SMART MATURE RESILIENCE

DELIVERABLE 5.3: REPORT OF THE

REVIEW WORKSHOP 1

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EXECUTIVE SUMMARY

The first review workshop of the Smart Mature Resilience (SMR) project took place on 21st September 2016 in Kristiansand (Norway). The workshop focused on gathering feedback from the pilot tools testing process and collecting input on social media integration and scenarios for the Resilience Portal, which is integral part of the Community Engagement and Communication Tool.

At the workshop, the cities provided feedback on the pilot implementation of the Community Engagement and Communication Tool; following a presentation of the tool, an overview of the testing process was provided. The core cities of Kristiansand, Glasgow and San Sebastian/Donostia then provided feedback on the pilot implementation activities in their cities, and the Tier 2 cities of Vejle, Bristol, Rome and Riga provided feedback on their peer-reviewing process. The cities and a local stakeholder from the fire department participated in interactive group exercises on creating goals for social media integration and creating scenarios for the Resilience Portal, integral part of the Community Engagement and Communication Tool.

The previous day, on the 20th September 2016, the University of Strathclyde organized and conducted a session aiming to provide feedback and gather input from the cities on the Risk Systemicity Questionnaire. This feedback wil be used during the subsequent pilot implementation of the Risk Systemicity Questionnaire and will help format the tool development (Months 17-22).

The aim of this report is to explain the execution of the workshop, describing the activities carried out and the obtained results. First, the organisational and preparation issues, which took place in relation to the workshop are presented, including the invitation to the workshop, the agenda setting, and associated issues. Second, the main results from the exercises developed within the workshop are described. More detailed information on the exercises will be presented in the project deliverable 4.3 in WP4. These exercises were developed to receive feedback from experts from the cities and develop the preliminary versions of the maturity model, the risk assessment questionnaire and the engagement tool. Finally, the evaluation and lessons learnt from the workshop are presented.

The exercise results from the workshop have helped to provide a better and improved definition of the policies that need to be implemented in the specific stages of the city-resilience maturity model, which is one of the main tool that are being developed throughout the SMR project lifespan. These results are useful to understand better the dynamics of building resilience in European cities.

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1. INTRODUCTION

This document reports on the first review workshop of the SMR project, which is the acronym for "Smart Mature Resilience". The workshop was organised by ICLEI and CIEM and hosted by the City of Kristiansand. The workshop took place on 21st September 2016 in Kristiansand, Norway. The previous day, on the 20th September 2016, the University of Strathclyde conducted a session aiming to provide feedback from the cities on the Risk Systemicity Questionnaire. This feedback wil be used during the subsequent pilot implementation of the Risk Systemicity Questionnaire.

During the review workshop, the draft prototype Community Engagement and Communication Tool, which SMR partners are currently developing, was presented and the participants had the chance to ask questions around its nature and functionalities. The tool is designed to support cities and emergency services in their communication with citizens. It also aims to facilitate communication between relevant stakeholders and enable knowledge transfer between cities. Cities and city administrations are complex systems with existing processes and channels for communicating internally and with their citizens. Rather than proposing to replace or substitute processes already in use and familiar to citizens, SMR will provide a toolkit for cities to be able to 'fill in the blanks' where their current communication channels are lacking facilities.

During the workshop, the CITIES were not able to look into and use the Portal, as it was still under development, but they were guided through its main functionalities and qualities by CIEM, in the form of presentations and discussions. In this respect, the Tier 1 and Tier 2 cities provided additional feedback from the pilot implementation and observation phases and the partner city representatives and invited stakeholders from Kristiansand participated in interactive group exercises on social media integration and creation of scenarios that would contribute to the development of the Resilience Portal.

The aim of this deliverable is to illustrate the execution of the workshop, describing the activities carried out and summarizing the obtained results. WP4 and other work packages and deliverables (such as the upcoming D4.3) majorly draw input and conculsions from the workshop activities. More information on the peer-review process and a recap of the feedback from CITIES throughout the pilot implementation process can be found in the project deliverable D5.2, while a recap of the Stakeholder Training Workshops on the Resilience Engagement and Communication Tool can be found in the project deliverable D5.5 (as the trainings took place in project months M20-M21)

2. WORKSHOP PREPARATION

The main objective of the first review workshop of the SMR project was to familiarise the project cities with the Community Engagement and Communication Platform, to gather feedback on the cities' experience of the pilot tool testing carried out so far, and to gather input for further development and finalization of the tool.

Preparation activities

The following preparation activities were undertaken between partners to prepare the workshop:

- Periodic teleconferences
- Screenplays developed and shared between partners
- SMR partners from the City of Kristiansand invited local stakeholders
- The final agenda was shared with partners 2 weeks before the meeting

The following materials were provided in advance in order to support the cities in preparation for the workshop:

- Workshop agenda (see Annex II)
- Workshop screenplay, made available a week before the workshop, used for facilitators' briefing
- Guiding questions: the Tier 1 cities were asked to prepare presentations (powerpoint or oral) on the pilot implementation based on the following questions.

    1. What did change between the kick-off workshop and the review meeting in each city regarding community engagement?
    2. What worked well and which challenges and constraints have you encountered?
    3. What are your specific requirements and suggestions for the finalization of the tool?
    4. Are there any lessons learned that should be included in the guidance to the tool to facilitate the use in other cities?

3. WORKSHOP EXECUTION

3.1 RISK SYSTEMICITY QUESTIONNAIRE SESSION: UNIVERSITY OF STRATHCLYDE

The Risk Systemicity Questionnaire (RSQ) session took place on the 20th September 2016 and it ran from 10am until 5pm. The session was facilitated by the University of Strathclyde and it involved 11 participants from all seven partner cities. The purpose of the session was to test a prototype of a subset of the RSQ with city representatives, to collect feedback to inform the subsequent development of this tool, and to gather a new set of data regarding policies that have been, or could be, used by cities to mitigate risk scenarios highlighted by the RSQ. In particular the test focussed on participants' reactions to a shift from risk portfolios to risk vicious cycles, as well as to a new design for the completion of the RSQ.

In the first hour of the session, participants were given copies of the prototype of the RSQ that comprised two topics: 'air pollution' and 'health'. Each city was asked to complete the RSQ. The number of participants in each city group, based on attendance at the workshop, varied between 1 and 3. In the RSQ, participants were asked to consider how likely different risk scenarios, which formed vicious loops, were to occur in their cities. The choices of responses were: 'high likely', 'possible/partially', 'unlikely', 'we don't know', and 'I don't know but someone else in my organisation does know'. Based on the responses, upon completion of each of the two sections of the RSQ, participants were given their own overall risk score (an estimated risk level for the city) and an awareness score (the level of understanding the city has about the possible risks).

Once participants had completed the RSQ, the facilitators engaged participants in a discussion about their views and reflections with respect to the content and the design of the RSQ. Overall, as evidenced both by participants' comments during and after the session, and based on the short survey conducted after the session about the participants' general experience on that day of the workshop (Figure 1), participants thought that the RSQ was potentially a very useful tool for their organisations. More specifically, participants believed that the RSQ would be suitable for engaging a variety of stakeholders about developing resilience within their cities. Firstly, the notion of vicious cycles emphasised by the RSQ was seen as very important and non-trivial in the context of developing city resilience. With the use of the RSQ different city groups might agree on policies aimed at breaking vicious loops affecting the city without concurrently enforcing some elements of the same vicious

loops. Secondly, the RSQ might be a promising tool for exploring the interconnectedness of city systems - some links can be obvious to one team and not for another team, and so the RSQ was argued to improve the understanding of different teams' roles and their impact with respect to resilience. And thirdly, the RSQ was seen as a good tool for starting the conversation about resilience, for inviting new people to that conversation, and for negotiating and clarifying the meaning of various key terms that are relevant to city resilience.

In terms of more technical comments, participants felt that some of the loops which appear on the RSQ were quite long and might be shortened. They also highlighted some areas which could be improved through increased clarity with regards to the wording of some of the elements of the RSQ, such as the 'possible/partially' response, or the notion of 'intolerable risks' which was used as a descriptor in some of the statement regarding risks. On the other hand, the group agreed that the new feature which allowed displaying pictures of the respective vicious loops was very helpful to RSQ users.

After testing the RSQ, the facilitators ran a Group Explorer (GE) session with city teams that was aimed at gathering tried and tested policies for addressing possible risk scenarios, which would then be used to further develop the RSQ.

Firstly, the facilitators used the GE's 'voting' facility to invite participants to prioritise, with regards to the potential impact and probability of occurrence of 17 main risk topics which had been identified from the analysis of previously gathered material. The 17 risk topics were structured around the material which had been co-produced by city representatives during the previous SMR workshops. Based on this exercise the topics with highest priority, that is with the highest risk value as a product of impact and probability, included health, ageing, and rising inequalities, and this selection of topics influenced the next stages of the session.

Subsequently, the facilitators explored those high priority risk topics on the causal maps obtained from the previous workshops which were displayed on the public screen. Participants were asked to consider the content of the causal maps representing different topics, including health, ageing, and rising inequalities. The facilitators then invited participants to embellish the existing policies, which also were obtained in the previous workshops, targeting different risk events shown on the screen, or to suggest new policies which have already been implemented successfully in their respective cities. That exercise resulted in 174 new policies collected during a half-day session, which was considered an excellent effort on behalf of city representatives. Those contributions will be used to expand the

policies used in the development of the RSQ. Overall, as evidenced in this section, the facilitators found the session very productive and useful in the context of their ongoing work on building the RSQ.

	Participants											Kristiansand - results	
Questions	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**	**P10**	**P11**	**Average (overall questions)**	**St dev.**
Q1 The facilitators appropriately communicated what was expected from the participants at each stage of the session.	4	4	4	4	5	4	4	5	4	4	4	4.2	0.4
Q2 The facilitators provided an appropriate amount of support throughout the session.	4	4	5	5	4	4	4	5	4	4	4	4.3	0.5
Q3 The pace of the session was appropriate to the purpose.	4	4	4	4	3	5	3	4	4	4	4	3.9	0.5
Q4 I had a good opportunity to express my own views so that they could be seen by all others present.	5	4	4	5	5	4	4	4	4	4	4	4.3	0.5
Q5 It was useful to see see my views in the context of the views of others.	5	4	4	4	5	3	3	4	4	4	4	4.0	0.6
Q6 it was useful to see the causal network gradually developing on the screen.	4	4	4	4	3	4	4	4	4	4	4	3.9	0.3
Q7 The workshop allowed for the creation of knowledge by the group. New inisghts were developed through the linking of perspectives.	4	5	4	4	4	5	4	4	4	4	4	4.2	0.4
Q8 The workshop helped me to change my understanding of the resilience issues in relation to social problems.	4	5	4	3	4	2	3	4	4	2	3	3.5	0.9
Q9 The RSQ was an interesting and useful development from the first version.	4	4	4	4	3	4	3	4	4	4	4	3.8	0.4
Q10 The RSQ content is likely to be useful in supporting discussions with city stakeholders and project managers regarding risk assessment.	3	5	4	5	5	5	4	4	3	3	4	4.1	0.8
Q11 The workshop made an appropriate contribution to the development of the H2020 project objectives.	5	4	4	4	3	5	4	4	3	4	3	3.9	0.7
Q12 The overall format of the session was useful to me in my organization role.	4	4	4	4	4	4	4	4	3	4	4	3.9	0.3

Figure 1: RSQ session - City survey reports

3.2. INTRODUCTION TO COMMUNITY ENGAGEMENT AND COMMUNICATION TOOL

The tool developers presented an introduction to the Beta version prototype Community Engagement and Communication Tool. This will serve as a toolbox, where cities can compare the communication systems already in place in their systems and choose elements and features of the platform to serve their individual contexts.

Tim A. Majchrzak (CIEM) and Nicolas Serrano (TECNUN), provided introductory presentations on the Community Engagement and Communication Tool and introduced the current progress and status of the Tool. The tool will be finalised until November 2016, and will be functional and ready to use by the CITIES as end users starting from December 2016.

3.2.1. CURRENT STATUS

Some changes have been made to the initial intention according to the Description of Work, and the tool will now be provided as a toolbox, which could be easily adoptable by cities. By trying specific features and functionalities of the toolbox, cities can compare the communication systems already in place in their systems and choose elements and features of the platform to serve their individual contexts. The tool works with real-time concrete data, which can be supplied by different users on different administrative levels, and the platform is designed for ease of use and does not require advanced technical knowledge.

The decision to shift from a concrete tool/platform to a toolbox was made in response to cities' comments that a plethora of tools and platforms are already available and in use within their administrations and that a toolbox from which elements could be integrated into the existing system to fill gaps as needed would be more effective than a complete new system. Therefore, the developers are now working towards altering and adapting the toolbox features and functionalities, and making them easily integrated with existing tools and platforms.

Informal interviews were carried out throughout the summer with all seven partner cities. The main focus of these interviews was the role of social media in knowledge sharing. All partner cities will continually be consulted and further activities are planned with cities.

The so far developed Community Engagement and Communication tool box has the following functions:

- It can acquire data from various, other sources in the portal
- There are templates for special services and main city activities
- It can easily connect to other systems
- It can create and manage databases
- Play data base inside the portal

3.2.2. RESULTS/CONCLUSIONS

The main results and conclusions that derived from the discussion among the tools developers, the cities and the rest of the SMR partners were the following:

- Regarding social media integration, further literature research was found to be necessary
- Until the finalization of the tool in November 2016, security features will be added and integrated
- Each city will be able to either use commonly accepted elements or design/adjust them based on specific needs and requirements – It was adviced though, in
- The tool will recquire minimum maintenance; therefore, it will be cost-efficient for cities to continuously use it after the end of the SMR project
- The tool will be easy to use/friendly to the end user
- The portal will work properly on every browser and will follow the SMR main website format and design
- The portal will provide with an information sharing system and a platform for interaction among citizens and authorities
- The users of the portal will be provided with different levels of administrative or editing privileges depending on their needs and how they plan to use the tool. Web pages have three areas: Configuration, web editor and code (optional).
- All registers will be listed with links to view, edit and insert new registries within the data listing page.
- The records inserted in the data store can be used in the different web pages, and when the data are updated, these data appear on the web page.
- Links between WP4 and WP6 were identified. In collaboration with DIN, the functional specifications will be discussed and decisions will be taken on how the tool could be made

practical for city IT departments, in order to work towards developing a standardised version

- The cities that will reach the Vertebrate stage of the Resilience Maturity Model will act as ambassadors for the further use of the tool across cities in Europe; they will facilitate the creation and establishment of a communication network that will strengthen the resilience backbone of Europe and will continuously learn from each other

The tool developers additionally described portal features and functionalities that the cities can evaluate and incorporate in the future; the presentation/discussion evolved around coding, data insertion, user profiles, register structures, web editing etc. The main purpose of the facilitated discussion that followed was to promote awareness of the tool features among partners and to provide with an introductory guidance for those partners that were not able to log-in and use the tool yet. Anyway, as it was stated at the beginning of the session, the tool is still a work-in-progress project; therefore it is constantly changing everyday.

The following screenshot presents how the current version of the portal would look, hypothetically for the city of Donostia/San Sebastian.

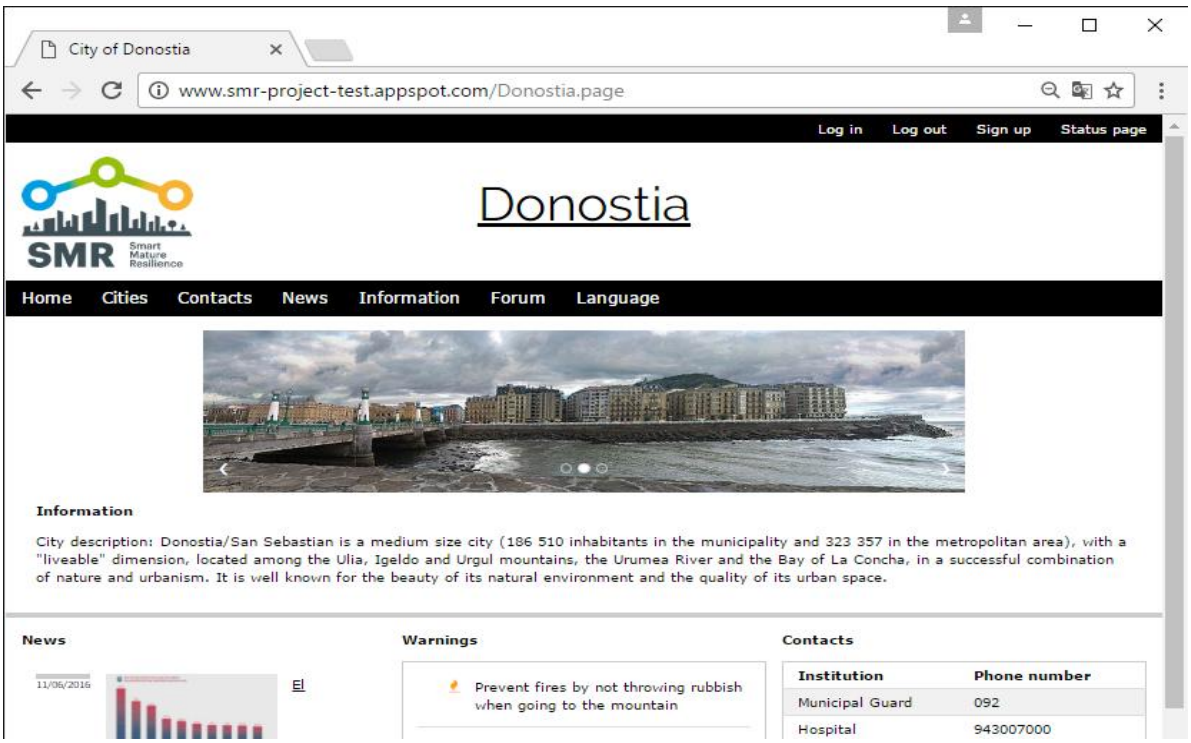

Photo 1: Screenshot from the SMR Resilience Portal

3.3. TIER 1 CITIES' FEEDBACK ON PILOT IMPLEMENTATION

After a brief introduction on the session by ICLEI Europe, the representatives from each one of the Tier-1 cities (Glasgow, Donostia, Kristiansand) were asked to come on stage and, one after the other, and provide feedback on the so far pilot implementation of the tool, based on a list of questions that were send to them, already a week before the workshop. This set of questions was the following:

- What did change between the kick-off workshop and the review meeting in each city regarding community engagement?
- What worked well and which challenges and constraints have you encountered?
- What are your specific requirements and suggestions for the finalization of the tool?
- Are there any lessons learned that should be included in the guidance to the tool to facilitate the use in other cities?

Photo 2: Representatives from the Tier 1 partner cities discussing in a plenary session

The project's Tier 1 partner cities then shared their experience so far in the project regarding stakeholder engagement and existing communication mechanisms that can integrate the Community Engagement and Communication tool in the next months. The cities also shared information on the selection of the security sectors they are focusing on as part of the project, their needs, expectations and requirements from the new communication platform and how it relates to the communication systems their cities already have in place.

More detailed information on the three pilot implementation processes, in each one of the Tier 1 cities can be found in the SMR WP5 deliverable D5.2.

3.3.1. FEEDBACK FROM KRISTIANSAND

Sigurd Paulsen of the city of Kristiansand, where the workshop took place, identified water and waste as the security sectors of particular focus, and noted that the city is currently significantly investing in these areas. The city has worked closely with local research partner CIEM to provide comprehensive feedback and information on the city's current communication practices in order to guide development of the tool and to optimize its potential for practical application. Sigurd Paulsen noted that the SMR kick-off workshop and networking have drawn attention to the need to build resilience within municipal administration and has also improved relationships and communication with city stakeholders, as well as spreading knowledge of resilience at national events, reaching national governmental actors.

Kristiansand has also been able to closely cooperate with the city of Vejle through the project and initiate a partnership for other projects and activities. An early positive outcome of this collaboration is the initiation of a "Resilience House", a project that will further enhance the two cities' resilience building efforts and will become a pioneer space for entrepreneurship and innovation on climate change adaptation, disaster resilience and environmental preservation for the whole region of Scandinavia. The project is still at its initial stage; more information will be shared with SMR partners in the following months.

3.3.2. FEEDBACK FROM DONOSTIA/SAN SEBASTIAN

Judith Moreno, from the municipal organization Fomento Donostia, named cyber security as a sector of particular focus for the city. Donostia found valuable networking at project events, as diverse experts from the city met at the SMR kickoff events, who are working on topics related to resilience, including health, food and crisis management, and networking through the SMR project gave these stakeholders the opportunity to discuss their experiences, which are diverse but related.

Like Kristiansand, awareness of the need for resilience and the value of resilience-building have been recognised as a high priority on municipal agendas as a result of the project. As a bilingual city, Donostia has come up against the challenge of articulating and communicating resilience issues in translation. Standardization partners DIN were able to offer to support the city in this challenge and confirmed that they have comprehensive experience with addressing this challenge.

3.3.3. FEEDBACK FROM GLASGOW

Frankie Barrett, Glasgow City Council, noted water security as a focus of Glasgow's current resilience-building process; the sector is very crucial for the city, therefore, it was chosen as the security sector the city should focus on. He noted the intersections between physical and social resilience, and the importance of developing resilience against flood risk, as this can put the city's most vulnerable groups at higher risk as a result of social factors. Glasgow has recently released its own resilience strategy, as part of the city's involvement with the 100 Resilient Cities program of the Rockefeller Foundation.

As a result of the SMR project so far, Glasgow has been able to more closely communicate with stakeholders who had not previously been reached regarding resilience. Communication and coordination with national governmental level has also been boosted through the SMR project.

3.4. FEEDBACK FROM TIER 2 CITIES (BRISTOL, ROME, RIGA, VEJLE)

The aim of this session was to receive further input on the pilot implementation by the Tier-2 cities, which were acting as peer-reviewers in the whole pilot process. The participants were divided in three break-out groups – 1 per tier-1/ tier-2 city group (Table 1: Kristiansand-Vejle, Table 2: Donostia-Bristol, Table 3: Glasgow-Rome-Riga). As part of the exercise-open discussion, the cities of Vejle, Rome, Bristol and Riga were asked to share insights on the tool development and provide with ideas and recommendations having followed the pilot implementation of the tool in the Tier-1 cities. The Tier-1 cities were also asked to elaborate more on the specific questions and follow up on the discussion that took place in the previous session, aiming in this way to further strengthen the co-creation of the tool and reinforcing the collaboration between Tier-1 and Tier-2 cities. The participants were asked to respond and elaborate on the following set of questions:

Question 1: How was your experience with webinars and interviews?
Question 2: Did you face or observe any potential challenges or constraints in this process?

Question 3 What is the main relevance of the Community Engagement and Communication tool for your city?
Question 4 Would you have any specific suggestions or requirements for the finalization of the tool?
Question 5 Are there any expectations from a communication portal on resilience? What should be included in the guidance to the tool to facilitate the use in other cities?

The present partners of CIEM were moving around the breakout group tables and made sure to pose open/remaining questions on the tool development. These questions, together with the overall conculsions and results of the workshop will feed into the finalization of the tool until the end of November 2016. The following sub-sections of this chapter aim to capture the most important responses of the partner city representatives to the above questions.

3.4.1. QUESTION 1

How was your experience with webinars and interviews?

- It is important to know how we can engage people; also who, when and why should be engaged; this was not clear in the webinars – there is need for more clarifications regarding the tasks and activities in the next pilot implementations; there is need for more webinars (Kristiansand)
- Through the webinars we were able to identify potential relationships, interdependencies and synergies between Kristiansand and Vejle; it definitely raised awareness on the potential to work together against common risks and vulnerabilities (Vejle)
- Kristiansand working with Vejle to work on resilience
- The webinar between Glasgow, Rome and Riga was a useful and reflective experience. It was definitely a good way to share information across cities (Glasgow)
- It was very interesting to follow the pilot implementation in Glasgow and strengthen our collaboration that started with the 100RC participation (Rome)
- The communication before and after the webinar was helpful in establishing and maintaining a good relationship with stakeholders (Donostia)
- It was very helpful that we followed a script throughout the webinar; it helped to exchange input and ideas with the other, not participating cities (Bristol)
- The webinars triggered a lot of discussion within our municipality on existing and needed communication mechanisms (Bristol)
- City stakeholders are not fluent in English and faced difficulties in following the discussion, despite the interpreter's efforts (Donostia)

3.4.2. QUESTION 2

Did you face or observe any potential challenges or constraints in this process?

- Throughout the implementation process, we should take into account social capital and social resilience (Vejle)
- The portal needs to be specific; or else there is the danger that it will only provide with generic information and the citizens and stakeholders will not trust or embrace it (Vejle)
- Each city needs to be very specific in what they are communicating to the general public (Kristiansand)
- It seems rather challenging to engage the private sector in such activities; extra effort needed by the city to involve and engage all relevant stakeholders following the pilot implementation of each tool (Bristol)
- The webinars concept was very abstract; there is need for more clarification in the future, regarding the tool functionalities, end products and user requirements. Some sessions during the Kick-off workshop and the webinar were too theoretical. The stakeholders prefer to discuss on more specific issues or challenges at city level (Donostia, Bristol)
- The main challenge was that we did not explore in detail the tool's functionalities; we had on the contrary a very general discussion that should be avoided in the future webinars. There is a need to pick thematics based on the various cities' challenges (Glasgow)
- The over consultation about resilience ends up loosing motivation of stakeholders (Glasgow)
- It is rather important to create a final product (set of tools and guidelines) that is tangible and useful for the end user. We should be clear about what we produce throughout the project and what the relevant stakeholders will get out as a result (Glasgow)
- It is very difficult to involve local associations, but also important to ensure that local councilors will stay engaged (Rome)
- There is severe lack of cooperation and collaboration among stakeholders in Rome; this is the main obstable in every relevant process (Rome)
- It is very difficult to find the proper language and arguments to convince stakeholders about the importance of engagement in any resilience building effort (Riga)
- The purpose of the tool is not clear; it is definitely going to be useful for cities, but we do not yet know how this will happen and if the cities are ready for this (Bristol)

- There should be more webinars in the future, to keep up the good work an avoid losing contact to relevant stakeholders (Bristol, Donostia)

3.4.3 Question 3

What is the main relevance of the Community Engagement and Communication tool for your city?

- The Community Engagement and Communication tool is necessary to develop and foster community initiatives; this is a tool for people understanding present challenges and the need for resilience at city level (Glasgow)
- A variety of tools are available in the city; we should decide with city stakeholders which are the most functional ones and try to integrate the SMR portal's functionalities (Donostia)
- If the tool contains local information (on weather conditions, city characteristics etc) it can become a point of reference for locals and tourists (Donostia)
- The portal may be able to connect procedures, departments, stakeholders etc. (Bristol)
- The portal may be able to bring together long-term stresses with emergency managers at city level (Glasgow)
- The city and community should be aware of what resilience tools can be provided to them (Rome)
- It is very important to digitalize the city's resilience building efforts (Riga)

3.4.4 Question 4

Would you have any specific suggestions or requirements for the finalization of the tool?

- The portal should be user friendly; different stakeholder groups should belong to different user categories (Bristol)
- Each procedure should define who and when is able to upload and define content (Bristol)
- The portal should include a forum/page that will highlight main achievements of the project and the cities' efforts on resilience building (Donostia)
- The tool should be flexible and always evolving (Donostia)
- The portal should integrate infographics, visuals (without text), multimedia and interactive links (Bristol)

- The tool needs to be adaptable and easy to evolve and change its features in the future (Glasgow)
- We should make sure that the language used in the portal, together with definitions of resilience or other terms are suitable for the people of each city (Glasgow)
- We need to develop a comprehensive communication strategy for resilience. The people need to be informed (Glasgow)
- It is necessary to develop a tool that relates both to citizens and to politicians. We should convert it into an effective tool of communication. The team of each city involved in the city could be a mediator to difuse these tools (Rome)
- It is important and necessary to add categories to improve the classification of information for specific risks and vulnerabilities (Rome)
- We should make use of templates to ensure that information from different cities will be easily transferred and diffused (Riga)

3.4.5. QUESTION 5

Are there any expectations from a communication portal on resilience? What should be included in the guidance to the tool to facilitate the use in other cities?

- The communication portal will help understand each city's needs and requirements on resilience following the lifespan of the SMR project (Vejle)
- An up-and-running, functional communication portal should help to develop a marketing communication strategy on resilience (Glasgow)
- An up-and-running, functional communication portal will start a new communication round with stakeholders in each city; synergies will be sought and cooperation mechanisms can be established; solutions and answers to pressing problems can be found (Bristol)
- We should make sure to further integrate social media; the tool should support the use of social media in an attempt to increase the interrelations and strengthen communication between local associations and initiatives and the local government and its departments (Rome, Donostia)
- The portal should integrate a variety of features like social media posts, radio programs and communication, visuals, videos etc (Vejle, Riga)

4. INTERACTIVE EXERCISES

4.1 CASE DESCRIPTION AND ACTION LISTS FOR SOCIAL MEDIA INTEGRATION EXERCISE

The aim of the first interactive exercise was to receive more general, high-level input on the design principles that are developed within WP4 of the project. The exercise puts additional focus on social media integration in these design principles. The participants were divided in three break-out groups – 1 per tier-1/ tier-2 city group (Table 1: Kristiansand and Vejle, Table 2: Donostia and Bristol, Table 3: Glasgow, Roma and Riga). The first table focused on the design principle: “citizen engagement and raising awareness”, the second table focused on the design principle “establish communication structure” and the third group focused on the design principle “information sharing/knowledge sharing”

*In this exercise we assume mainly Facebook and Twitter as social media services. Participants may suggest further services that they consider particularly important for their usage.

*Participants will decide which department they are in (choosing several departments as applicable).

Table 1 (Kristiansand and Vejle): Citizen Engagement and Raising Awareness

Case: You are in charge of using social media in your department (XXX). Your main responsibility is to raise awareness of important issues and engage citizens to your daily operations. Here your main concerns are…

- ✓ Increasing interactions w/citizens
- ✓ Being partner for co-creating value w/citizens (necessary because of limited official resources)
- ✓ Growing social capital (a strong relationship) among citizens

How do you set up actions with social media to approach your goal?

Kristiansand and Vejle, with the participation of a firefighter from the city of Kristiansand, took the example of the fire department and discussed and compared the use of social media for communicating with citizens in emergency and business-as-usual situations. It was found that all cities represented used social media to communicate with citizens regarding fire safety and fire emergency situations, although the approach varied greatly between cities.

Photo 3: Representatives from Tier 1 city Kristiansand and peer-reviewer Vejle share opinions on social media integration

The city representatives also compared social media use for citizen communication in fire departments and in the municipality in general. In Kristiansand's case, all communication is focused on the website, and social media communications are channeled towards the central website. Vejle's fire department generates social media-specific communications.

The cities also considered the level of engagement with citizens via social media and found that in most cases, staff capacity is not committed to publicly replying to posts on social media. This was considered to be a 'Vertebrate' stage of social media communication development.

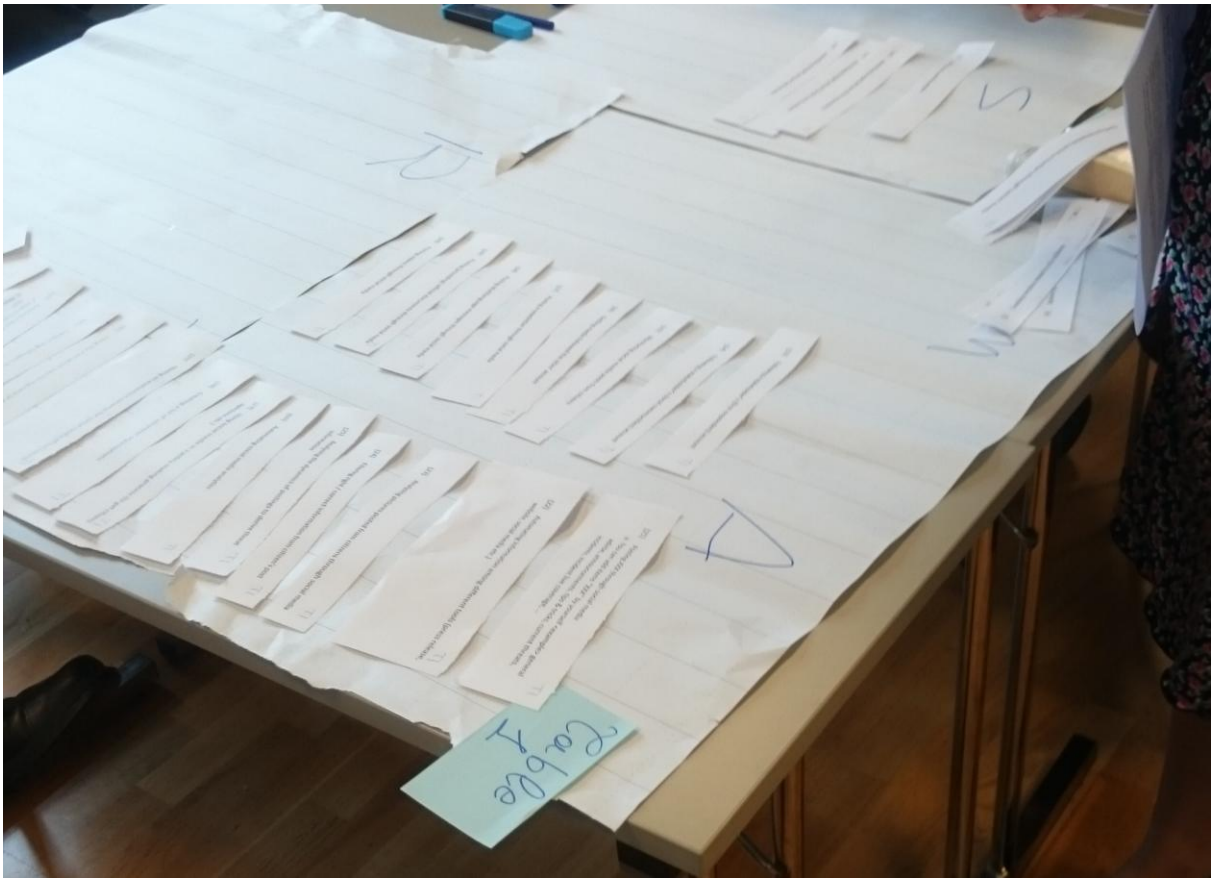

Photo 4: Table 1 (Kristiansand-Vejle) first results

Table 2 (Donostia and Bristol): Establish a Communication Structure

Case: You are in charge of using social media in your department (XXX). Your main responsibility is to establish strong communication structure mainly with stakeholders listed below.

Here your main concerns are…

- ✓ Visualization of live communication (you want to know who contacts whom)
- ✓ Building a report scheme (in emergency you want to know how they react)
- ✓ Visualization of resource capability (you want to know who is available in time of actual communication is needed)

How do you set up actions with social media to approach your goal?

Photo 5: Representatives from Tier 1 city Donostia and peer-reviewer Bristol share opinions on social media integration

Stakeholder list

Donostia: Civil security, fire fighters, local police, (citizens), mobility services, health system, energy, construction, ICT and security companies

Bristol: Police, fire, ambulance, health partners, (community groups), environment agency, charity and volunteer sector, social care providers, utility and transport companies, local businesses, neighbouring local authorities, central government

Photo 6: Table 3 (Glasgow-Rome-Riga) first results

Table 3 (Glasgow, Roma and Riga): Knowledge Sharing

Case: You are in charge of using social media in your department (XXX). Your main responsibility is to increase the available knowledge and expand access to it. The scope of sharing knowledge is to local, national and European level.

Here your main concerns are…

- ✓ Enhancing learning opportunity on the Resilience portal (assume that the portal has online learning functions)
- ✓ Collecting best practices of resilience building activities that consequently are provided to the portal
- ✓ Building a higher level of trust among different partners (city stakeholders and external partners) for further knowledge sharing

Photo 7: Representatives from Tier 1 city Glasgow and peer-reviewers Rome and Riga share opinions on social media integration

How do you set up actions with social media to approach your goal?

The proposed <Action list> is presented here:

- Setting up a central website
- Creating narrative related to city resilience
- Delivering the story through the website
- Delivering the story through social media
- Delivering an abstract / teaser through social media
- Setting up a service center to respond inquiries from citizens
- Letting the service center use social media to respond inquiries
- Allowing citizens to contact the service center using social media
- Starting interactive communication through social media
- Identifying target groups (first responders)
- Identifying target groups (local communities)
- Identifying target groups (individuals)
- Following a stakeholder's (first responders) account
- Following a stakeholder's (local communities) account

- Monitoring social media posts from citizens
- Getting media followed the cities' account
- Posting a newsletter through social media
- Posting Multilanguage messages through social media
- Posting (providing) official documents through social media
- Posting videos through social media
- Posting XXX through social media
- Automating information among different tools (press release, website, social media etc.)
- Analyzing pictures posted from citizens through social media
- Filtering right / correct information from citizen's post
- Analyzing the dynamics of postings to derive threat information
- Automating social media analytics
- Using social media in a policy making process (to get citizens opinions etc.)
- Creating a list of volunteer organizations
- Having an evaluation scheme for social media effectiveness
- Using the evaluation scheme regularly or even automated
- Categorizing followers in purpose of effectiveness analysis
- Creating a plan for multi-channel communication
    - How should a strategy for multi-channel communication look like?
    - How can multi-channel communication actually be set up?
- Making a strategy how to be a part of exiting FB network
    - How should this strategy look like?
- Collaborating with a local community through social media to approach particular issues
- Starting exercises for social media usage in emergency

4.2. MAIN RESULTS

The exercise results enabled CIEM to make several categories for actions which can be described as design principles for social networking services. Detailed analysis of both exercises will be shown in the deliverable D4.3. Moreover, results have confirmed the feasibility of integration WP4 results with the maturity model. Thereby, they also showed us how actions flow through the Maturity model (in each stage).

In particular, the exercise results will be used for a revision of the design goals and principles as presented in D4.2. These were confirmed in general; however, due to the exclusion of social media in the first year of work in WP4, for D4.3 the goals and principles are revised for inclusion of social media as a promising mean to communicate with stakeholders and citizens and to also engage citizens. Through the exercise, cities have provided insights on which social media practices are particularly important, which ones might be redundant, and for which ones currently information on feasibility or efficient usage is missing.

Besides discussing the action list, cities were also asked to name further actions. Results will help to amend the informal interviews that serve as further input to D4.3.

4.3. TESTING THE RESILIENCE PORTAL

The aim of the second interactive exercise was to create scenarios for the usage of the resilience portal. These will be used to verify and identify functions as well as to create test cases for the future use of the tool. The participants were divided in the same group as the previous exercise, while local stakeholders from the city of Kristiansand were invited beforehand and attended the session. This was meant to strengthen the co-creation process, having the input of the city stakeholders in developing the scenarios. Two example scenarios were shown by CIEM, while the participants were also asked to create their own ones (at least two scenarios each for short-term and long-term) based on prior/possible incidents in the cities. The exercise aimed to recreate/simulate real-life situations related with critical infrastructure performance and communication flow mechanisms and help participants identify ways of communication that would strengthen the overall preparedness and resilience at city level. In each scenario, usage of the resilience portal should be described and categorized within each maturity stage.

Scenario 1: Short-term Action in Case of an Incident

Scenario Setup

Heavy rainfalls have led to swelling rivers. The city's sewage systems can barely handle the amount of water. Meteorological services predict the situation to rather getting worse than better. According to the city's plans, it is likely that at least flooding of some streets will be unavoidable. It cannot be ruled out that some parts of the city could be severely flooded. To minimize damages, the city might have to consider opening valves, thereby deliberately flooding one part of the city, as this could take pressure off the system and save most other parts.

Mitigation Steps with Help of the Portal

	Usage of the Resilient Portal	**Complementary Usage of Social Media**
S	On its resilience portal, the city has provided guidelines and advice on flooding risks.	
M	Citizens can use the portal to report problems, e.g. regarding the sewers. The city uses the portal to update citizens regarding the situation. Most crucial information is provided also in English.	This information is also syndicated to social media.
A	Even if problems are reported in case of severe events, they will quickly be categorized for importance. If they address the current situation (e.g. a sewage leakage), they immediately are fed to the task force working on the situation.	The task force can also issue tweets.
R	The portal provides areas including forums, wikis and other means of exchange for volunteer groups. For example, neighbourhood groups use the portal to scrutinize whether their members have checked all elderly people in the lightly flooded area. The portal provides the mean to form and support such groups.	
T	Due to prior efforts the portal has established itself as the main hub for citizens to acquire information in case of city-wide	A backchannel to the city is provided on social

	incidents. The plan to flood one part of the city can be made public along with information to calm citizens who might be affected. Moreover, the portal provides means to hold virtual conferences. Before making the final decision of flooding a part of the city, a conference is held with a partner city that experiences a similar situation a few months ago. Citizen can use the mobile device-optimized version of the portal to keep themselves updated in a live-stream of notices.	media services.

Scenario 2: Long-Term Perspective on Citizen Engagement

Scenario Setup

Due to a recent event, a greatly increased number of refugees is arriving at a city. A substantial number of them will have to stay in the city at least for some weeks, probably for months. While the capacities of shelters are yet sufficient and the media has been careful in reporting out the refugees, first doubts have arised in the population. There have been small protests by right-winged groups and citizens have complained about “the situation at the nearby shelters”.

Mitigation Steps with Help of the Portal

	Usage of the Resilient Portal	**Complementary Usage of Social Media**
S	The resilience portal is used to keep the public updated with news on arriving refugees and how they are distributed to shelters.	This information is also syndicated to the city’s Facebook and Twitter accounts.
M	The resilience portal provides a backchannel where citizens can comment on the situation of the refugees as well as on consequences for themselves. Moreover, the portal has at least some of the general information about the refugees also provided in English as well as in a language typically spoken by the majority of the currently arriving refugees.	The City is actively monitoring reposting of Facebook and Twitter postings.

A		The city has a team that keeps track of activities on social media and reports back to the Chief Resilience Officer.
R	The resilience portal is used to facilitate a dialogue between citizens and refugees. It also provides the resources (e.g. forums, private areas) for self-help and support groups to form. This not only strengthens the efforts of citizens who want to help, but also provides the city with a better impression of the general atmosphere.	
T		The city uses automated tools that monitor social media usage by citizens and refugees to reason from activities and to anticipate problems.

4.4. MAIN RESULTS

The scenario that was chosen by the group Kristiansand-Vejle was: “Heavy rainfall that leads to severe flooding in the city”. In Kristiansand the main issue would be related to the sewage network connected directly with the sea. In Vejle, the main challenge relates to raising water that may affect access to houses and businesses and specific functionalities or proper operation of infrastructure; IT equipment that is usually installed in the basement of buildings can also potentially be affected.

For Deliverable 4.3, the exercise has value in three directions. Firstly, it confirmed the effectiveness of scenario building. Secondly, it provided a starting point for this activity. Thirdly, the exercise also highlighted difficulties that arise from scenarios.

Functional specification documents, as included in D4.2 and – in revised and much extended form – in D4.3 typically include testing cases. These are used to provide a mean to assess a system developed based on the specification. To make the test cases more accessible, and to ensure their realism, they can be embedded in testing scenarios. While we had planned for inclusion of testing scenarios before, the exercise has confirmed their feasibility and underlines that cities find them useful.

While the two example test cases provided by us were artificial and not based on real cases, the way the cities used and amended them illustrated their general usefulness. Thereby, they provided us with a starting point for scenario development as part of D4.3 and a possible standard for the Information Resilience Portal.

However, it needs to be mentioned that also limitations of scenario building became apparent. While the creation of scenarios that are suitable and useful for testing of the portal prototype is confirmed, scenarios that are realistic depictions of incidents in cities has been said to be extremely hard. Such scenarios are not necessary for inclusion in D4.3, but it must be made clear that they for example would not serve as the basis of simulation models, simulation games, incident planning or other resilience-related city tasks that need very much elaborated details. According to the cities, creation of such scenarios would be a task that would require a higher double-digit number of hours each, and would only be realistic when including a number of stakeholders with very sophisticated roles. While such scenarios are by no means required for assessing an IT platform since most of their details would not actually be needed, D4.3 will need to stress that scenarios are testing scenarios in the sense neither of a functional specification, and neither more nor less.

5. SUMMARY AND CONCLUSIONS

The first review workshop ended with some reflections on the day.

The Community Engagement and Communication Tool, which was originally foreseen to be a complete website that cities could adopt in its entirety, has been revised in light of the reality in place in SMR cities. While a theoretical perspective would favour overhauling current communication systems and implementing a unified and streamlined tool, cities are not simple machines, and communication processes in cities are as complex and many-faceted as its citizens. Each city has developed its own communication processes, relationships and priorities based on the infrastructure available, messages that need to be communicated, the way in which their citizens reach out to them and the staff capacity and resources available. A one-size-fits-all solution was found to be both unnecessary and impractical.

In response to cities' needs, the Community Engagement and Communication Tool will serve as a toolbox, whereby current platforms and websites in place and in use in cities can be augmented and gaps in facilities can be filled. As noted by Bristol, elements that are unavailable or undersupported technically could be provided by the toolbox, which would be helpful and welcome, whereas replacing the current system is unfeasible and undesired.

One tendency shared by cities was effective communication during crisis, risk and emergency situations and less or no regular communication otherwise. This can lead to citizens forgetting or being unused to using the channels of communication. Regular communication regarding resilience and security during ordinary life through the same channels as will be used for emergency situations could support cities in more effective communication.

As noted by Vejle, there are vulnerable citizens who are not connected to the online world, who are not necessary closely integrated into communities or social groups, and with whom cities need to communicate as with all other citizens in emergency situations. Social media strategies will not benefit these groups, and communication with them is vital due to their vulnerability. Community-building and more supportive social engagement is therefore necessary and ongoing work in order to ensure that these groups receive the information they need and are not isolated.

A recurring topic also explored by the cities and researchers was the reflection and consideration required in order to apply the Resilience Maturity Model to a real-life city context. As the city stakeholders present are not representing their cities in a theoretical capacity, but deal with real practicalities on a daily basis, theoretical cities or model cities are of little use or application. Therefore,

the Resilience Maturity Model is also guided by the actual status of the cities. When considering cities' resilience maturity in the context of communication and social media, the first stage of development is not a vacuum, or a city administration that does not communicate with its citizens. In an ideal case, before a city began to communicate with citizens via social media, they would first draft a strategy, which would be used to structure the communication. However, in practice, the cities first began to communicate, and at a later stage, it became evident that a strategy and coherent structure would be more effective than an ad-hoc and erratic approach. Cities are therefore adapting their processes in response to needs as necessary.

The Risk Systemicity Questionnaire session provided an opportunity to conduct another test of the propotype of this tool with city participants, following the previous two tests during the WP5 kick-off meeting in Donostia and during the WP2 workshop in Vejle. Thus, valuable feedback from the cities was gathered regarding the RSQ's new features, including an emphasis placed on vicious feedback loops, and a possibility for users to display all scenarios in the form of pictures. As evidenced in this report, many other technical comments were collected. Furthermore, a Group Explorer session was conducted with all seven cities, during which 174 new policies were gathered, which was considered a very good effort on behalf of city participants. Consequently, the collected feedback and the new empirical material will be used to expand the existing policies used in the development of the RSQ.

In general, the Resilience Engagement and Communication Tool was perceived as a tool that has potential for the CITIES, especially when it comes to creating a culture for resilience in the CITY. The pilot implementation process for the tool was agreed to continue throughout the following the review workshop months, with the organization of Stakeholder Training Workshops in each tier-1 CITY.

More information on the peer-review process and a recap of the feedback from CITIES throughout the pilot implementation process of the Resilience Engagement and Communication Tool can be found in the project deliverable D5.2, while a recap of the Stakeholder Training Workshops on the Resilience Engagement and Communication Tool can be found in the project deliverable D5.5 (as the trainings took place in project months M20-M21).

ICLEI and CIEM shared some concluding remarks on the next steps of the project, and in particular related to WP4 and WP5 interactions. In particular Tim A. Majchrzak and Mihoko Sakurai (CIEM) touched upon the great amount of input they received during the workshop and will help them improve and finalize the tool's functionalities.

ANNEX I

WORKSHOP PARTICIPANTS

Partner Institution	Function	Internal/Exter	Gender
Vejle	Project Manager	Internal	Female
Linköping Uni.	Researcher	Internal	Male
Glasgow	Resilience Officer	Internal	Male
Rome	Project Manager	Internal	Male
Uni. of Strathclyde	Professor	Internal	Male
Linköping Uni.	Professor	Internal	Male
TECNUN	Researcher	Internal	Female
Riga	Project Manager	Internal	Male
CIEM	Professor	Internal	Male
ICLEI Europe	Officer Communications	Internal	Female
Uni. of Strathclyde	Professor	Internal	Female
Vejle	Project Manager	Internal	Male
DIN	Project Manager	Internal	Male
Vejle	Project Manager	Internal	Male
Donostia	Head of Strategy Office	Internal	Male
TECNUN	Professor	Internal	Male
Riga	Project Manager	Internal	Male

DIN	Project Manager	Internal	Male
CIEM	Ass. Professor	Internal	Male
TECNUN	Researcher	Internal	Female
Donostia	Senior Technician	Internal	Female
Kristiansand	Crisis Manager	Internal	Male
Uni. of Strathclyde	Researcher	Internal	Male
CIEM	Head of Lab	Internal	Female
ICLEI Europe	Deputy Director*	Internal	Male
Riga	Project Manager*	Internal	Male
CIEM	Ass. Professor	Internal	Female
TECNUN	Professor	Internal	Male
Kristiansand	Project Manager	Internal	Male
CIEM	Researcher	Internal	Male
ICLEI Europe	Project Officer	Internal	Male
City of Kristiansand	Firefighter**	External	Male
University of Agder	Student**	External	Male

*Indicated participants only attended 21 September 2016

**additionally a stakeholder from the fire department (Male) and a student from the University of Agder (Male) joined the exercises on the Resilience Engagement and Communication Tool on the 21st of September 2016 / (Interactive Group Exercise 2: Testing the Resilience Portal and Interactive Group exercise 1: Social media integration)

ANNEX II

WORKSHOP AGENDA

AGENDA: SEPT 20TH, 2016

Venue: Clarion Ernst Hotel (Rådhusgata 2, Kristiansand)

Participants: All

Time	Script
9:00 – 10:00	Presentation reference model and policies discussion
10:00 – 10:45	Introduction to GE session and initial gathering of risk mitigation strategies
10:45 – 11:15	Coffee Break
11:15 – 12:30	Gathering and discussion of risk mitigation strategies
12:30 – 13:30	Lunch
13:30 – 15:00	Gathering and discussion of risk mitigation strategies
15:00 –15:30	Coffee Break
15:30 – 17:00	RSQ Trial and feedback

AGENDA: SEPT 21ST, 2016

Venue: Grønt Senter (Odderøyveien 5, Kristiansand)

Participants: All

Time	Script	Responsible
9:00 – 9:05	Welcome	ICLEI
9:05 – 9:20	Presentation of the Community Engagement and Communication Tool – WP4 activities	CIEM
9:20 – 10:20	Feedback from the pilot implementation - WP5 activities	ICLEI
10:20 – 10:30	Q & A	
10:30 – 11:00	Coffee break	
11:00 – 12:00	Feedback from the tier-2 cities	ICLEI
12:00 – 13:00	Lunch	
13:00 – 14:00	Interactive Group exercise 1: Social media integration	ICLEI, CIEM, All CITIES
14:00 – 14:15	Reporting to the plenary	CIEM
14:15 – 14:45	Coffee break	
14:45 – 15:45	Interactive Group Exercise 2: Testing the Resilience Portal	ICLEI, CIEM, All CITIES

15:45 – 16:00	Wrap-up	ICLEI, CIEM