SMART MATURE RESILIENCE

D5.2 – PEER REVIEW MEETING 1

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EXECUTIVE SUMMARY

This report was prepared in the framework of Work Package (WP) 5, i.e. the WP coordinating the testing process of the pilot tools developed in WP3 and WP4. It is the first of three peer-review reports aimed at summarizing the feedback from the partner CITIES on the pilot implementation phase. Specifically, this report summarises the feedback from the partner cities on the pilot implementation of the Community Engagement and Communication Tool, developed by CIEM, Center for Integrated Emergency Management, Universiteit i Adger, in WP4, in collaboration with TECNUN, University of Navarra.

The aim of this report is to provide important input for the finalization of the aforementioned tool. The report also demonstrates and highlights the main outcomes of the kick-off workshops, the organized webinars between the tier-1 and tier-2 partner CITIES, as well as the input received and the results of the review workshop, which took place in Kristiansand, Norway, on 21 September 2016. During this review workshop, the tier-1 CITIES provided collective input having participated in the first pilot implementation (out of 5) of the project, while the tier-2 CITIES shared their additional feedback having followed the peer-reviewing activities within WP5. The report summarizes the recommendations of the partner CITIES for the finalization of the tool, assesses the impact of the tool for the stakeholders for each tier-1 CITY identified in D5.1 and states some general conclusions on the pilot implementation process.

The report is divided into six parts: The 1st part introduces the tool and the main parts of the pilot implementation process, while it also provides information on methodology and process details. The parts 2-4 explore the feedback provided by Kristiansand, Donostia/San Sebastian, and Glasgow, respectively, by matching them with the best practices provided by their respective tier-2 peer(s). Each of these parts concludes with necessary recommendations for the further development and finalization of the tool. The 5th part focuses on the impact of the Community Engagement and Communication Tool to city processes and relevant stakeholders, which have been identified for each tier-1 CITY, within the chosen security sectors; these stakeholder lists have been presented in Deliverable 5.1. The sixth and final part of this report summarizes the tool's strengths and weaknesses as elaborated by the peer-review CITIES and focuses on general conclusions and future steps for the subsequent pilot implementation processes.

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1. INTRODUCTION TO THE PILOT IMPLEMENTATION

This report is prepared in the framework of Work Package (WP) 5, i.e. the WP coordinating the pilot implementation of the Resilience Management Guideline, through a testing process of all the five resilience tools that are being developed within the SMR project. The report summarises the feedback from the partner CITIES on the pilot implementation and the peer-reviewing process of the Community Engagement and Communication Tool, which is developed by CIEM, Center for Integrated Emergency Management, University of Adger, within WP4. CIEM is working closely with TECNUN, University of Navarra in preparing a Beta version of a Resilience Portal. All partner CITIES have been able to use and test the different versions of the portal throughout this first pilot implementation process. The report highlights and summarizes important inputs received from the peer-reviewing cities that will be used for the finalization of the Community Engagement and Communication tool within WP4.

The main elements of the pilot implementation were:

- 1 kick-off workshop in each implementing CITY with the involvement of local stakeholders relevant to the selected security sectors;
- 1 webinar for each implementing CITY: the appointed tier-2 CITY/ CITIES act as peer-reviewer(s);
- Informal interviews between the tool developers and the CITIES (both tier-1 and tier-2);
- Presentations and workshops organized by each CITY to involve and engage local stakeholders;
- Presentations and discussions on key functionalities of the tool, referring to the portal and its ecosystem, by city representatives and SMR partners: most discussions were based on theory and on a general assessment of the tool.
- 1 review workshop in Kristiansand, Norway with involvement of all partners and local stakeholders

1.1. COMMUNITY ENGAGEMENT AND COMMUNICATION TOOL

The Resilience Information Portal will serve as a collaborative environment to facilitate awareness and engagement among key partner in resilience building activities. The portal particularly serves two purposes:

- Support communication within the city, between the city and its stakeholders, and between the city and its citizens. In addition, the integration of social networking services is supported.
- Enable knowledge sharing as a long-term communication activity. Similarly to short-term communication support, the city, its stakeholder, and citizens are included.

The Community Engagement and Communication tool that is developed within the WP4 activities consists of a set of design principles and a tool prototype for the Resilience Information Portal. Detailed information on the Community Engagement and Communication tool can be found in the project Deliverable D4.2, while the updated information will be included in the deliverable D4.3.

1.2. THE TOOL TESTING PROCESS

The tool testing process for the Community Engagement and Communication tool took place between project months 11 and 16 (April-September 2016) in the three tier-1 CITIES of Kristiansand, Donostia/ San Sebastian and Glasgow, and was peer-reviewed by the four tier-2 CITIES Bristol, Vejle, Riga, and Rome. The tool testing activities took place with the support of the local research partners in each CITY, while ICLEI was acting as ´external coach` and coordinator, facilitating knowledge and information exchange between partners and city officials and representatives.

During this period, partners and representatives of the three tier-1 CITIES had the chance to explore and validate the tool in the security sectors that were already identified (T5.2) and to provide input to the developers for the finalization of it; input that was used to always update the portal's functionalities and improve the tool's qualities. The two relevant security sectors in each CITY were identified at the beginning of the activities in WP5 (month 8); these sectors vary from critical infrastructures for water,

energy, transport, housing, communications, finance, health, etc. and serve as the operational environment for the pilot implementation in each of the tier-1 CITIES.

Security sectors for each CITY

City	Security sector
Kristiansand	1.Water resources management
	2.Waste water/Sewage
Donostia/San Sebastian	1.Energy
	2.Telecommunications
Glasgow	1.Flooding
	2.Surface water management

ICLEI European Secretariat, in close cooperation with representatives of the three tier-1 CITIES (i.e. Kristiansand, San Sebastian/Donostia and Glasgow) and their respective research partners (i.e. CIEM, TECNUN and the University of Strathclyde) organized three 'kick-off workshops' in Kristiansand, Donostia/San Sebastian and Glasgow from February to June 2016. The workshops gathered the most relevant stakeholders of each tier-1 CITY, presenting the project goals and outputs, introducing participants to the project's resilience management approach, and de facto kick-starting the pilot implementation of the tools in general, and the Community Engagement and Communication tool in particular, in each CITY.

After the first weeks of the pilot implementation process, ICLEI conducted a series of webinars during which the implementing CITIES presented the activities and processes conducted so far and the tier-2 CITIES had the opportunity to ask questions and provide their insights and feedback on the ongoing tool development.

Although the webinars were well attended and provided a lot of useful input for the further development of the tool, some questions remained unanswered; specifically in relation to social media integration. Therefore, CIEM conducted informal interviews with each CITY (both tier-1 and tier-2) in order to further discuss social media integration into the proposed design principles. Social media integration could potentially be a sensitive issue for many municipalities in Europe and triggered discussions (during webinars and partner meetings/calls) regarding which information should be reflected and shared on social media, and in which ways. ICLEI again acted as external coach for the informal interviews process. These interviews were based on a questionnaire developed by CIEM; more information on the methodology and outcomes of these interviews will be included in the deliverable D4.3.

Throughout the pilot implementation process, the CITIES in close cooperation with their respective research partners, organized bilateral meetings with identified stakeholders (stakeholder lists for each security sector and each tier-1 CITY are presented in deliverable D5.1) to further explore synergies and collaboration potential between institutions, municipal departments and utilities and the Smart Mature Resilience project. These meetings also aimed to find the most appropriate ways to integrate the Community Engagement and Communication tool with existing communication mechanisms and platforms that city stakeholders have been potentially using.

A final and crucial part of the testing and review process was the review workshop in Kristiansand, Norway in September 2016. During this workshop, the tier-1 CITIES provided their feedback on the pilot implementation process to CIEM, while the tier-2 CITIES shared their additional feedback and summarized their recommendations for the finalization of the tool through a combination of facilitated discussion, based on guiding questions, and conduct of interactive exercises in breakout groups. At the workshop, it became evident that now, approaching the end of WP4, CITIES are already working on improving stakeholder engagement, revising the IT systems currently in use and thinking about potential, possible ways to integrate the SMR Community Engagement and Communication Tool's features and functionalities.

1.2.1. CIRCLE OF SHARING AND LEARNING

Cities are central to the Smart Mature Resilience project; a Circle of Sharing and Learning is used in a four-tier CITY process to reach and engage more CITIES and therefore to grow the resilience backbone for Europe. The four-tier process aims at maximizing impact, facilitating best practice exchange and raising awareness on resilience around Europe. Starting from the early adopters and

the peer reviewers, the project aims to reach out to further cities in established resilience networks (100 Resilient Cities, UNISDR Making Cities resilient campaign members, ICLEI European member cities working already on adaptation and resilience, EU-funded projects like Green Surge etc.) and then to other cities around Europe.

The tier-1 CITIES are the early adopters and present the operational environment in which the pilot implementation of all the 5 tools will take place. City representatives and stakeholders are rather important in providing input for the finalization of each tool.

WP5 has a central role in this process, in terms of:

- ✓ Providing a platform for exchange and development
- ✓ Strengthening the co-creation process, from the very beginning
- ✓ Facilitating a structured and coordinated interaction between the implementing cities and the local research partners

City representatives and critical infrastructure stakeholders have been invited and attended workshops and webinars. In the implemented workshops and stakeholder meetings, the identical methodology was used aiming to ensure replicability, comparability, and transferability and to put the emphasis on the Circle of Sharing and Learning.

1.2.2. CITY MATCHING

Following the identification of the security sectors, all partner CITIES have been positioned in exchange groups of CITIES, according to an assessment of their geographical, demographic, socio-economic, and climate characteristics that was conducted by ICLEI Europe in collaboration with the research partners of the project. During the WP2 workshop in Rome (February 2016) ICLEI Europe suggested this CITY matching process and the partners agreed upon it. This process aims again to ensure replicability, comparability, and transferability and to support CITY decision-makers in adopting resilience measures in their CITIES.

The four partner CITIES, which are not serving as pilot implementation cases (Vejle, Bristol, Rome, and Riga) are involved in the implementation and review process, assuming the role as peer-

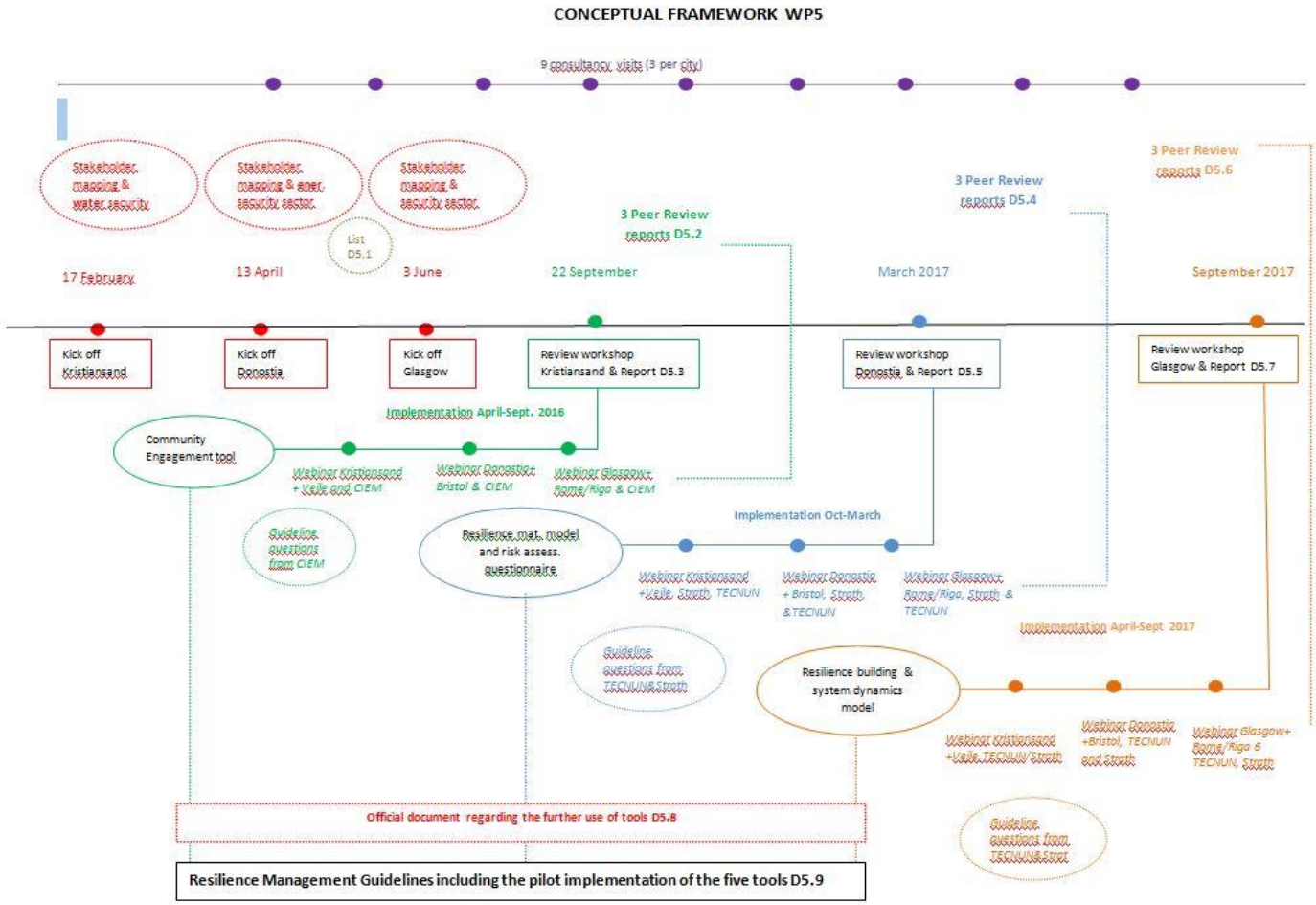
reviewers. In respect to this, it could be considered that the tier-2 CITIES were assigned with an observer role in the pilot implementation process, monitoring the progress of the assigned tier-1 CITIES and providing feedback and insights, which will ensure that the final tools are widely replicable and applicable to other cities in Europe. The tier-1 CITIES and their local research partner will be working closely together on co-creating and testing the project's tools, with a particular focus each case on building resilience against risks that fall within each chosen security sectors.

Pairs of cities and their corresponding local research partners

Local partner	Tier 1 City	Tier 2 City
CIEM, University of Adger	Kristiansand	Vejle
TECNUN, University of Navarra	Donostia/San Sebastian	Bristol
Strathclyde University	Glasgow	Rome & Riga

1.3. DETAILED TIMELINE/ROADMAP

The following graph presents the conceptual framework for WP5, including all five pilot implementations of the different tools, dates of the kick-off workshops, tentative schedule for the webinars etc.


CONCEPTUAL FRAMEWORK WP5
9 consultancy visits (3 per city)
Stakeholder mapping & water security
Stakeholder mapping & ener. security sector
Stakeholder mapping & security sector
List D5.1
3 Peer Review reports D5.2
3 Peer Review reports D5.4
3 Peer Review reports D5.6
17 February
13 April
3 June
22 September
March 2017
September 2017
Kick off Kristiansand
Kick off Donostia
Kick off Glasgow
Review workshop Kristiansand & Report D5.3
Review workshop Donostia & Report D5.5
Review workshop Glasgow & Report D5.7
Implementation April-Sept. 2016
Community Engagement tool
Webinar Kristiansand + Valle and CIEM
Webinar Donostia Bristol & CIEM
Webinar Glasgow+ Rome/Riga & CIEM
Guideline questions from CIEM
Resilience mat. model and risk assess. questionnaire
Implementation Oct-March
Webinar Kristiansand +Valle, Strath TECNUN
Webinar Donostia + Bristol, Strath & TECNUN
Webinar Glasgow, Rome/Riga, Strath & TECNUN
Implementation April-Sept 2017
Guideline questions from TECNUN& Strath
Resilience building & system dynamics model
Webinar Kristiansand +Valle,TECNUN Strath
Webinar Donostia, +Bristol, TECNUN and Strath
Webinar Glasgow+ Rome/Riga & TECNUN, Strath
Official document regarding the further use of tools D5.8
Guideline questions from TECNUN& Strat
Resilience Management Guidelines including the pilot implementation of the five tools D5.9

The framework has been implemented as depicted in the graph above, with the following changes:

- Following partner consultation, the first 3 webinars on the Community Engagement and Communication Tool took place in M12-M13 – as a result the webinars provided the needed information on design principles and tool functionalities earlier in the process.
- The planned, regular coaching visits did not take place yet, as exchange was achieved during physical meetings organised within other WPs, as well as phone/ webinar meetings. Additionally, these coaching visits will be used during 2017 to make sure we maintain a good rhythm of presence in each city, targeting various stakeholder groups for which the tools will be relevant.

Following the review meeting in September 2016, and in order to accommodate comments by the European Commission and the partners, ICLEI will prepare an altered framework and present it to partners in November 2016. The new framework will run until the end of the project (May 2018) and will accommodate the validation of the Resilience Management Guideline as a whole in another, final pilot implementation that will engage a broader group of cities that will be identified within 2017 (Tier 3 cities; cities already in resilience networks like 100 Resilient Cities, European ICLEI member cities, UNISDR campaign Making Cities Resilient members etc.

1.4. KICK-OFF WORKSHOPS

The kick-off workshops were well attended by stakeholders, as shown in the following table.

Event	Date	Stakeholders
1st KoW Kristiansand	17/02/2016	22
1st KoW Donostia	13/04/2016	17
3rd KoW Glasgow	03/06/2016	33

During each kick-off workshop, information about stakeholder engagement and communication in each tier-1 CITY was gathered through group exercises on stakeholder mapping and communication for the security sectors selected by each of the tier-1 cities. Through these activities at the workshops, project partners, with ICLEI as lead, collected information about the most relevant stakeholders for the security sectors of each tier-1 cities and prepared three stakeholder lists. These were later augmented by the respective CITY partners and will be used throughout the SMR project, particularly in preparation of and during the pilot implementation of the SMR tools. These lists can be found in project deliverable D5.1. During the interactive exercises, the stakeholders that were missing from the workshops were also identified and considered for the creation of the comprehensive stakeholder lists.

1.4.1. 1ST KICK-OFF WORKSHOP KRISTIANSAND

In February 2016, the first kick-off workshop initiated the pilot implementation in Kristiansand, with ICLEI and the city of Kristiansand identifying and engaging with a group of the city's most crucial stakeholders in ensuring Kristiansand's resilience against water management and waste water/sewage challenges. Some of these stakeholders are listed below:

- ✓ National Food Authority
- ✓ Crisis Management municipal department
- ✓ Water management municipal department
- ✓ Rambøll Management Consulting Services
- ✓ Sweco Norge AS
- ✓ First Responders Kristiansand
- ✓ Fire Department
- ✓ Agder Politidistrikt
- ✓ Chief Physician
- ✓ COWI Norway

The workshop's first interactive exercise aimed to make participants reflect on how communication and information flows and to whom, to start thinking about possible communication gaps or hiccups and which stakeholders should be more specifically targeted with information (hence more effectively reached) about potential issues arising in the water and sewage sectors. Then, each group was assigned a real case study to focus on. The aim of this exercise was to identify the information gap that led to the situation described in the case study, proposing possible solutions and reflecting on how a communication platform could help tackle such challenges in the future.

The two case studies were the following:

Case Study 1

Your institution receives incoming reports of poor water quality from the public sector, the hospital and from internal quality inspections. The reason remains unknown.

Case Study 2

A landslide affects a major water supply pipeline of water supply to the citizens, reason unknown.

The participants mainly discussed reasons for lack of communication and possible improvements and what should be the most needed features and functionalities of the Community Engagement and Communication Tool. Some important insights that became particularly evident during the workshop, in each case in relation to communication/information flows and mechanisms are the following:

- The city needs to create inter-linkages between science, policy and society and establish a practical approach to resilience.
- The communication protocol of the municipality of Kristiansand indicates that in crisis situations, the group informed first of a potential arising issue will be the first responders, then the county and the national level and then schools, nurseries, elderly houses and the rest of the citizens.
- Usually, the police and the hospitals receive the most accurate information and also ensure secure communication, even in the case of a serious disaster event, with many cascading effects.
- The most common means of communication with citizens in cases of emergency are by mobile phone, email and SMS. 40 priority satellite phones in the municipality are used in these cases.
- On a daily basis, communication is not scheduled; however, there are organized updates among municipal departments and a variety of relevant stakeholders.
- Some of the reasons for the lack of communication that have been identified are: lack of availability, old contact details, time pressure, lack of awareness of specific responsibilities, information overload from time to time, confidentiality issues, long bureaucratic procedures, behavioural factors, etc.

1.4.2. 2ND KICK-OFF WORKSHOP DONOSTIA/SAN SEBASTIAN

In April 2016, the second Kick-off workshop initiated the pilot implementation in Donostia/San Sebastian, with ICLEI and the city of Donostia/San Sebastian identifying and engaging with a group of the city's most crucial stakeholders in ensuring Donostia's resilience against energy and telecommunication challenges. Some of them are listed below: Renfe (National Railway Services), EuskalMet (Basque Meteorological services), Firefighters - Fomento San Sebastian, Civil Protection Department, City Council San Sebastian, Strategic Development Office (Oficina de Estrategia), OSAKIDETZA – Basque Healthcare services, Iberdrola, NaturGas etc.

During the workshop, the invited stakeholders were introduced to the city's resilience-building activities and were asked to share insights and ideas on potential strategies and structures regarding management, safety and efficiency improvements of critical infrastructures in the energy and telecommunications security sectors. The workshop participants managed to broaden thinking about stakeholder engagement within the city of Donostia/San Sebastian by identifying those actors/parties that are most relevant and influential within the energy and telecommunications security sectors, while also mustering early stakeholder buy-in to the SMR activities and the tools that will be developed during the project's lifespan.

The city had never performed a stakeholder mapping exercise in the selected security sectors, therefore it was considered crucial to start with a such exercise, before moving on to another one focusing on communication and information flows in the city. The stakeholder mapping session, according to the city representatives was very helpful in serving to flag key gaps in stakeholder identification and engagement for strengthening resilience in Donostia.

The second interactive exercise focused on communication flows in everyday operations, before defining and analyzing how these dynamics and relationships work in the case of an emergency. Special reference was made to different communication tools for engaging stakeholders, from training exercises with the emergency services by using standard communication channels to reach the public (e.g. SMS, Twitter and websites). As part of the exercise, a case study was presented to the participants, who were asked to reflect on it and share input on potential reasons for lack of communication and possible improvements and what should be the most needed features and functionalities of the Community Engagement and Communication Tool. The case study was the following: A general power grid outage in Donostia/San Sebastian following a strong storm (including massive wind and flooding) that lasted for about 8 hours.

Some important insights that became very prevalent during the workshop, in each case in relation to communication/information flows and mechanisms are the following:

- The city need to raise awareness and educate society on emergency management response and planning
- The available information in the city needs always to be reviewed and checked upon reliability, with a periodic character and to avoid creation of chaos
- There is lack of communication among health services and firefighters, something that can be rather problematic at the peak of a crisis situation
- Communication channels should be established and updated (there should be offline, web, and social media channels available in the future)

1.4.3. 3RD KICK-OFF WORKSHOP GLASGOW

In June 2016, the third Kick-off workshop initiated the pilot implementation in Glasgow, with ICLEI and the Glasgow City Council identifying and engaging with a group of the city's most crucial stakeholders in ensuring Glasgow's resilience against flood risk and crisis situations. The principal objective of this kick-off was to introduce the city to the resilience management approach of the project, to touch upon the specific tools that will be developed throughout its lifespan and start the pilot implementation of the tools. The workshop was well attended by city representatives and relevant stakeholders within the Water and Flooding security sector that was chosen as being quite critical for the city of Glasgow and Scotland in general. Some of them are the following: SEPA, Scottish Water, Fire Scotland, Scottish Ambulance, Police Scotland, New Gorbals Housing Association, Wheatley Group, National Centre for Resilience, the Glasgow Centre for Population Health, Cordia, and Sustainable Glasgow.

To explore how the city would currently react to a water-related crisis and to gather data for development of the SMR tools, the stakeholders and city partners considered a number of flood scenarios and designed theoretical responses in order to minimize disruption to the city. The scenario planning exercise was received well by the city stakeholders as it was stated in follow-up, bilateral meetings that were organized by the Glasgow City Council. The participants focused on a variety of issues like: what plans and procedures are already in place to deal with extreme flooding events, what would be the trigger events to consider such plans and interrelations with weather broadcasts, how

would internal, inter-agency and external communications be managed, what services, human resources, and other capacities are needed to respond to such situations, what are the emergency response priorities etc.

The city of Glasgow has already excessively worked on stakeholder engagement through the 100 Resilient Cities, pioneered by the Rockefeller Foundation programme, but as the city representatives stated, it was helpful to narrow down the stakeholders to the ones that are most crucial for the water and flooding security sectors. During the workshop, but also in the following weeks, most important were considered the contributions, opinions, and experiences shared by local first responders, critical infrastructure institutions and most importantly the relevant departments of the Glasgow City Council.

Some important insights that became very prevalent during the workshop, in each case in relation to communication/information flows and mechanisms are the following:

- Reducing water infrastructure maintenance budgets has a negative impact on water/flooding resilience
- Housing associations and social work departments have access to vulnerable groups of people and can become crucial actors in community engagement
- Announcements on radio and television can be problematic as they could potentially increase congestion and create chaos in the city
- There are various transport options available depending upon distance: the fire services would support rescuers
- Neighborhood information is key for resilience in the water/flooding security sectors

1.5. WEBINAR CONCEPT

The peer-reviewing process included three webinars, one per implementing city and their assigned tier-2 CITIES that aimed to strengthen the co-creation process and ensure that the tools developed are of use for all involved CITIES. The peer-reviewing process ensures the uptake of the tools by the cities after their finalisation. One webinar per implementing tier-1 city was organized after the first weeks of the pilot implementation phase. Each webinar involved the respective implementing city; the

assigned tier-2 city/cities, CIEM as a research partner and responsible for the tool development and ICLEI as moderator/facilitator.

1.5.1. METHODOLOGY

All three webinars followed a structure that was result of the ongoing collaboration between ICLEI and CIEM through weekly calls:

- Both tier-1 and tier-2 CITIES were able to introduce to each other their resilience-building strategies and activities with respect to social cohesion, climate change, and critical infrastructure. Aiming at developing a tool that can best assist cities in exchanging communication in times of emergency and, thus, enhancing urban resilience, the webinars focused on the cities' resilience building efforts in relation to general preparedness and information sharing during previous disaster events;
- Both tier-1 and tier-2 CITIES presented existing communication platforms and tools that could integrate potentially functionalities of the SMR resilience information portal;
- The implementing tier-1 CITIES presented the challenges and constraints experienced by during the first week of the pilot implementation process;
- The tier-2 cities asked questions based on a guideline questionnaire prepared in advance by CIEM. This was to make sure that the most relevant aspects for the tool development would be questioned and analyzed. The tier-2 cities' representatives posed additionally their own questions;
- CIEM facilitated the discussion on the Design Principles and put an emphasis on social media integration

According to the description of work, the webinars were intended to take place until the end of month 15, but following consultation with CIEM and TECNUN, all of them took place in months 12-13, in order for the tool developers to receive as much input as possible from the implementing tier-1 CITIES and the tier-2 peer reviewer CITIES.

The following table presents the tentative webinar schedule:

	Kristiansand - Vejle	Donostia - Bristol	Glasgow - Riga - Rome
Community Engagement Tool	31st May 2016 CIEM&TECNUN	22nd June 2016 CIEM&TECNUN	29th June 2016 CIEM&TECNUN
Resilience Maturity Model & Risk Systemicity Questionnaire	December 2016 TECNUN & Strathclyde	January 2017 TECNUN & Strathclyde	February 2017 TECNUN & Strathclyde
Resilience Building Policies & System Dynamics Model	May 2017 Strathclyde & TECNUN	July 2017 Strathclyde & TECNUN	September 2017 Strathclyde & TECNUN

1.5.2. GUIDING QUESTIONS

In anticipation of the webinars, CIEM provided guiding questions in advance of the discussion in order to include specific issues in the debate. These questions meant to foster a better understanding of requirements needed for the Information Resilience Portal, as well as for actions to be taken by CITIES in its usage and integration with existing systems. They also aimed to make sure that the most relevant aspects of the tool development would be questioned, analyzed and highlighted during the webinars.

These questions were based on interviews conducted in six cities and their stakeholders (12 stakeholders in total, leading to 20 sets of interviews with 33 total interviewees) by CIEM. The questions were sent to the peer- reviewer cities, already a week before each webinar aiming for them to serve as a basis for the discussion between the cities and the tool developer. The cities were advised to elaborate on the questions internally in their teams and to provide additional questions or comments if needed.

The project deliverable D4.2 compiles design principles for the use of social networking services to promote transdisciplinary collaboration. It does so based on a series of extensive interviews with the CITIES and stakeholders.

These design principles are:

1. Information Sharing;
2. Establish a Communication Structure;
3. Citizen Involvement and Raising Awareness;
4. Knowledge Sharing;
5. Information Sovereignty;
6. Usability

While the first four are close to actual functions and actions in an information system and on a city level, the latter two rather address quality aspects. During all three webinars, the main discussion was around the following two design principles: Establish a Communication Structure and Knowledge Sharing. The discussion touched upon the rest of the design principles too, but focused on these first two as the developers considered them to be the ones requiring more input from the cities.

The guiding questions list included two sets of questions; the first one focused on the first two design principles, while the second consisted of general questions on potential tool qualities and functionalities.

Questions on the design principles

Question 1

An important aspect of a communication structure is a contact list. The portal should provide a contact list in a modern fashion. Can you envision how such a contact list should look like?

Notes:

a) The contact list functionality could include reminders to update contacts, situation specific selections (e.g. to list those contacts on top that are most relevant to a selected emergency);

b) There could be an overall contact list or specific contact lists. There could even be role-based and situation-based visibility of contact (details).

Question 2

How could the portal integrate a video conference tool?

Note:

Please consider existing video telephony solution such as Skype and corporate video conference tools such as WebEx.

Question 3

Imagine the following functionality. During a call, you mention the tunnel fire policies and type “tunnel fire” into the chat box. The system could now propose a list of documents found on the portal that matches this term and that have clearance for your call partner. Is this kind of functionality useful?

Question 4

How do you think can such tools encourage learning among participants? Are educational materials necessary? If so, what kind of materials would be useful? Please give an example in case you use such materials in daily operations.

Question 5

Which functionality of such tools would you expect to be embedded with the portal? Examples of functionalities: chat option, sending files, screen sharing, contact list, recording calls, etc.

Question 6

To keep information in the portal updated, grasping resource capability is important. Do you have any ideas for visualizing human resource capability with using the portal?

Question 7

If the portal employs a resilience library, can you image how to use this? Which information or functionality would you expect to be embedded with the library?

General questions on tool qualities and functionalities

Question 1

The portal should provide (mainly static) lists of Frequently Asked Questions (FAQ). For which topics (e.g. threats and “what to do when” descriptions”) should such lists be provided? In which form (structure) should they be provided?

Question 2

Is it possible to embed an existing role and rights concept into the portal?

Question 3

Can you envision how searching for information on a portal should look?

Note:

Keep in mind that information on the portal with be heterogeneous and originate from many sources.

Question 4

Should translation services be included in the portal even if there is the risk that automatic translation will come at the cost of precision?

Note:

Translation could be done to English for universality, or into other languages e.g. to include minorities, refugees, etc.

Question 5

How would you design a situation diary that is included in the portal?

Note:

A situation diary is used by cities and stakeholders to log daily incidents and reports

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Question 6

Does your city have experience in the security assessment of its information systems? How would you adjust security procedures for the portal?

Note:

This question might be considered to be sensitive and will then need to be discussed directly between key personnel of the city council and tool developer in an informal private interview

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Question 7

The portal does not mean to replace existing systems but rather to provide access to them. Are there resilience-related systems that are particularly suited for integration? How should this integration look like?

Note:

Integration can come in many ways. It is recommended to abstract from the actual technological way of doing it but rather to discuss the desired way it would function;

Hint*:*

Consider which features of existing systems you would keep and which not...

Question 8

Would you use the portal to set up a Wiki (i.e. a user-editable collection of Web pages, each on a topic denoted by a keyword)? If yes, what kind of information should be included in this and who should be users? Examples: A Wiki could be used by stakeholders such as firefighters to share knowledge. It could also be used as a kind of citizen self-help database in which citizens share experiences. The latter would arguably require some form of moderation by the city.

1.5.3. WEBINAR REPORTS

Following the webinars, the peer-review CITIES provided a short report each, summarizing their experience and providing with some recommendations for the further development of the tool and practical action regarding the portal. As it was also stated in the description of work, they would provide additional feedback based on the webinars during the review workshop in Kristiansand, September 2016. The most important information from these reports is summarized in the following chapters that focus on the pilot implementation in each city.

The agendas and peer-review reports of each webinar can be found in the Appendix of this report.

2. LESSONS FROM THE PILOT IMPLEMENTATION IN KRISTIANSAND

2.1. PEER-REVIEW PROCESS 1

The city of Kristiansand found the pilot implementation experience quite useful, as it was a very good opportunity for stakeholders to meet each other and exchange views about strengthening the region's resilience. While there have always been virtual meetings between them, through phone and emails, many stakeholders never had the chance to physically meet before the Kick-off workshop in February 2016. The pilot implementation was successful in terms of raising awareness within the selected security sectors on potential threats and risks, and facilitating the dialogue on resilience building in the city. It created a positive buzz around the word "resilience" in conjunction and interrelation with preparedness and emergency management.

Following the kick-start of the process, the city has maintained a good relationship with other levels of governance (county, national) and has initiated discussions in integrating resilience in the sustainability and emergency management agendas. The pilot implementation involved many students and researchers from the University of Adger and introduced them in the way the municipality works in the water management and emergency management fields. The city became aware of the existence of many studies in water and waste management that remain unused and obsolete. Regarding communication flows and mechanisms in the water and waste water security sectors, especially within the municipality the information flow is bi-directional (top-down and bottom-up); the City Engineer is one of the most important stakeholders, and the same applies for the crisis management department that is well connected with most municipal departments and external stakeholders.

2.1.1. 1ST WEBINAR FEEDBACK

During the second webinar, Vejle's Chief Resilience Officer, Jonas Kroustrup introduced the participants to the recently developed strategic resilience strategy (which can be found and followed via www.vejle.dk/resiliens) and aims to make the CITY robust in facing potential consequences of climate change, globalisation, immigration and population growth. Major problems in Vejle relate to flood risk and water management issues. Vejle recommendations focused on the importance of formal, informal and non-formal communication for building solid relationships among all the stakeholders involved.

In overall, Vejle recommends building a formal organizational structure, as well as robust technical solutions. The formal preparedness system already provides solutions and procedures, which are in line with the CITY needs. At the same time, the CITY would certainly benefit from the new information technology opportunities that the project can offer, the same goes for the ongoing collaboration with Kristiansand, as both CITIES share many similar geographical, climatic and socio-economic characteristics. Prompt and effective information can be provided through several different platforms to address the relevant subjects in charge of risk-management operations. Current challenges relate to the effectiveness and operational capacity of the system during the emergency. It is also recommended to establish a communication platform that local communities can use in times of peace, with the aim of establishing a basic trust among its citizens. Activities which are meaningful to citizens, (e.g. communal gardens, loan schemes for gear swap markets for furniture, etc.) can also benefit by the support of digital solutions.

During the webinar, it was considered of major importance to address volunteers, key personnel and the public on how to take appropriate actions during a crisis. In addition, children training to this purpose can be implemented through emergency preparedness courses in schools. Parents, through children´s activities, can also be involved. Concluding, the representatives from both CITIES, together with the rest of present project partners agreed that the SMR resilience portal could definitely improve the communication flow mechanisms of both CITIES; mechanisms that are already considered effective, but definitely need improvement.

2.1.2. 1ST REVIEW WORKSHOP FEEDBACK

Both CITIES shared insights on the selection of the security sectors, their needs from the new communication platform and how it related to the communication systems their cities already have in place. It became rather clear, throughout the workshop that the Community Engagement and Communication Tool 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 purposes or local context. The toolbox will work 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.

Throughout the workshop, it became apparent that Vejle digitizes at all levels, both in the internal processes and the communication mechanisms with citizens and stakeholders, and Kristiansand could

replicate and adapt their experience with the always increasing use of mobile platforms and social media integration potential. As part of its resilience strategy, the City of Vejle was able to update its information/communication strategy that ensures that citizens are well informed and equipped with the necessary tools to inform and educate themselves. The municipality offers a digital tutor that has as its primary task to guide, inform and educate local citizens, targeting mainly the elderly and the young population.

2.2. RECOMMENDATIONS FOR THE FINALIZATION OF THE TOOL

The on-going discussion between Vejle and Kristiansand throughout the pilot implementation process resulted in a series of recommendations that should be considered for the finalization of the tool.

These can be summarized as follows:

- Both cities agree that communication needs social resilience: As a representative from Vejle mentioned during the review workshop: “There are people that cannot be reached digitally. They depend on community.”
- Cities plan to use the Community Engagement and Communication tool to help replicate policy from other cities & learn from each other
- Both cities need to build formal, informal and non-formal relationships with all relevant and involved stakeholders; there is a need though for formal organizational structures, robust technical solutions and analogue relationships that are all structured and applied also 'in times of peace'. Therefore, the portal should not only target emergency situations, but should instead become an interface of dialogue and exchange between the citizens.
- The portal should build upon trust between the city and the community. There should be linkages and interconnections with new, innovative or successful initiatives and activities: for example, introducing communities, which are perceived as meaningful for citizens (e.g. communal gardens, loan schemes for gear swap markets for furniture, etc.). These everyday activities could be supported by digital solutions.

- The portal should also make available manuals that would instruct volunteers, key personnel and the public on how to behave during a crisis. Training course can be advertised; increase community involvement and responsibility.
- The tool should integrate community mapping in order to engage people of all levels of capability or authority and various disciplines. This mapping should include many aspects like land use, community facilities, evacuation plans, transport options, etc.

3. LESSONS LEARNED FROM THE PILOT IMPLEMENTATION IN DONOSTIA/SAN SEBASTIAN

3.1. PEER-REVIEW PROCESS 2

The testing process was launched in the May 2016, in the weeks following the kick-off workshop in Donostia/San Sebastian; the city representatives were able to test different versions of the Resilience portal, while they provided additional input on the Design principles through informal interviews with CIEM. The activities of the pilot implementation process to date that involved stakeholders and city representatives resulted in a variety of observations for the city's resilience in the selected security sectors, and with respect to communication flows and mechanisms.

Both the kick-off workshop and the bilateral meetings between TECNUN and the city addressed the issue of how Donostia is vulnerable to crisis, from small incidents, such as water and electricity shortages, to more severe crises such as floods or earthquakes that could potentially generate high economic impacts and loss of life. The consequences of these crises depend on the preparation and the response level of the city to address them, and it was agreed that Donostia is at a very starting level regarding resilience. Most CITY stakeholders consider communication in Donostia to be unidirectional, thus many communication/information gaps and hiccups exist. There are communication tools, used by different organizations, utilities and city departments that are not integrated and most of the times are difficult to use, they are not user-friendly and with limited functionalities.

The city hopes to develop the capability to self-asses its resilience development progress, develop a comprehensive resilience initiative to cope with significant elements of hazards and to improve infrastructure in the energy and telecommunications sectors. Therefore, through SMR the CITY hopes to improve access to technological information and data integration and to learn to monitor and evaluate threats and hazards and effectively tackle them.

3.1.1. 2ND WEBINAR FEEDBACK

During the second webinar, the representatives from Donostia talked the participants through their resilience-building activities with respect to social cohesion, climate change and critical infrastructure highlighting specific projects, strategies and governance structures for delivery. Reference was made to different communication tools for engaging stakeholders from training exercises with the emergency services through to the use of standard communication channels to reach the public e.g. SMS, Twitter, and websites. The CITY of Donostia/San Sebastian set up a communication/information system for emergency planning and actions, which include: emergency plans; situation-specific procedures; information and knowledge sharing; departmental connection; core stakeholders' connections (police/fire workers/etc.). The major benefits of this system are: prevention & correcting measures; training for emergency response; initial works to broaden stakeholders cooperation/ scope; communication to the public; working with civil entities (base data); real-time communication (Basque Government, applications); local coordination group for emergencies; sanitary-health services hub coordination.

The representatives from Bristol gave a very quick overview of their strategic resilience-building work but focused largely on the different communication channels they are using in the CITY (with some examples from elsewhere in the UK). They also highlighted different platforms for communicating with stakeholders including the use of secure platforms for emergency responders, severe weather warning systems, mapping local information for residents, standalone apps, community resilience portals and city resilience platforms for facilitating a city conversation. They highlighted communication and engagement gaps where the SMR project could add value. Screenshots were used to provide examples of websites providing emergency advice for the public and area-based information for communities.

For example, all emergency responders in Bristol are connected to the platform "Resilience Direct". Corporate stakeholders' engagement, instead, is guaranteed by a platform called "Everbridge". This platform acts as a notification system, thanks to the inclusion of a series of contact lists (e.g. staff list, emergency volunteers list, snow wardens 'list) and can be used for ad hoc purposes (e.g. elections). The Red Cross Emergency App, free to download, provides instructions on what to do before, during and after a range of emergencies; it has a location system, which gives the opportunity to map localized risks in multiple areas (home, work, school, elderly parents 'houses, etc.). The Bristol City Council allows the electronic mapping of each neighborhood of the city. Through it, citizens can map

waste collection areas, parking areas, the nearest Council with its services and facilities and also how to explore Bristol´s facilities (schools, historic and local info, etc.).

The constructive discussion between Donostia/San Sebastian and Bristol covered areas such as two-way communications reach with the public, use of volunteers and existing networks, engaging businesses (general and high risk). In addition, Bristol discussed its planning for 50-year trajectory, safeguarding community cohesion and individual resilience as a member of the community, entry points for engaging widely with the public, reaching people with no internet access, using social media such as Facebook, handling sensitive data and identification of vulnerable people, plus the challenge of resourcing activities.

3.1.2. 1ST REVIEW WORKSHOP FEEDBACK

The CITY of Bristol emphasized the need to understand the levels of SMR support which will be available to enable local development of the portal prototype, including liaising directly to ICT colleagues on the technical specification/ICT architecture.

Municipalities have recognized the need to raise awareness of the need for resilience and the value of resilience building as a high agenda priority 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. There has been an ongoing discussion, which was triggered by the webinar between Donostia and Bristol, on how to allocate resources in translating the Resilience Portal features and content into Spanish and Basque. Finally, standardization partners DIN were able to offer to support Donostia and confirmed that they have comprehensive experience with addressing this challenge.

With respect to portal design, the two CITIES discussed the need to share information with communities specific to certain crises and improve awareness of climate change. They also analysed the nature of the portal prototype, its subsequent development, and challenges of integrating a portal alongside existing ICT infrastructure addressing compatibility concerns.

3.2. RECOMMEDNATIONS FOR THE FINALIZATION OF THE TOOL

The ongoing discussions between Donostia/San Sebastian and Bristol throughout the pilot implementation process resulted in a series of recommendations that should be considered for the finalization of the tool. These recommendations refer to the nature of the portal prototype, its

development, and challenges of integrating it alongside the existing ICT infrastructure, addressing compatibility concerns and emphasizing on specific functionalities and qualities of the tool.

These recommendations can be summarized as follows:

- With respect to portal design, the tool needs to share information with communities specific to certain crisis and improve awareness of climate change effects
- The tool should not exclude co-ordination of emergency services or handling of sensitive data
- The tool should focus on communication with 3 key stakeholder groups – businesses, communities, individuals
- It should provide localised information e.g. weather warnings, local places of safety, high flood risk areas
- It should cover business resilience, community resilience-building, and self-organisation activities
- The tool should signpost best practice across European cities on city resilience, should facilitate knowledge transfer and safeguard/enhance community cohesion and integration
- It should provide links to wider city resilience – air quality, water quality, inequalities, basic needs fulfilment etc.
- Communication materials/manuals/information should be in plain English, easy for everyone to understand; should be also available in a variety of formats and in different languages (local, regional) if possible
- Finally, the tool should avoid duplication or competition with other systems and market leaders as much as possible

4. LESSONS FROM THE PILOT IMPLEMENTATION IN GLASGOW

4.1. PEER-REVIEW PROCESS 3

People and communities are the key component of a new strategy intended to build tier-1 City Glasgow's (UK) resilience against the impact of the shocks and stresses faced by a city in the 21st century. The "Resilient Glasgow" strategy, the outcome of the city's participation in the 100 Resilient Cities, pioneered by the Rockefeller Foundation, details 50 different actions intended to create a stronger and more adaptable city. It focuses on issues such as economic growth, tackling inequality, enhancing partnerships at all levels, delivering services around the needs of citizens, and building capacity for resilience among the city's population. The results from the tool testing process by Glasgow city representatives were mainly used to provide guidance on emergency planning in the selected security sectors and further define the various stages of community engagement in Glasgow.

In Glasgow's case, one of the most prevalent and urgent challenges and top priorities is flood risk. Therefore, flooding and surface water management were the selected security sectors. During the pilot implementation months, the CITY, project partners and local stakeholders analysed and defined Glasgow's key resilience challenges and practices in relation to water and the flooding security sector. In Scotland, flood risk is managed in accordance with the national Flood Risk Management (Scotland) Act 2009, which includes policy specific to the local context as well as creating a joined-up and coordinated process to manage flood risk at a national and local level. The regional Climate Ready Clyde initiative sets out a shared vision for a resilient city region through collaboration between neighbouring local authorities and agencies.

Following the kick-off workshop, the CITY presented the Smart Mature Resilience program and the tools under development in a variety of events, emphasizing on the fact that, while the tools are developed by experts with access to the latest scientific research and technology, local stakeholders' input ensures that the tools are targeted at addressing the most prevalent and pressing issues facing Glasgow and its citizens.

Glasgow (UK) is set to create Scotland's largest urban heritage and Nature Park, investing £6.8 million to create a green area that will encompass 16km² of lochs (lakes), parks, nature reserves and woodlands. The project will also see the development of walking and cycling routes and improvements

to paths and signage within the park, allowing people to better experience the natural and cultural heritage of the area. Urban wildlife areas provide cities with a wide variety of environmental, social and economic benefits. Making the most of the park to meet, learn and exercise together will help to strengthen communities and improve Glaswegians' health. The natural wetlands and open green spaces can also help to absorb excess water in the case of flooding, taking Glasgow a step further on its path towards resilience. Therefore, the SMR partners believe that synergies can be sought and cooperation can be initiated through the connecting SMR activities with other ongoing projects and initiatives.

4.1.1. 3RD WEBINAR FEEDBACK

The webinar experience between Glasgow, Riga and Rome was highly valuable in sharing existing problems and challenges. Glasgow, whose major resilience challenges include e.g. massive urbanization (including in areas close to vacant and derelict land), shortage of adult formal qualification, a violent crime rate twice the average and an increasing share of households experiencing fuel poverty, already embeds resilience as a core principle of strategic planning. Among the pillars of its resilience strategy, there is to foster civic participation. With respect to the existing communication tools, processes and mechanisms in place in Glasgow, the City developed a communication strategy that tries to involve stakeholders across silos and engage them in sharing knowledge, experience and information on pressing societal and environmental issues. The SMR Community Engagement and Communication Tool could be potentially used to expand this strategy specifically for the water sector, engaging relevant stakeholders and highlighting the main threats and challenges, the city is facing in this field.

Rome, whose resilience strategies relate to many and multiple interdependent sectors - ranging from the risk of terrorism to cultural heritage protection – recently engaged in a series of initiatives and projects (SMR, Smarticipate, 100 Resilient Cities) and set up a Resilience Office within the municipality administration of the city. One of the Resilience Office´s strategic goals is to enhance knowledge sharing; therefore, the SMR tool can enhance this part. For this purpose, the CITY of Rome is planning to develop a communication and knowledge-sharing strategy, which includes the development of a functional communication portal that could serve as an interface to the public as well as a collector of updated information. The accessibility of the portal to the public enhances citizens' engagement and provides quick access to timing information on climate hazards and during emergencies. The SMR resilience portal can be a starting point for these activities; the representatives

from Rome believe that the city can integrate many of its features and functionalities, while social media integration can be quite relevant as part of a comprehensive engagement strategy. Rome has two valuable data sources that can feed into the resilience portal: the Open Data systems of the City Council and the Regional Administration. Both the Open Data Portal of the Regional Administration (accessible at https://dati.lazio.it/en) and the Open Data Portal of the Municipal (City Council) Administration (accessible at https://dati.comune.roma.it/) offer free access to good quality statistical data (on population, economic indicators, social indicators, weather/climate, environment, agriculture, industry, services and third sector, transportation etc.). For the moment, though, this data is only presented in a raw form of spreadsheets and tables.

According to the Riga representatives, the bottom line of engaging a community is by showing what the mission and the expected benefits are; by sharing existing problems and challenges. Following its participation in the SMR project, the city has highlighted the need to set up a strategy for communication regarding urban, social and environmental resilience. The already up and running website with Open Data questions can be integrated with the SMR resilience portal, bringing the city a step forward, towards the implementation of multiple data sources to become available, for businesses, educational institutions, municipalities, etc. that will be able to analyze the data and come up with conclusions to anticipate future events. During the webinar, Riga showed its recent launch of a fresh and informative news and knowledge portal that will gather most important information including resilience actions (www.riga.lv). Information about the IT security system of Latvia – “security through cooperation” - is retrievable in English on the website of the Information Technology Security Incident Response Institution of the Republic of Latvia (https://www.cert.lv/en).

4.1.2. 1ST REVIEW WORKSHOP FEEDBACK

During the review workshop in Kristiansand, Frankie Barrett, from the Glasgow City Council, noted that water security is definitely one of the focus areas of Glasgow’s current resilience-building process, following the selected of the relevant sector within the SMR project. He also 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 because of social factors.

As a result of the project, Glasgow was able to communicate more closely with stakeholders who had previously not been reached regarding. The city seems to be in need of a communication strategy for resilience. Therefore, a community engagement tool would be very valuable in linking community with

engagement and shifting the focus of emergency management from the individual to the collective, safeguarding inclusiveness and ensuring that consideration is made of Glasgow's diversity. Communication and coordination between the local/regional and national level has been boosted through the SMR project too.

Rome highlighted that community engagement can take many forms and covers a broad range of activities and mentioned that sharing experiences with other city representatives from Riga and Glasgow has been very fruitful, given the various demographic, social and geographical features of the three cities. Finally, Riga suggested that the cities should work more closely with each other during the following pilot implementation processes, to maximize the exchange of input, facilitate the developing of partnerships, formulate options and provide solid recommendations for the finalization of the other SMR tools.

4.2. RECOMMENDATIONS FOR THE FINALIZATION OF THE TOOLS

The on-going discussion between Glasgow, Rome, and Riga throughout the pilot implementation process resulted in a series of recommendations that should be considered for the finalization of the tool. These recommendations refer to the nature of the portal prototype, its development, and challenges of integrating it alongside the existing ICT infrastructure, addressing compatibility concerns and emphasizing on specific functionalities and qualities of the tool.

These recommendations can be summarized as follows:

- The portal should include a function that enables statistical elaborations, along with a GIS interface that will display actual interrelations and interconnections with available territorial data.
- An integrated GIS interface can be a valuable asset for communication flow in times of emergency or crisis. Most of the available resilience date is (or can be) geo-referred and all modern GIS solutions can provide with data association, as well as multi-layer cartography. GIS functionalities can potentially increase tool attractiveness and valuability.
- New, updated date provided by stakeholders and citizens should be inserted through personalized filters providing different access privileges and quality control
- Allowing stakeholders and citizens to upload and input new data, through personalized filters providing different access privileges and quality control mechanism
- The tool should emphasize on the importance of and engagement with Open Data; it should also be able to differentiate between data coming from stakeholders and other sources
- It is important to provide with a stand in each city's communication efforts in times of emergency or crisis; the tool should highlight how each stage or event is contributing to the overall engagement process in the city
- Communication materials/manuals/information should be in plain English, easy for everyone to understand; should be also available in a variety of formats and in different languages (local, regional) if possible

5. EXPECTED IMPACT TO CITY PROCESSES AND RELEVANT STAKEHOLDERS

In the following pages, an assessment of stakeholder influence by the activities of SMR Work Package 4 (WP4) is presented. First, a general perspective is given before moving on to a more detailed view based on D5.1.

5.1. GENERAL ASSESSMENT

The Resilience Portal along with the Design Principles developed in WP4 provides a rationale, detailed advice, and specific methods to communicate with CITY stakeholders and to engage them in resilience-related activities. Therefore, influence on the stakeholders by activities in WP4 and WP5, which takes over the WP4 for purposes of implementation and validation, have to be scrutinized. The possible impact can be assessed for various activities and artifacts. For WP4, three perspectives exist:

1. The design principles provide the foundation for discussion of communication and knowledge sharing activities. Thereby, they offer a rationale for the CITIES how to design information systems relevant to resilience and how to implement resilience-related processes with stakeholders.
2. The functional specification offers an IT-perspective on the rather abstract design principles. While the design principles are particularly suited for a strategic assessment and long-term planning, the functional specification provided a common language for personnel that have an IT background. Thereby, it can be used as a form of integration guideline.
3. The actual tool prototype is supposed to act as a showcase for possibilities and for CITIES to try out functionality. CITIES are encouraged to have a look at it together with stakeholders or to even provide access to it. Thereby, assessing novel IT possibilities toward resilience communication becomes possible jointly.

Besides these direct perspectives, the work of WP4 already had much subtle influence, that would not normally directly attributed to the project's results:

- WP4 work is based on formal interviews with CITIES. These interviews involved a high number of stakeholders (see specifically D4.2). Work with these stakeholders was not unidirectional. In fact, by introducing them to the SMR project, they became aware of ongoing effort. It has been informally acknowledged by CITIES that this led to a dynamic of its own: the discussion of resilience-related topics is now much more active. Moreover, a stakeholder of partner CITIES frequently exchange with similar stakeholder of other CITIES (e.g. in case of municipal supplying companies) or directly serve several cities (e.g. health authorities or the National Guard). Thereby, knowledge of resilience, and a discussion of topics raised by the SMR project is spread widely, and discussions – and, eventually, activities – beyond the project are stimulated.
- In the ongoing work of WP4, informal interviews as well as many informal talks have been done. Some of these involved key stakeholders who have particular importance in a given CITY or have been especially active in the formal interviews. Thereby, their involvement is even strengthened. Again, this is a bidirectional relationship. Stakeholders not only provide input but also get the change to reflect on their work and discuss proposals made by WP4. Thereby, WP4 serves as a kind of catalyst for key stakeholders.
- As part of the WP5 effort, kick-off meetings and webinars provided the possibilities to reach an even greater number of stakeholders and raise awareness for the topic of resilience and related needs in communication and knowledge sharing. This bolstered the above-described subtle effects of seeding the topic into societies and facilitating CITIES in becoming more resilience by the help of their various stakeholders.

It needs to be mentioned, however, that the above-described effects are limited (or rather slowed down) to some extent. Firstly, work on WP4 is ongoing. WP4 strives for design principles and a tool prototype; it is only partly concerned with implementation and validation. Therefore, the full impact on stakeholders is yet to be realized. Secondly, for similar reasons, particularly the fact that the SMR project is only running for a slightly more than a year, the full impact could not yet be achieved. Some stakeholders do not frequently exchange but nonetheless can be involved in a very fruitful way. Thirdly, WP5 activities strictly speaking started quite early. Therefore, they did not consider an actual completed tool but were chiefly a theoretical assessment. This fostered the above-described awareness, yet again did not provide the opportunity to involve stakeholders *directly* through the tool, yet.

Since D5.1 provided a specific list of identified stakeholders for the tier-1 CITIES, it is reasonable for the cities themselves to identify the specific impact of the Community Engagement and

Communication Tool to their respective local stakeholders. During the next months, and following the finalization of the tool in WP4, the CITIES will be asked to evaluate the stakeholders that have been identified and rank the impact of the tool between low", "medium" and "profound" , according to a selection of criteria like: stakeholder feedback during the Kick-off workshop, stakeholder feedback following the Kick-off workshop, openness and accountability, participatory processes in place etc. The results of this survey will be presented in future deliverables.

6. OUTLOOK

6.1. ASSESSMENT OF STRENGTHS AND WEAKNESSES

The following table summarizes the peer-review cities' perspectives on the tool's strengths and weaknesses.

Strengths	Weaknesses
Can stimulate discussion and dialogue on security issues and emergency management	May be difficult for people to engage if the only available language is English
Can help citizens understand and engage with their community	Can potentially create unwanted or even chaotic situations
Can strengthen a sense of common ownership	Lack of local knowledge can create misunderstandings and confusion
Interactive and engaging design and functionalities of the tool can measure quality and effectiveness of community engagement and enhance preparedness	Some ideas may be difficult to implement; not everyone may be aware of available resources and capacities at local level

6.2. GENERAL CONCLUSIONS/FUTURE STEPS

There have been some changes in the first pilot implementation process and some delays in implementing specific activities, due to the change of course in the development of the Community Engagement and Communication Tool.

The tool was originally foreseen to be a complete website that cities could adopt in its entirety, but has been revised in light of the reality in place in SMR cities. On the contrary, now it is provided as a toolbox, with features and functionalities that 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 project divides cities into four ties, for which two tiers are present as partner CITIES. Regarding stakeholder involvement in the sense of WP4 activities, no distinction between these two tiers has been necessary. Therefore, in terms of collecting requirements for tool development, CIEM has treated all seven cities in the same way, posing similar questions that ensure transferability and replicability of results, but also taking into account city specific characteristics and requirements.

The collective feedback from all CITIES showed that informing thoroughly stakeholders and city representatives is important and necessary in order to secure their active participation and involvement. There is need for further focus on stakeholders that are mostly affected by or interested in an issue or challenge. Workshop and general project methodology needs to be tailored in order to solicit feedback to specific stakeholder groups.

Data should be presented in a consistent and solid manner and also filling in gaps or hick-ups in city processes and local stakeholder engagement. The focus shifted quite early in the process to meaningful and solid engagement (creating and maintaining stakeholder relationships and co-creating the tool having constant input) rather than on innovation (creation of a breakthrough, innovative resilience portal). A number of key partners identified social media integration as quite crucial in citizen engagement processes; social networking can be rather meaningful in facilitating communication flows and strengthening community involvement but needs to be treated carefully in order to change their effect from outreach to participation and to avoid problems arising from their wrongful use.

Summarizing the whole processs, we can say that the Resilience Engagement and Communication Tool:

- aims at building a collaborative environment in order to facilitate awareness and engagement among key partners in resilience building
- enables cities to improve their own IT systems

- is provided as a toolbox which shows desired functionality for implementing the design principles summarized next
- allows different levels of permissions and users
- can complement and enhance the platforms and software that cities already have in place

To ensure high quality pilot implementation processes in the future, there is need for close cooperation and coordination with research and city partners to ensure a clear, well-structured co-creation process in line with the project timeframe. This may happen with implementing additional, joint webinars and regular calls, increasing cooperation between implementing and peer-review cities through city workshops and stakeholder briefing meetings on the use of the tools; the consultancy visits will be used to foster this interchange.

Additinal information on the Resilience Engagement and Communication Tool and in principal, on the Stakeholder Training Workshops organised in the tier-1 CITIES can be found in the project deliverable D5.5.

APPENDIX

I. 1ST WEBINAR PEER REVIEW – KRISTIANSAND/VEJLE

a. Agenda

1st Webinar Agenda /Kristiansand-Vejle	
Moderator	ICLEI
Participants	ICLEI; CIEM; Project managers Kristiansand; Project managers Vejle; City Stakeholders identified and invited by the cities
Duration	1 hour 30 minutes
5 minutes	Welcome & introduction (ICLEI)
30 minutes	Setting the context: the resilience strategies in Kristiansand and Vejle (presentations from both cities – 15 min each)
15 minutes	Discussion – (CIEM) Challenges and constraints during the first weeks of the implementation period Lessons and practices Commonalities
35 minutes	Questions and answers relevant for the tool development Vejle to pose questions CIEM to assist with guidance Kristiansand to respond
5 minutes	Wrap up/Next Steps

b. Vejle's peer-review report

It is important to focus on formal, informal and non-formal relationships. There should be a formal organizational structure, some robust technical solutions and some analog relationships that are built 'in times of peace'.

The formal preparedness system already has procedures to act in various crisis situations; but will certainly be able to benefit from the many opportunities that the new information technology can offer.

Information can be provided more quickly on several different platforms to relevant key persons depending on the given event and experience from similar events in other cities can be quickly implemented. The challenge, however, is that the system should be operational in the given situation.

In times of peace, the city (local community) must establish a basic trust among its citizens and an analog relationship, which can be done by the introduction of communities that are perceived as meaningful for citizens. (E.g. Communal gardens, loan schemes for gear swap markets for furniture, etc.). These everyday communities can be supported by digital solutions.

It is important that both the volunteers, key personnel and the general public know what is most appropriate to do in a given crisis. This can be supported, for example to teach emergency preparedness in school and to involve the parents through the children.

II. 2ND WEBINAR PEER REVIEW – DONOSTIA-SAN SEBASTIAN/BRISTOL

a. Agenda

Agenda 2nd Webinar/ Donostia-Bristol	
Moderator	ICLEI
Participants	ICLEI; CIEM; Project managers Donostia; Project managers Bristol; City Stakeholders identified and invited by the cities
Duration	1 hours 30 minutes (approx.)
10 minutes	Welcome & introduction (ICLEI)
45 minutes	Setting the context: the resilience strategies in Donostia and Bristol (presentations from both cities – 15 min each, additional time for interpretation considered)

30 minutes	Discussion – (CIEM) Challenges and constraints during the first weeks of the implementation period Lessons and practices Commonalities
45 minutes	Questions and answers relevant for the tool development Bristol to pose questions CIEM to assist with guidance Donostia to respond
10 minutes	Wrap up/Next Steps

b. Bristol's peer-review report

Donostia talked us through their resilience-building activities with respect to social cohesion, climate change and critical infrastructure highlighting specific projects, strategies and governance structures for delivery. Reference was made to different communication tools for engaging stakeholders from training exercises with the emergency services through to use of standard communication channels to reach the public e.g. SMS, Twitter and websites. Screenshots were used to provide examples of websites providing emergency advice for the public and area-based information for communities.

We gave a very quick overview of our strategic resilience-building work but focused largely on the different communication channels we are using in the city (with some examples from elsewhere in the UK). We highlighted different platforms for communicating with stakeholders including use of secure platforms for emergency responders, severe weather warning systems, mapping local information for residents, standalone apps, community resilience portals and city resilience platforms for facilitating a city conversation. We also highlighted communication and engagement gaps where the SMR project could add value.

The constructive discussion between DSS and Bristol covered areas such as two-way communications reach with the public, use of volunteers and existing networks, engaging businesses (general and high risk), planning for 50-year trajectory, entry points for engaging widely with the public, reaching people with no internet access, using social media such as Facebook, handling sensitive data and identification of vulnerable people, plus the challenge of resourcing activities.

With respect to portal design we discussed the need to share information with communities specific to certain crises and improve awareness of climate change. We also talked about the nature of the portal prototype, its subsequent development and challenges of integrating a portal alongside existing ICT infrastructure addressing compatibility concerns.

Remaining Questions

Our main clarification is understanding the levels of SMR support which will be available to enable local development of the portal prototype, including liaising directly to ICT colleagues on the technical specification/ICT architecture.

Recommendations for the Portal

- Excludes co-ordination of emergency services or handling of sensitive data
- Focuses on communication with 3 key stakeholder groups - businesses, communities, individuals
- Provides localised information e.g. weather warnings, local places of safety, high flood risk areas.
- Covers business resilience, community resilience-building and self-organisation
- Signposts best practice across European cities on city resilience
- Provides links to wider city resilience – air quality, water quality, inequalities, etc.
- Avoids duplication or competition with other systems and market leaders as much as possible.

III. 3RD WEBINAR PEER REVIEW – GLASGOW/ROME,RIGA

a. Agenda

Agenda 3rd Webinar/ Glasgow-Rome-Riga	
Moderator	ICLEI
Participants	ICLEI; CIEM; Project managers Glasgow; Project managers Rome; Project managers Riga, other stakeholders identified by the cities
Duration	2 hours

10 minutes	Welcome & introduction (ICLEI)
45 minutes	Setting the context: the resilience strategies in Glasgow, Rome and Riga (presentations from all three cities – 15 min each)
20 minutes	Discussion facilitated by ICLEI (challenges and constraints during the first weeks of the implementation period; lessons and practices to be transferred; commonalities)
40 minutes	Questions and answers relevant for the tool development (Rome and Riga to pose questions, local research partner to assist with guidance, Glasgow to respond)
5 minutes	Wrap up/recap of insights gained from the discussion and next steps

b. Rome's peer-review report

The webinar between Glasgow, Riga and Rome was a good opportunity to get valuable guidelines on functions of the Community Engagement and Communication Tool that is developed during the SMR project and get more insights on the specific features and qualities of the Resilience Portal.

Actually, such an implementation is one of the key actions to be undertaken in the resilience process of the city as a whole: the most important achievement of the current initiatives in Rome (namely, SMR, Smarticipate, and 100´Resilient Cities) is the set up of a Resilience Office within the municipal administration of the city, and knowledge sharing will be one of its strategic goals.

During the webinar we were able to explain the challenges Rome is now facing, and their relevant inter-dependencies. The sketch we have described includes:

1. Critical Infrastructures
2. Vulnerable Population
3. Cultural/Natural Heritage
4. Climate Change
5. Abandoned Real Property
6. Immigration
7. Terrorism

8. Governance and Citizen Participation

For such challenges, almost 400 interested stakeholders were interviewed, in order to get the big picture of the city's situation and to evaluate the exposure to natural and man-made risks. The following work, which will be completed later this year, is to assess ongoing and possible actions to increase the resilience level and so define the resilience strategy.

One of these actions is for sure the development of a functional communication portal that could serve as an interface to the public, as well as a collector of updated information. We gave a brief overview of our strategic resilience-building work but focused mainly on the different communication channels we use in Rome.

In respect to this, for the moment, the city has got two valuable data source available for the process that can give an outstanding share to the resilience portal, as conceived by the SMR project:

1. The Open Data of the City Council
2. The Open Data of the Regional Administration

Both these portals offer free access to good quality statistical data (on population, economic indicators, social indicators, weather/climate, environment, agriculture, industry, services and third sector, transportation etc.). The problem is that data is presented only in a raw form of spreadsheets and tables. We had a good discussion about the portal prototype that CIEM and TECNUN are developing, its design principles and also the challenges of integrating a portal with existing ICT tools that our cities already have.Therefore, we could make use of the SMR Resilience Portal and integrate it and its design principles to our existing tools.

Suggestions

- A suggested evolution of these data portals is functions providing the ability to perform statistical elaborations, along with a GIS interface, to display actual relations among territorial data.
- Especially for the GIS interface, we consider it as a really valuable tool; since most of data relevant to resilience are (or can be) geo-referred and all modern GISs solutions can perform association of data as well as multi-layer cartography.
- Another suggestion would be the ability to input new data by stakeholders and citizens, through personalized filters providing different access privileges and quality control.

The comparison of our experience with the other participants from Riga and Glasgow has been very fruitful, given the different demographic, social and geographical features of the three cities.

a. Riga's peer-review report

The webinar between Glasgow, Riga and Rome was highly valuable in sharing existing problems and challenges. For Riga, presentation of Glasgow was highly relevant, as the general characteristics of the cities are very similar. At the same time presentation of Rome was relevant in a number of problem the city experience.

During the webinar we were able to speak about the problems that Riga is facing, including:

- Energy security
- Dependency on natural resources, especially gas
- Housing
- Water floods
- River shores are constantly being strengthen at different parts of Latvia
- Climate change
- Sewage systems
- Reaching critical CO2 emission in city centre
- IT security issues
- Terrorist attacks
- Social aspects
- Geopolitical
- Political aspects
- Asylum seekers
- Integration problems
- Economic problems

There is quite a lot of work to be done in Riga in terms of resilience, including:

- Set up resilience office;
- Unite relevant structure and build a communication, reporting and management platform for resilience.
- Set up a strategy for communication with public with regards to resilience issues.

Currently have city of Riga created a website dedicated to Open Data question, which is a step towards implementation multiple data sources to become available, meaning both businesses, educational institutions, municipalities, etc. will be able to analyze the data and come up with conclusions to predict future event. It could be a significant investment into forecasting occurrence of unlikely events.

Suggestions

- Open Data is highly important in terms what it can bring, so it is extremely important to engage with as many institutions as possible.
- Implementation of the resilience system would make a huge step towards the management and prevention of unlikely events.

IV. 1ST KICK-OFF WORKSHOP – KRISTIANSAND

a. Agenda

TIME	SESSION	DESCRIPTION
8.45-9.00	Registration	
9.00-9.10	Welcome by the City of Kristiansand	
9.10-9.20	Introduction to the programme	Introduction to the activities of the day
9.20-9.50	Presentation on the SMR Project	
9.50-10.00	Q&A	Round of questions and answers on the project from the audience
10.00-10.30	Starting the journey together: Short self-introduction and expectations by participants	
10.30-10.55	Presentation on the SMR Communication Platform	Presentation on the communication portal and its objectives.
10.55-11.10	Q&A	Round of questions and answers from the audience

11.10-11.25	Coffee break	
11.25-12.25	Group exercise: Mapping the flow of information in a complex environment	Participants will be divided in three groups and reflect together about the information flows that they observe in their daily work
TIME	SESSION	DESCRIPTION
12.25-12.40	Reporting to the plenary	The group facilitators will report on the results of the discussions.
12.40-13.40	Lunch	
13.40-14.40	Group exercise: Analysing the case study – what does experience tells us about information gaps?	Participants will discuss together a practical case on communication gaps in a complex environment
14.40-14.55	Coffee break	
14.55-15.25	Reporting to the plenary and stocktaking for the tool development	
15.25-15.40	Wrap-up & Next Steps	

b. Participants list

Partner Institution	Function	Internal/Ext	Gender
ICLEI Europe	Project Officer	Internal	Male
ICLEI Europe	Project Officer	Internal	Male

ICLEI Europe	Project Coordinator	Internal	Female
CIEM	Professor	Internal	Male
CIEM	Professor	Internal	Female
CIEM	Post-doc researcher	Internal	Female
CIEM	Post-doc researcher	Internal	Female
CIEM	Ass. Professor	Internal	Male
Directorate for Civil Protection	Project manager	External	Male
University of Agder	PhD Student	External	Male
Municipality of Kristiansand	Project Advisor – Adaptation	External	Male
Municipality of Kristiansand	Chief Physician	External	Male
County Governor Office Agder	Head of the Civil Protection and Emergency Planning division	External	Male
SWECO	Advisor	External	Male
Norwegian Food Safety Authority	Advisor	External	Male
Norwegian Food Safety Authority	Department Manager	External	Female
Municipality of Kristiansand	Project manager	Internal	Female
Municipality of Kristiansand	Crisis manager	Internal	Male
Municipality of Kristiansand	Head of engineering department	External	Male
Municipality of Kristiansand	Head of water/waste division	External	Male
Municipality of Kristiansand	Operator water system	External	Male

Municipality of Kristiansand	Operator waste water system	External	Male

V. 2ND KICK-OFF WORKSHOP – DONOSTIA/SAN SEBASTIAN

a. Agenda

Time	Programme
8.45-9.00	*Registration*
9.00-9.15	Official *Welcome* by the City, Presentation of the City of Donostia/San Sebastian and the Energy & Telecommunications Sector
9.15-9.30	*Introduction* to the 2nd SMR Kick-off Workshop *Vasileios Latinos, ICLEI*
9.30-10.00	*Presentation*: the SMR Project (tools, objectives, opportunities) *Jose M. Sarriegi, TECNUN*
10.00-10.10	Q&A
10.10-10.30	Starting the journey together: Short self-introduction and expectations
10.30-11.30	*Presentation*: Update on the Resilience Tools development *Jose M. Sarriegi (TECNUN), Colin Eden (Strathclyde Business School), Jose J. Gonzalez (CIEM)*

11.30-11.40	Q&A
11.40-11.50	Coffee break
11.50-13.00	Interactive Group *Exercise* 1: Stakeholder Mapping for the Energy & Telecommunications sector
13.00-13.15	Reporting to the plenary
13.15-14.10	Lunch
14.10-15.25	Interactive Group *Exercise* 2: Communication and Information Flow in the Energy & Telecommunications sector
15.25-15.40	Coffee break
15.40-15.55	Reporting to the plenary
15.55-16.15	Wrap up & Next Steps *Vasileios Latinos, ICLEI*

b. Participants list

Partner Institution	Function	Internal/Ext	Gender
ICLEI Europe	Project Officer	Internal	Male
ICLEI Europe	Project Officer	Internal	Male
ICLEI Europe	Project Assistant	Internal	Male
Strategy Office Donostia	Senior Technician	Internal	Female

Strategy Office Donostia	Head of Strategy Office	Internal	Male
TECNUN – University of Navarra	Professor	Internal	Male
TECNUN – University of Navarra	Professor	Internal	Female
TECNUN – University of Navarra	Ass. Professor	Internal	Female
TECNUN – University of Navarra	PhD Student	Internal	Female
TECNUN – University of Navarra	Project Assistant	Internal	Male
TECNUN – University of Navarra	Professor	Internal	Male
Donostia Fomento	Project manager	External	Female
IBERDROLA – Electric Utility Company	Project manager	External	Male
S21 CYBER SECURITY	Officer	External	Male
S21 CYBER SECURITY	Officer	External	Female
CIM – Municipal Informatics Center	Project manager	External	Male
Donostia City Council	Communications Officer	External	Male
Donostia City Council	Officer, Environmental Services	External	Female
DBUS – Bus transport company	Project manager	External	Female
RENFE - Train Authority	Officer	External	Male
RENFE – Train Authority	Officer	External	Male

OSAKIDETZA – Public Health System	Officer	External	Male
OSAKIDETZA – Public Health Sysdtem	Officer	External	Male
Donostia City Council	Councilor Citizen Mobilisation	Internal	Male
Donostia City Council	Councilor Social Action	Internal	Female
Donostia City Council	Development department officer	External	Female
DIN	Project manager	Internal	Male
CIEM	Professor	Internal	Male
University of Strathclyde	Professor	Internal	Male

VI. 3RD KICK-OFF WORKSHOP – GLASGOW

a. Agenda

TIME	SESSION	DESCRIPTION
8.45-9.00	Registration	
9.00-9.05	Official Welcome from the City of	Alastair Brown, Chief Resilience Officer,

	Glasgow	Glasgow City
9.05-9.10	Starting the journey together	Short self-introduction of workshop partners (facilitated by ICLEI)
9.10-9.20	Introduction to the programme	Overview of the day's activities (ICLEI)
9.20-10.00	Presentation on the SMR Project and the resilience tools (WP3 – SRQ) Q&A	Susan Howick, Strathclyde Business School, University of Strathclyde
10.00-10.10	Setting the Context of flooding in Glasgow	David Hay, Glasgow City Council
10.10-10.35	Coffee break	
10.35-12.30	Group exercise related to water/flooding Scenario Planning + Reporting	Participants will be divided into groups facilitated by ICLEI, Strathclyde and GCC.
12.30-12.40	Cities and Standards	René Lindner, DIN (German Institute for Standardisation)
12.40-12.50	Wrap-up, Next Steps	Overview of the next steps (ICLEI)
12.50-14.00	Lunch and Networking	

b. Participants list

Partner Institution	Function	Internal/Exte	Gender

Scottish Environmental Protection Agency	Flood Warning Unit Manager	External	Male
Scottish Water	Flooding Manager	External	Male
Glasgow City Council	Development Manager	External	Male
Glasgow City Council	Development Manager	External	Male
Glasgow City Council	Sustainability Officer	External	Female
Glasgow City Council	Resilient Glasgow Officer	External	Male
Glasgow City Council	Chief Resilience Officer	Internal	Male
Glasgow City Council	Sustainability Manager	Internal	Male
Glasgow City Council	Sustainability Ass. Manager	Internal	Male
Glasgow City Council	Resilience Officer	Internal	Male
Glasgow City Council	Resilience Officer	External	Male
Glasgow City Council	Resilience Team Assistant	External	Female
Fire Scotland	Firefighter	External	Male
Scottish Ambulance	First responder	External	Female
Police Scotland	Police Officer	External	Male
New Gorbals Housing Association	Project manager	External	Male
New Gorbals Housing Association	Project manager	External	Female

Wheatley Group	Project manager	External	Female
Glasgow City Council	Flooding manager	External	Male
National Centre for Resilience	Project manager	External	Female
Glasgow City Council	Sustainability Officer	External	
Glasgow City Council	Preparedness Officer	External	Male
Glasgow City Council	Preparedness Officer	External	Female
Glasgow City Council	Sustainability Officer	External	Male
Glasgow City Council	Sustainability Officer	External	Male
Glasgow City Council	Resilience/Crisis Officer	External	Female
Glasgow City Council	Resilience/Crisis Officer	External	Female
East Dunbartonshire	Resilience Unit Officer	External	Male
Glasgow City Council	Citizens mobilisation officer	External	Male
Scottish Environmental Protection Agency	Project manager	External	Female
GCPH	Advisor	External	Male
Cordia	Project manager	External	Female
Glasgow City Council	Project manager – Social Works	External	Male
University of Strathclyde	PhD Student	External	Female
University of Strathclyde	PhD Student	Internal	Male

University of Navarra	PhD Student	Internal	Female

VII. 1ST REVIEW WORKSHOP – KRISTIANSAND

c. Agenda

Time	Programme	
8.30 - 9.00	Registration	
9.00 - 9.05	Welcome and introduction to the activities of the day	ICLEI
9.05 - 9.20	Presentation of the Community Engagement and Communication Tool, and overview on testing process Design Principles and Prototype	CIEM
9.20 - 10.20	Feedback from the Pilot Implementation – WP5 activities	Cities of Glasgow, Kristiansand, San Sebastian/ Donostia ICLEI
10.20- 10.30	Q&A	CIEM & ICLEI
10.30 – 11.00	Coffee Break	
11.00-	Feedback from the Tier 2 cities –	Cities of Vejle, Bristol, Rome

12.00	Peer-reviewing process	and Riga ICLEI & CIEM
12.00-13.00	LUNCH	
13.00-14.00	Interactive Group Exercise 1 / Creating goals for social media integration	CIEM (with support of other partners)
14.00-14.15	Reporting in the plenary	CIEM
14.15-14.45	Coffee Break	
14.45-15.45	Interactive Group Exercise 2 – Creating scenarios for the Resilience Portal	CIEM (with support of other partners)
15.45-16.00	Wrap up & Next Steps	ICLEI-CIEM

d. Participants list

Partner Institution	Function	Internal/External	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)