communication strategy and design. The call also needs to be in line with the aims of the Portfolio of crisis management Solutions as it is the first contact point to external solution providers. Finally, the review process contributes to the sustainability as it aims to find appropriate solutions, which take part in the pan-European Test-bed.

These dependencies have a strong influence on the timeline for the creation and execution of the call, which on the one side caused some delays in the process, but also highlighted some additional tasks, which were not planned beforehand. Taking the limited available time into account, the process remained in the planned schedule for the work package, which is due to a great support from the Solution Review Group. Although the first Call for Application was overall successful in terms of objectives and timing, there are lessons learned which lead to further improvements of the solution review process. This section gives a summary of the most important aspects to consider in the next calls.

- Clear communication roles in the creation and communication of review results are needed.

As one of the external communication streams, the Call for Application needs to comply with the DRIVER+ communication strategy managed in the SP95 by ARTTIC. With every new piece of information to be shared to externals, it is required to identify the role and responsibility of the partner to communicate to companies outside of DRIVER+. It was agreed that SP95 manages the publication and dissemination of the call, while WWU answers and manages direct inquiries to the call while constantly informing the partners from SP95. Reimbursement requests are handled by the External Cooperation Manager (SP91).

- The review phase can start before the submission deadline ends.

The review process for the first call started after the submission deadline had ended. This had the advantage that the total workload was known for the assignment of reviewers, but it also caused time pressure in the finalization, as each submission needs to be reviewed by three persons in total. It was decided that the review could already start once the first submissions are received.

- Review criteria require additional explanations to avoid ambiguities among solution providers.

By reviewing the answers to the review criteria, it became clear that some solution providers had an ambiguous understanding on what is asked for. Some aspects were interpreted differently, which created difficulties in the review and comparison among the solutions. The later calls will therefore include additional details on the aims of the criteria.

- The review requires more guidance to increase the quality of textual comments.

Although the review guidelines and the initial instructions for the reviewers clearly mentioned that the scoring needs to be justified in the comments of the review criteria in a polite and comprehensible manner, some reviews did not provide sufficient information. Since the reviews are used by the Trial Committee to select solution candidates and are also distributed to the solution providers, they need to be in a neutral and comprehensible form. Further training and expectation management will be conducted with the next calls.

- Trial owners can better share their view utilizing a meta-review perspective.

Having a third, separated blind-review by the Trial owner in addition to the two blind-reviews by the practitioners was perceived as problematic. The Trial owner focuses in his responsibility very much on the fitness of a solution to the Trial scenario and might not be able to assess the overall crisis management contribution of a solution. To improve this process, it was decided that the Trial owner uses the two blind-reviews to create a meta-review. They can thereby integrate the impression from the other reviewers and add their opinion on the scenario applicability.

6. Conclusion

The deliverable started with an overview of the Solution Review Group and the involved actors and their roles. It mainly comprises the constant members of the practitioner organizations and WWU as coordinator, part-time members with the Trial owner and invited sub-reviewers and advisories like SP95 and the External Cooperation Manager.

Following this an overview of the executed solution evaluations between M1 and M26 was given. Based on a discussion with the Solution Review Group, the former evaluations have been used to create a new set of review criteria, which are to be answered by all solution providers, internal and external. For internal solutions, the former evaluations can provide additional insights. The document then laid out the overall review concept as it has been introduced in the DoW and further detailed by WWU. This leads to the detailed review process defined with the Review Group. The criteria for the solution review are split into two sets, each comprising five aspects. The first set is evaluated regarding the overall crisis management contribution and applicability of the solution in the Trial scenario. The second set serves as additional information on the solution, but is not reviewed as it is not comparable among solutions.

The second part of the document presented the Trial 1 Call for Application and the review results. 25 solutions have applied to the call from which 13 have been pre-selected and are provided to the Trial Committee for further investigation. Also lessons learned have been documented, which have already been implemented by improvements in the second call.

The Trial 2 Call for Application needed to be delayed in reference to the original work package schedule. Multiple dependencies to other tasks in the project require that the Trial design is advanced beforehand to some level in which a basic scenario is available. To the current state, there are no intermediate results available for the second call as the submission phase is just closing with this deliverable. The results are presented in the updated deliverable D942.12.

Overall, valuable and positive conclusions can be drawn, from which some lead to a set of lessons learned to be integrated in the current and future Call iterations. Based on the design of the review, the aim to achieve a clear and transparent process was achieved, which is regarded as important by practitioners as it uses their criteria to investigate solutions. The Solution Review Process thereby supports the project to be practitioner-driven, rather than solution-driven. Given the good response rate, it is concluded that the design and communication of the Call as attractive also to external solution providers. In addition, a wide range of maturity was received from early developments to first products and market-ready systems, indicating that the Call is attracting innovative approaches and tested solutions alike. Finally, the identified lessons-learned all improve and contribute to the process development, proving that the process overall is robust and accepted. The improvement will be taken forward to the future iterations.

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 updated¹. 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.

Table A1: DRIVER+ Terminology

Terminology	Definition	Comment
Crisis management	Holistic management process that identifies potential impacts that threaten an organization and provides a framework for building resilience, with the capability for an effective response that safeguards the interests of the organization's key interested parties, reputation, brand and value creating activities, as well as effectively restoring operational capabilities.	Note 1 to entry: Crisis management also involves the management of preparedness, mitigation, response, and continuity or recovery in the event of an incident, as well as management of the overall programme through training, rehearsals and reviews to ensure the preparedness, response and continuity y plans stay current and up-to-date.
Dry run 1	First rehearsal of a Trial, focusing on the technical integration of solutions, reference implementation of the Test-bed, and scenario validation; it also serves as a readiness review to approve the maturity of technical solutions.	
End-users	Individual person who ultimately benefits from the outcomes of the system	
Innovation	Implementation of a new or significantly improved product (good or service), or process, new marketing method, or new organizational method in business practices, workplace organization or external relations	
Lesson Learned	Lessons learning: process of distributing the problem information to the whole project and organization as well as other related projects and organizations, warning if similar failure modes or mechanism issues exist and taking preventive actions	

¹ Until the Portfolio of Solutions is operational, the terminology is presented in the DRIVER+ Project Handbook and access can be requested by third parties by contacting coordination@projectdriver.eu.

Terminology	Definition	Comment
Portfolio of Solutions (PoS)	A database driven web site that documents the available Crisis Management solutions. The PoS includes information on the experiences with a solution (i.e. results and outcomes of Trials), the needs it addresses, the type of practitioner organisations that have used it, the regulatory conditions that apply, societal impact consideration, a glossary, and the design of the Trials.	
Practitioners	See: End users	
Scenario	Pre-planned storyline that drives an exercise, as well as the stimuli used to achieve exercise project performance objectives	
Trial	An activity for systematically finding and testing valuable solutions for current and emerging needs in such a way that practitioners can do this in a pragmatic yet systematic way.	

Annex 2 – Brainstorming Collected Questions

Table A2: Brainstorming Questions

Pos.	Question 1	Question 2	Question 3	Extra Question
12	Is it a Game-changer?	How does it make my life better or easier?	What is the weight and the cost of the solution?	How extensive is the training?
6	What is the level of readiness?	Does it increase effectiveness or efficiency?	Has it been tested or implemented?	
5	What is my problem, what is your solution?	Does it work on operational level?	What are the costs?	
3	What is in it for me?	What are the costs?	-	
1	What is the cash (opportunity) you are trying to sell?	Which resources are needed?	How did we came in contact to each other?	How does it fit to existing systems (tech. & org.)?
13	What is the outcome produced?	Which knowledge is needed to operate solution?	How long does it take to get an outcome? (analysis)	How much universal is the solution? (e.g. language)
10	How did you take into account user requests and needs?	How flexible is your solution? (e.g. adaptations)	How mature is solution?	
8	Do you know my needs or gaps?	Does it have adaptation possibilities?	What is the experience of the provider?	
9	[Answer to all in one sentence] Is it ready?	How does it benefit me?	Which resources are needed to work?	
2	Is it tested or proved?	In which development phase is it?	Do you have any references?	
7	Is it possible to be adapted or given to other users?	Is it based on needs or gaps?	Has somebody else used it already?	
11	Which is the benefit compared to existing solutions?	Is it in agreement with own standards and specifications?	What are the costs?	
4	Do you know my organization?	What problem do you solve?	How does it fit in my organization?	

Cluster (score)	Questions
Mission (9)	<p>Is it a Game-changer?</p> <p>Does it increase effectiveness or efficiency?</p> <p>What is in it for me?</p> <p>What is the cash (opportunity) you are trying to sell?</p> <p>How does it make my life better or easier?</p> <p>What is the outcome produced?</p> <p>How does it benefit me?</p> <p>Which is the benefit compared to existing solutions?</p> <p>What problem do you solve?</p>
Integration (7)	<p>How does it fit to existing systems (tech. & org.)?</p> <p>How much universal is the solution? (e.g. language)</p> <p>How flexible is your solution? (e.g. adaptations)</p> <p>Does it have adaptation possibilities?</p> <p>Is it possible to be adapted or given to other users?</p> <p>Is it in agreement with own standards and specifications?</p> <p>How does it fit in my organization?</p>
Readiness (7)	<p>What is the level of readiness?</p> <p>Has it been tested or implemented?</p> <p>Does it work on operational level?</p> <p>How mature is solution?</p> <p>Is it ready?</p> <p>Is it tested or proved?</p> <p>In which development phase is it?</p>
Investment (4) (not for Trials)	<p>What is the weight and the cost of the solution?</p> <p>What are the costs? (3)</p>
Motivation (4)	<p>What is my problem, what is your solution?</p> <p>How did we came in contact to each other?</p> <p>Do you know my needs or gaps?</p> <p>Do you know my organization?</p>
Resources (3)	<p>Which resources are needed?</p> <p>How long does it take to get an outcome? (analysis)</p> <p>Which resources are needed to work?</p>
References (3)	<p>What is the experience of the provider?</p> <p>Do you have any references?</p> <p>Has somebody else used it already?</p>
Know-How (2)	<p>How extensive is the training?</p> <p>Which knowledge is needed to operate solution?</p>
Target (2)	<p>How did you take into account user requests and needs?</p> <p>Is it based on needs or gaps?</p>

DRIVER+ project ■ Call for Application Trial 1

CALL FOR APPLICATIONS: Submission documents



Are you **DRIVING INNOVATION IN CRISIS MANAGEMENT**? Are you developing and deploying **SOCIO-TECHNICAL SOLUTIONS**? Do you provide **INNOVATIONS** being a game changer for operational, tactical and strategic decision makers?

If you can answer the above questions with yes, then please share your innovations with the **CRISIS MANAGEMENT** community.

DEADLINE FOR SUBMISSION: 9th of January 2018



This project has received funding from the European Union's 7th Framework Programme for Research, Technological Development and Demonstration under Grant Agreement (GA) N° #607798

Who are we?

In 2014, dedicated practitioners' organizations, research institutes, industries and SMEs teamed up to drive innovation in Crisis Management for European resilience.

By 2020, our goal is to valorise the wealth of European innovation and science in Crisis Management, by assessing and delivering solutions that can be used and combined to address different types of large-scale crises. Your participation in DRIVER+ activities is important to us and will help us to align with and to follow-up on relevant policies, challenges, gaps and community needs faced within the wide spectrum of thematic areas dealing with Crisis Management. To maximise the impact of European Research and Innovation in Crisis Management, and to ensure that our trials and events are conducted taking into account your expertise and the technological state-of-the-art, we warmly invite you to take part in our activities.

Within the project, we will conduct a series of trials, which investigate innovative solutions under simulated crisis conditions. We invite selected submissions to this call for application to participate to one of these events. The next section will give insights on the setting for the trial you can apply to by this call.

Why should you take part?

Participating in the DRIVER+ portfolio of solutions features great opportunity to spread out your product to the European Crisis Management community. Within the trials, you will be in contact with a large group of actors who are working and researching in the domain. Thereby, your solution gains visibility to a wide audience not only within DRIVER+ but also, as part of the portfolio of solutions, to other interested parties in and beyond Europe. The trials furthermore create a controlled environment simulating a crisis scenario to test and assess solutions, which are currently under development, providing you with new insights to advance in the design.

Solutions - What are we looking for?

A solution is a building block that contributes to a crisis management function. Solutions can be technologies, tools, methods, concepts, or recommendations that regard potential technical, organizational, procedural, legal, policy, societal, or ethical improvements to the European Crisis Management legacy.

Trial Scenario

An error occurring during maintenance of a chemical plant incapacitates a control station for pipeline pressure causing rupture in a toxic chemical pipe, which releases a massive amount of a fluid mud like chemical.

Initial Crisis Situation

During maintenance work on a chemical plant in a border region in Poland, an error in the maintenance causes a control station to short-circuit. This leads to an unsafe build-up of pressure in the connected pipelines running between the main plant and a sub plant several miles away. The pipe that carries a liquid, mud like form of a toxic chemical eventually bursts, spilling its contents.

Developments from Initial Situation

The broken control station prevents a quick intervention and the increased pressure causes approximately one million cubic meters of toxic, mud like, fluid as a massive 1-2 meter high wave that floods nearby localities in a matter of minutes. Included in the path of the spill are several villages and towns, where initially 15 people die and 200 people get severe toxic injuries.

The eventual 60 square kilometers of affected land include a river that crosses the border into neighboring countries. This river is used as water intake for various industries, agriculture and fresh water companies, resulting in destroyed crops, toxic injuries to livestock, and disturbance in the water supply causing immediate water shortage. The incident requires deployment of evacuation forces as well as a high number of decontamination forces from multiple countries to deal with the increasing number of toxic injured people.

Trial Setup

Due to the widespread effects of this kind of incidents and the limited possibilities to conduct this kind of exercise in real-life conditions, the planned demonstration will have the form of 2-day, international table-top trial. The aim of the trial is to simulate coordinated local, regional, national and international level actions, whose purpose is to counteract the disaster effects. The scenario will be prepared inside virtually simulated countries to show the most serious effects of considered assumptions of scenario.

Actors in the Trial

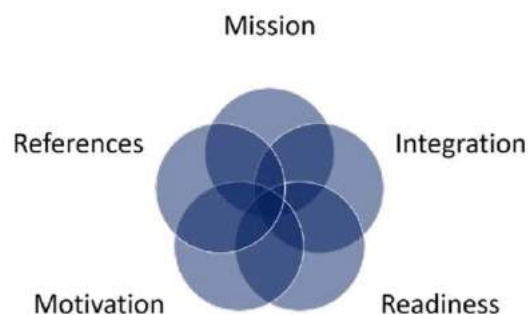
The scenario will require a commitment of stakeholders (end-users) from every crisis management level (local, regional, national and international). Examples of such stakeholders are representatives of ministry of infrastructure, state fire service, crisis management experts, representatives of chemical and water sectors, representatives of non-government organizations (volunteers), representatives of decontamination institutes, and representatives of other institutions which are responsible for response during similar situations. Actions will be taken by these stakeholders in realistic information environment, based on currently available means for chosen country, crisis management plans, rescue procedures and good practices of participants.

Application Steps

Step 1: Answer the evaluation criteria

Please give short and concrete answers to the following questions with regard to the above scenario description. Please do not discuss implementation details or any technical aspects, which are not defining the contribution. You will have the chance to address technical details in the next section.

[Up to 300 words each]



Mission	How does the solution contribute to crisis management?
Integration	How is it integrated into the existing crisis management operations?
Readiness	How mature is the solution and has it been tested or proved?

Motivation	How does the solution address problems of practitioners?
References	Which references on the provider's experience and solution application exist?

Step 2: Provide additional details

Please give a short and concrete answer to the following questions. The answers provided here will not be evaluated in regard to a selection for the DRIVER+ trials but serve a better documentation of solutions. Provide attachments if needed.

[Up to 300 words each]

Resources

Which resources are needed to operate the solution?

Know-How

Which expertise is needed to operate the solution?

Platform

On which platforms (e.g. technical/organizational etc.) is the solution available?

Technique

On which technique (or technology if applicable) is the solution based on?

Investment

Which investments are necessary to deploy the solution?

Stage of Innovation	Technology Readiness Level
Stage 1: Concept	TRL 1: Basic principles observed and reported
Stage 2: Research and Development	TRL 2: Technology concept and/or application formulated
Stage 3: Initial Piloting	TRL 3: Analytical and experimental critical function and/or characteristic proof of concept
Stage 4: Early Adoption/Distribution	TRL 4: Component and/or breadboard validation in laboratory environment
Stage 5: Market Growth	TRL 5: Component and/or breadboard validation in relevant environment
Stage 6: Wide-scale Adoption	TRL 6: System/subsystem model or prototype demonstration in a relevant environment
	TRL 7: System prototype demonstration in an operational environment.
	TRL 8: Actual system completed and qualified through test and demonstration.
	TRL 9: Actual system proven through successful mission operations.

Step 3: Provide attachments (optional)

To support your answers in step 1 and 2 you can provide attachment in form of pictures and documentations. Please be aware that the attachments do not replace your answer and may only support explanations given above. All attachments need to be packed into one archive. (supported file format: .zip, maximum file size: 500MB)

Step 4: Submit application

Upload the completed PDF form and attachments (if included) to the submission tool EasyChair following the link below.

<https://easychair.org/conferences/?conf=1stdtss>

Submission deadline: 9th of January 2018

Review Procedure

Every solution will be evaluated according to the above criteria – Mission, Integration, Readiness, Motivation and References – by at least three independent evaluators. The review results will be send to you by January 31st 2018. In case your solution is selected as candidate to participate in the trial, you will receive an invitation to a coordination meeting, taking place February 26 – 27, 2018 in Warsaw, Poland.

In order to facilitate your contribution to the trial, your expenses directly related to your contribution to the DRIVER+ Trial may be partially reimbursed. When selected for the trial, you will be asked to indicate whether you require any reimbursements for your foreseen contribution, and, if yes, for which expenses (amount and description). The coordination team decides whether your request will be granted.

Contact

In case of questions or any other inquires to the call, please feel free to contact us
callforsolutions@projectdriver.eu