SMART MATURE RESILIENCE

DELIVERABLE 5.5: REPORT OF THE

REVIEW WORKSHOP 2

ICLEI European Secretariat | November 2017

	Report of the Review Workshop 2
Deliverable no.	D5.5
Work package	WP5
Dissemination Level	Public
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Date	31/03/2017
File Name	D5.5.SMR_Report_ReviewWorkshop2.pdf
Revision	30/11/2017 - Vasileios Latinos, ICLEI European Secretariat
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EXECUTIVE SUMMARY

The second review workshop of the Smart Mature Resilience (SMR) project took place on the 6-8 March 2017 in Donostia-San Sebastian (Spain). The workshop focused on gathering feedback from the joint pilot implementation process of the Resilience Maturity Model and the Risk Systemicity Questionnaire. In more detail, following a presentation of the tools by their developers, the CITIES provided their final feedback on this joint pilot implementation of the tools. The core cities of Kristiansand, Glasgow and San Sebastian/Donostia then provided feedback on the pilot implementation activities in their cities, and the Tier 2 cities of Vejle, Bristol, Rome and Riga provided feedback on their peer-reviewing process.

Representatives from all the CITIES participated in an interactive discussion that was consisted of a panel with the three tier-1 CITIES, while the tier-2 CITIES acted as peer-reviewers and interviewers. The discussion was facilitated by ICLEI European Secretariat. In addition to this, the second review workshop introduced the System Dynamics model and the Resilience Building Policies Portoflio, which both are the final SMR tools that will be tested and validated in the tier-1 CITIES, through a set of interactive exercises facilitated by the tool developers and other partners, appointed by them before the workshop. It was finally also used to intiate brainstorming on the Resilience Management Guideline among partners and strengthens the integration between the 5 SMR tools.

The aim of this report is to explain the execution of the workshop, describing the activities carried out and the obtained results. First, the organisational and preparation issues, which took place in relation to the workshop are presented, including the invitation to the workshop, the agenda setting, and associated issues. Second, the main results from the exercises developed within the workshop are described. Finally, the evaluation and lessons learnt from the workshop are presented.The report is divided into five parts: The 1st part provides an introduction to the main activities and session of the 2nd Review Workshop, while it also provides information on methodology and process details. The 2nd part provides an overview of the preparation phase that led to the workshop, while the 3rd part is focusing on the setting and the execution of it. The 4th and larger part of this report provides a general outlook on the workshop sessions; summarizes the pilot implementation process and gathers feedback on the tools as elaborated by the pilot and the peer-review CITIES and provides with some final recommendations for both the tools.

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1. INTRODUCTION

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 main goal of this report is to summarize the activities that took place during the 2nd Review Workshop of the WP5 of the project.

The second review workshop of the Smart Mature Resilience (SMR) project took place on the 6-8 March 2017 in Donostia-San Sebastian (Spain). The report summarises the feedback from all partner CITIES during the workshop and on the pilot implementation of the Resilience Maturity Model and the Risk Systemicity Questionnaire. The workshop served unofficially as a project general assembly as more than 40 representatives from the SMR partner organizations were present.

As a matter of fact, during the review workshop, the Tier-1 CITIES provided their final feedback on the joint pilot implementation of the Risk Systemicity Questionnaire, developed by the University of Strathclyde and the Resilience Maturity Model, developed by Tecnun, University of Navarra. In more detail, the tier-1 CITIES provided feedback on the stakeholder training workshops, while the tier-2 cities of Vejle, Bristol, Rome and Riga provided feedback on peer-reviewing process, having attended the webinars and the pilot process closely.

Representatives from all the CITIES participated in an interactive discussion that was consisted of a panel with the three tier-1 CITIES, while the tier-2 CITIES acted as peer-reviewers and interviewers. The discussion was facilitated by ICLEI European Secretariat.

In addition to this, the second review workshop introduced the System Dynamics model and the Resilience Building Policies Portoflio, which both are the final SMR tools that will be tested and validated in the tier-1 CITIES, through a set of interactive exercises facilitated by the tool developers and ICLEI.

Another element of the workshop was the recap of the three remaining from the previous pilot implementation, stakeholder training workshops on the Community Engagement and Communication tool. The workshop ended with brainstorming on the Resilience Management Guideline, updates on the exploitation plan from ICLEI and announcements and coordination about future dissemination

events and project workshops, like the Workshop on Resilience in Cities and Communities that is organized within WP6 in Berlin on April 2017.

2. WORKSHOP PREPARATION

The main objective of the 2nd review workshop of the SMR project was to familiarise the project cities with the latest, and almost final, versions of the Risk Systemicity Questionnaire and the Resilience Maturity Model, to gather feedback on the cities' experience of the pilot tool testing carried out so far, and to gather input for further development and finalization of both the tools.

Preparation activities

- Periodic teleconferences

- Screenplays and guiding questionnaires developed and shared among partner cities

- SMR partners from the City of Donostia/San Sebastian invited the Mayor of the city and local stakeholders

- The final agenda was shared with partners 2 weeks before the meeting

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

- Workshop agenda (see Annex I)

- Pilot Review session agenda (see Annex I)

- Guiding questions: the Tier 1 cities were asked to prepare presentations (oral) on the pilot implementation based on the following questions:

Pilot implementation of the Risk Systemicity Questionnaire

– Can you provide an overall feedback on the training workshops and the webinars in which your city participated?
– What worked well and which challenges and constraints have you encountered?
– What are your specific requirements and suggestions for the finalization of the tool?
– What was the focus for the RSQ session in your city? What was the main added value?
– Were any specific reactions and follow-up feedback from the participants after the workshop?
– Are there any lessons learned that should be included in the guidance to the tool to facilitate the use in other cities (keeping in mind that user manuals are soon to be delivered)?

Pilot implementation of the Resilience Maturity Model

– Can you provide an overall feedback on the training workshops and the webinars in which your city participated?
– What worked well and which challenges and constraints have you encountered?
– What are your specific requirements and suggestions for the finalization of the tool?
– Were any specific reactions and follow-up feedback from the participants after the workshop?
– Are there any lessons learned that should be included in the guidance to the tool to facilitate the use in other cities?

– Do you think that the MM prompted participants to reflect on the city resilience building process? Did the participants find the tool as necessary and important for the city´s strategic planning and management?

3. WORKSHOP SETTING

3.1. WELCOME AND SETTING

The 2nd review workshop gathered almost 40 participants from the 13 partner organizations of the SMR project. Eneko Goia, Mayor of San Sebastian, welcomed the Smart Mature Resilience project to San Sebastian City Hall on 6th March 2017, emphasizing that "cities are the ideal scale for working on resilience". Resilience-building is crucial to for San Sebastian, as the coastal city is already experiencing the consequences of climate change, particularly flooding.

As the mayor joked, "The Sea wants to recover all of those places we took in the past!" The project is developing a new Resilience Management Guideline, which helps cities to make the right decisions and policies to build resilience. This guideline is designed to be useable not only by the project cities, but by all European and global cities. Resilient cities support one another and bolster each other's ability to recover from shocks and stresses.

"We are building the boat and sailing," in the words of project coordinator Jose Mari Sarriegi, Tecnun, University of Navarra: the project partners, scientists and cities of San Sebastian, Glasgow, Kristiansand, Bristol, Vejle, Rome and Riga collaborate closely on developing the tools.

One of the tools is complete and is now available for use by cities: the Community Engagement and Communication tool or Resilience Information Portal. At the end of March 2017, another two tools will be also ready. A Resilience Maturity Model, which is a strategy and policy tool that enables cities to self-assess their resilience status and provides a roadmap for how cities' resilience development could be rolled out. The Resilience Maturity Model provides a collaborative environment that facilitates awareness and engagement among key partner in resilience building activities.   Also, a Risk Systemicity Questionnaire has been developed and tested in cooperation with the project cities, and this will be launched in April 2017. The objective of this tool is to support cities in thinking about risk Systemicity scenarios: a sequence of casually related risks that are sometimes creating vicious circles.

The RSQ is expected to help cities decide which risk scenarios they need to pay the greatest attention to and to consider possible policies that may be used mitigate these risks.

The final two tools, the Resilience Policies Portfolio and the System Dynamics Model, are currently being developed. The project partners and stakeholders are working on testing the model during the San Sebastian meeting, following which the tool developers will integrate the feedback gathered into the final, public version of the tool.

Photos from the opening session of the 2nd Review Workshop

4. WORKSHOP SESSIONS

4.1. SYSTEM DYNAMICS MODEL SESSION

4.1.1. THE TOOL IN A NUTSHELL

The final two resilience tools, the Resilience Policies Portfolio and the System Dynamics Model, are currently being developed. The project partners and stakeholders got familiar with the beta version of model during the San Sebastian meeting. Following this workshop, the tool developers will integrate the feedback gathered into a more sophisticated and advanced version of the tool that will be presented to project partners during the 3rd Review Workshop in Glasgow on May 2017.

The System Dynamics Model is a game-style simulation programme that allows users to explore the

effectiveness of implementing different resilience policies, helping to show which kinds of policies should be implemented in which order as the ideal trajectory towards a resilient city.

It embodies key aspects of the Resilience Maturity Model and supports decision makers to diagnose, monitor and explore the CITIES's resilience trajectory as determined by resilience building policies.

The tool is composed of two parts: 1) a simulation model where the simulation is carried out and b) a user interface where the data from the user is introduced and the results of the simulations are presented. The exercises that were performed aimed to validate both these parts.

Main objectives of the System Dynamics Model are the following:

- Enable experimenting with the various policy options

- Increase awareness on counter-intuitive consequences

- Create understanding of the structure of the whole system, dynamic implications and cascading effects among policies

- Alert about posible unintended consequences

During their opening presentations on the System Dynamics Model, representatives from Tecnun and CIEM emphasized on the following facts:

- The System Dynamics Model is not a predictive model but a reflexive model.

- The System Dynamics Model will help us to understand that as the policies are related then they should be implemented in a given order in order to improve resilience in the most efficient way.

- The System Dynamics Model will allow understanding and reflecting about the order in which the policies should be implemented.

The following timeline shows the expected development of the tool, from December 2016 that CIEM and Tecnun started working on it, until the end of September 2017 that the tool needs to be delivered, after having been tested in the tier-1 CITIES and peer-reviewed by the tier-2 CITIES:
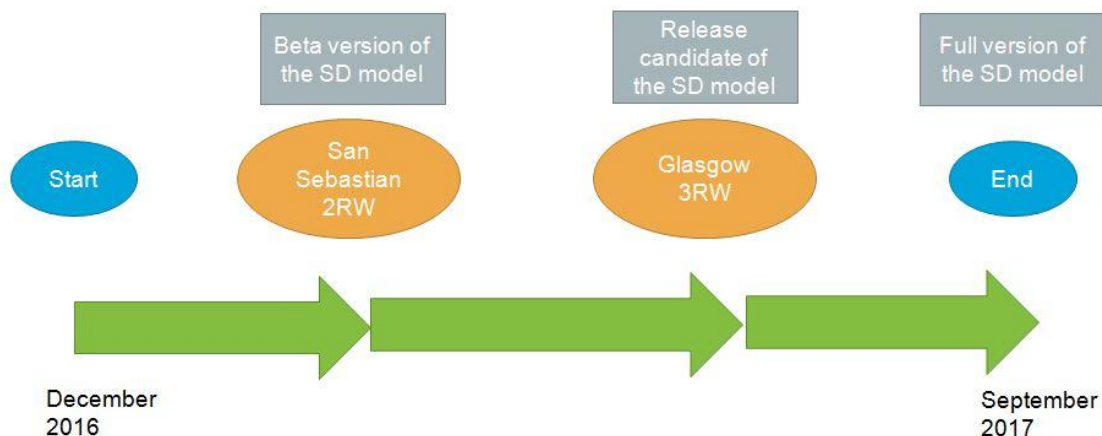
The following list shows the interrelation and strong connection between the System Dynamics Model with the Resilience Maturity Model:

- The SD model includes the policies defined in the Maturity Model

- The first version of the SD Model includes only 19 out of the 98 policies defined in the MM. The aim is to eventually include more policies in the upcoming versions of the tool.

- The policies are divided into four dimensions: leadership and governance, preparedness, cooperation, and infrastructure and resources as in the Maturity Model.

- The policies should be implemented in a given order: first the policies in the lower maturity stages and then the policies in the higher maturity stages

- The policies in different sub-dimensions and dimensions can also be related

- The aim of the model is to help cities to understand how the policies of the MM should be implemented and how the relationships among the policies are.

- The model will also help determining the optimum order in which the policies should be implemented to efficiently improve resilience.

4.1.2.   SESSION EXECUTION

Following the general presentations, the participants had the chance to work on the System Dynamics Model through a number of subsequent sessions in the form of exercises, hands on the tool. All SMR partners were engaged in the exercises and were divided in groups by Tecnun and CIEM. Each group had a moderator and a recorder. The model was tested in two modes in order to provide insights on its usefulness to function as a laboratory and as a training tool.

In the version of the tool as a laboratory it does not provide users with guiding messages when they implement policies out of sequence. That way the user should experiment with the tool in order to finally understand how the tool works.

The System Dynamics Model is available in laboratory mode (smrsdlab) at the following link: http://smr-project-test.appspot.com/smrsdlab. When the System Dynamics Model will be completed, it will be also uploaded on the Resilience Information Portal of each of the tier-1 CITIES.
In order to ensure the availability of the tool, it was also available at:

http://home.uia.no/ahmedg/smrsdlab/index.html. In case of internet failure or any other reason, there is a copy on a flash memory available with Tecnun to copy a local version to the computer. Tecnun and CIEM also shared other technical requirements with participants, moderators and recorders to better understand the functioning of the tool.

The moderator and the recorder were required to accomplish general but specific tasks during all the sessions of the workshop, and particular tasks during each session. The general tasks were shared with moderators and recorders before the workshop, while detailed minutes for each break-out group became available to the tool developers and will be used to further develop and finalize the tool.

The following table shows a brief overview of the performed exercises:

GOAL	DESCRIPTION OF EXERCISE
USER INTERFACE VALIDATION	**Exercise 1: Free play with the System Dynamics Model** In this session, the participants were in general free to use the simulation tool as they wish, get familiar with the tool, its functionalities etc. They were also encouraged to pose questions to Tecnun and CIEM in order to better understand the tool.
	Exercise 2: Trying the SD model having a TARGET in the laboratory mode, NO guidance (no messages system) The target was: ''achieving at 1 (or 100%) on all 4 SMR dimensions' indicators with the lowest possible cost by the end of the 40 years simulation period''. The participants were asked to calculate the cost of their decisions by the end of each scenario (40 years). It was important to realise how much they have spent per policy and hopefully understand why one policy costs more than another to have at the same implementation level (taken into consideration that in the current version of the SD model all policies cost the same though)
	Exercise 3: Trying the SD model having a TARGET in the training tool

mode, WITH guidance (with messages system)

The target was again: ''achieving at 1 (or 100%) on all 4 SMR dimensions' indicators with the lowest possible cost by the end of the 40 years simulation period''.

The participants were guided in calculating the cost of their decisions by the end of each scenario (40 years). It was important to realise how much they have spent per policy and hopefully understand why one policy costs more than another to have at the same implementation level (taken into consideration that in the current version of the SD model all policies cost the same though)

The participants were also asked to answer two questionnaires: one about the user interface and its functionalities, and the other one about the parameter estimation.

Exercise 1:Testing the structure of the simulation model

The participants had to discuss about all Policies in the Maturity Model and how they are related. They were adviced that there are two types of relationships:

- Linear relationships: within each sub-dimension the policies in the higher stages are dependent towards the policies in the lower stages

- Transversal relationships: within each stage, the policies in different sub-dimensions are related each other

The goal of the session was to validate the relationships among the policies: linear relationships and transversal relationships.

Exercise 2: Validating the relationships among the policies: linear relationships and transversal relationships.

SIMULATION

MODEL

VALIDATION

Participants were provided with an A3 sheet that contained a Causal Loop Diagram of a current view of the causal relations among the SMR sub-dimensions with the aim of validating the transversal relationships.

Then the participants were asked to give their opinion concerning these relations in terms of agreeing/disagreeing and suggesting new relations if needed.Then, they were provided with additional A3 sheets where they could draw their version of the connections between the SMR sub-dimensions, if the one provided by the organizers was far from their opinion.

Moderators made sure that during this session the participants understood the concept of causal connections and in the end had a clear understanding of what were the positive and negative connections, how they work, and what are the main differences between them.

4.1.3.   MAIN RESULTS/RECOMMENDATIONS

The consensus among participants was that the System Dynamics Model is quite helpful in realizing what is the usefulness of the Resilience Maturity Model; many participants agreed with Tecnun's perception that actually the System Dynamics Model is a laboratory experiment on how the Resilience Maturity Model works.

A question that was common to all the groups was: What happens if the implementation of a specific policy fails after the CITY has actually lost a lot of resources on it? This is something that needs to be included and taken into account for the finalization of the tool. Many participants also argues that while the tool provides a very good simulation already at this stage, it is still in general important to differentiate theory and reality.

Many participants had doubts about the costs of implementing specific policies, while they would be more confident if they added their own budget to the tool, based on each CITY's financial situation and specific needs and prospects. Many argued that the tool is not yet integrating the specific, unique characteristics of CITIES and their financial and social situation/status.

Some problems and challenges the CITIES are facing can be more important than others, therefore it would be very helpful if different policies had different weight. In particular, more weight when they appear to be more critical.

The participants were able to analyze the transversal relationships among the policies, for some of which they suggested different wording.

Also, another suggestion involved financing; the model should be able to show correlation between different policies and interaction between factors. Not all the policies cost the same amount the money, and also the costs for maintaining the implementation of each policy is different. This information is helpful for the cities to decide and it would be interesting to provide this information in the simulation tool. Finally, the model should support the idea that resilience building is directly connected to financing, but it is also more than just investment; clear links to transparency for investments should be included, national, regional and municipal processes and financing schemes should be treated separately and complex financial systems, especially in cities of the European south create additional challenges in working with the model. Participants suggested that a progress/implementation bar (above the sliders) should be added.

Some other concrete recommendations for the tool development are summarized here:

It would be interesting to not only have information on the policies that need to be implemented in each stage but also the policies that need to be implemented in all of the stages, so that depending of the preferences of the cities, each city can best select the policies that needs to implement. It would be good to see the goals that are set with specific decisions and actions.

It would be good if the model provided with a summary on resources spent for each of the categories of the MM (Leadership & Governance, Cooperation, Preparedness and Infrastructure & Resources).

Some participants mentioned that for the commercial exploitation of the tool, maybe a catchier name for it would be needed in the future.

As expected, since this was the first time that the SMR partners and CITIES got the chance to work with the tool, the feedback and reactions were quite mixed. Tecnun and CIEM will collaborate and work together on improving the description of policies, and incorporate the received input for the System Dynamics Model version that will be presented during the 3rd Review Workshop in Glasgow.

4.2. GENERAL FEEDBACK ON THE JOINT PILOT IMPLEMENTATION

This chapter summarises the final feedback from all partner CITIES during the workshop and on the pilot implementation of the Resilience Maturity Model and the Risk Systemicity Questionnaire. As a matter of fact, during the review workshop, the tier-1 CITIES provided their final feedback on the joint pilot implementation of the Risk Systemicity Questionnaire, developed by the University of Strathclyde and the Resilience Maturity Model, developed by Tecnun, University of Navarra. In more detail, the tier-1 CITIES provided feedback on the stakeholder training workshops that took place in each one of them (one workshop per CITY and per TOOL), while the tier-2 cities of Vejle, Bristol, Rome and Riga provided feedback on peer-reviewing process, having attended the webinars and the pilot process closely.

More detailed information on the joint pilot implementation process, in each one of the tier-1 CITIES can be found in the SMR WP5 deliverable D5.4, together with detailed information about the implementation of each of the stakeholder training workshops and the webinar peer-review reports by the tier-2 CITIES.

4.2.1 UPDATE ON THE RISK SYSTEMICITY QUESTIONNAIRE

At the start of this session, Strathclyde gave a presentation which reported on the progress of the work on the Risk Systemicity Questionnaire (RSQ) since the previous SMR workshop in Kristiansand in September 2016. Strathclyde reported on new features added to the RSQ: the comment box, summary sheet, and the inclusion of scenarios which form causal chains rather than causal loops – the details and the time plan of this work on the RSQ are included in SMR project deliverable D3.3.

In order to build the questionnaire, the data gathered during the Work package 2 workshops was analysed using Strathclyde's Group Explorer software and the results were used to build the Risk Systemicity Questionnaire. The interactions between risks were captured in these workshops, as the participants were linking the risks to one another, demonstrating how risks interact. This data was then transferred into a tool, which is programmed in Microsoft Excel.

Therefore, Risk Systemicity Questionnaire is an Excel based tool where users are asked to consider the relative likelihood of a broad range of risks in their cities. These risks are spread across 9 topics: health, climate change (air pollution), climate change (flooding), social inequalities, ageing

(population), riots, immigration, social cohesion and social alienation and are considered as networks of interrelated risks. These networks of risks are presented as risk scenarios, some of which result in vicious cycles. Users progress through the tool by completing questions which ask them to consider whether defined risks scenarios are likely or not to occur in their cities.

Based on the responses to the questions contained in each of the topics of the RSQ, participants are provided with a relative risk score (an estimated risk level for the city) and an awareness score (the level of knowledge the city has about the possible risk scenarios). In addition to this, users can access policies recommendations that may be used to address those risk scenarios that are of most threat to the city.

Not only does completing the Risk Systemicity Questionnaire help cities to assess their exposure to risk, but it also indicates their level of awareness of risk and where cities should prioritise their efforts. The purpose of the questionnaire is for it to be used by groups of users with diverse areas of expertise so that it can prompt valuable discussions where different stakeholders' experiences can be brought together to determine a city's priorities to enable them to anticipate and appropriately respond to future challenges.

After collecting feedback from the project cities at the Kristiansand review workshop, seven subsequent tests were carried out in order to be able to further refine the questionnaire.

RSQ TESTS AND DATES	
Test with Bristol City Council:	21/11/2016
Test with Glasgow City Council	02/12/2016
Project meeting in Amsterdam	12/12/2016
WP5 Stakeholder Training Workshop in Donostia	24/01/2017
WP5 Stakeholder Training Workshop in Kristiansand	09/02/2017
WP5 Stakeholder Training Workshop in Glasgow	21/02/2017
Interdisciplinary RSQ workshop	21/02/2017

In particular, the questionnaire was also tested in Rome without the external facilitation of SMR tool developers. With these topics, by the end of March, each city will be able to facilitate at least a half-day workshop. Topics have been refined to focus on the following 9 topics:

RSQ TOPICS

- Health
- Climate change - air pollution
- Climate change - flooding
- Social inequalities
- Ageing (population)

- Riots
- Immigration
- Social cohesion
- Social alienation

The material used to build the RSQ was validated in three ways.

Firstly, literature review was studied to confirm that the scenarios make sense.

Feedback from city pilot testers was taken into consideration.

Mapping software was used to work in the analysis of the causal maps, as these can demonstrate and reveal inconsistencies in the causal chains.

In additional to vicious loops, causal chains were also included which are not necessarily loops. Images were added for the causal chain scenarios in response to feedback that some users found the images used in the RSQ helpful. These images also demonstrate the distinction between closed causal loops and causal chains.

Integration between scenarios has been added belonging to different topics. The value of the RSQ is to show the interdisciplinary character of risks. As you complete the RSQ, some scenarios appear more than once, which portray e.g. how air pollution relates to health. Therefore, if a user answers that air pollution risk is likely, this will trigger a positive answer in the health tab, although the user has not completed the health tab yet. Interacting scenarios are highlighted with a purple title.

A comment box is another new feature. Each scenario now has a button displaying a comment box. These comments are collected in a separate comment sheet. A summary sheet was also added, which allows seeing the scores and answers given for each topic and scenario. (Insert image from new version of RSQ).

The RSQ scores are not intended as an objective diagnostic for a city, but instead provide areas which need to be examined further with other tools aimed at risk diagnostics.

Three different RSQ uses:

1. Working with city project teams
2. City resilience office teams
3. Engagement with external stakeholders

Facilitation guidelines have been developed for the RSQ to allow the questionnaire to be used without the facilitation of SMR partners. This standard facilitation process has already been used in Rome.

RSQ TESTING IN ROME

In more detail, the Rome workshop gathered 21 experts from: city council, critical infrastructures, civil protection service, security, social assistance, health care and major risk insurance. To organise the session, the RSQ was sent to stakeholders in advance along with information on the SMR project and requesting that stakeholders themselves would compile the questionnaire.

During the session, stakeholders from different sectors were grouped around 4 tables. The answers gathered showed that there were very different perceptions of participants regarding the likelihood of risks in different areas. After discussions among participants, the results become more uniform, on the basis of results from groups with mixed competencies. The following table shows the most relevant findings for each theme tested during the workshop and some suggestions on further RSQ themes that would be relevant given the local context of the city of Rome.

RSQ Theme	Relevant Findings
Ageing Population	Elderly isolation // Mental Health // In-home Nursing // Active Aging Initiatives
Social Alienation	Rome viewed as neighbourhood ensemble, not a megacity // Local Citizen associations active and fighting against social alienation

Social Cohesion	Education Access // Cultural Division are major issues in Rome
Social Inequalities	Social Exclusion or specific citizen groups// Participation is limited in the city, especially regarding public space and community development
Climate Change Flooding	Impact on infrastructures // Soil Consumption // Increasing precipitation intensity
Climate Change Air Pollution	Photosmog // p.m. 2.5 // Effects on Cultural Heritage // Wide green areas within the city
Health	Degenerative Diseases increasing (connection to ageing population) // Heat wave danger, urban heat island effect very intense
Ageing Population	Obesity not considered as a serious social problem, but a concern for teenagers // Alchoolism: Youngsters more than elderly (resulting in increase in road accidents,street Violence)
Immigration	Drug trafficking // Microcriminality // Shelter problems // Pressure on Health Care System
Riots	Cultural or racial tensions not yet a problem

RSQ Theme Suggestions	Relevant Findings
Cultural Heritage	Touristic Pressure // Wear // Vandalism // Increased Weathering
Mobility and transport management	Diesel emissions // Touristic buses // Low capacity of Public Transportation
Private Property and real estate	Building deterioration // Abandoned properties // Squatting
Climate Change: heat waves	Main climate change issue // Vulnerable Population // Photosmog // Spikes of power consumption
Urban Governance	Cumbersome Bureaucracy // Budget Constraints // Unresponsive Institutions // Lack of awareness // Lack of trust

4.2.3. UPDATE ON THE RESILIENCE MATURITY MODEL

The representatives of Tecnun University of Navarra opened the session with a summary of the changes and modifications to the Resilience Maturity Model that have been undertaken since the Kristiansand workshop in September 2016. A general introduction was provided combined with an overview of the most important specifications and functionalities of the tool.

In order to identify the 93 resilience building policies that have been included in the 5 maturity stages included in the tool, again the data gathered during the Work package 2 workshops was analysed; several reviews were conducted and led to the final version of the Resilience Maturity Model that will be uploaded publicly on the SMR website at the end of March 2017.

Using the Resilience Maturity Model, CITIES, and more specifically municipal employees and elected official that are engaged in activities connected to strategic planning and management of the CITY, are asked to consider CITY's current status of resilience, and then check through the model which are those policies that need to be implemented in order for the CITY to evolve and move to the next maturity stage. The model contains also indicators to measure these policies, together with a description of the stakeholders' activities that need to be implemented.

In other words the Resilience Maturity Model:

- enables cities to self-assess its resilience status and

- provides a roadmap for how cities' resilience development could be rolled out

After collecting feedback from the project cities at the Kristiansand review workshop, five subsequent tests were carried out in order to be able to further refine the Resilience Maturity Model.

MATURITY MODEL TESTS AND DATES	
Test with Donostia City Council:	06/12/2016
Project meeting in Amsterdam	12/12/2016
WP5 Stakeholder Training Workshop in Kristiansand	02/02/2017

SMR Smart Mature Resilience

WP5 Stakeholder Training Workshop in Donostia	07/02/2017
WP5 Stakeholder Training Workshop in Glasgow	23/02/2017

The tool developers (TECNUN) and communication work package leaders (ICLEI) began to work closely together in San Sebastian and remotely following the San Sebastian workshop to develop visual elements to display the Maturity Model online and in print format.

SUBDIMENSIONS		STARTING	MODERATE	ADVANCED	ROBUST	VERTEBRATE
COOPERATION	**Development of partnerships with city stakeholders (C1)**	(C1S1) Map relevant stakeholders to develop the resilience action plan (C1S2) Develop a public website with emergency information	(C1M1) Develop a stakeholder engagement plan defining its roles and responsibilities (C1M2) Develop an internal communication platform for sharing information with different municipal departments and emergency services	(C1A1) Align the objectives of the different stakeholders and set up a common understanding of resilience (C1A2) Develop formal partnerships between academic and scientific entities to improve the resilience building process (C1A3) Undertake public consultations to receive feedback on the resilience action plan (C1A4) Develop a public communication platform to interact with stakeholders	(C1R1) Widen collaborative networks with stakeholders to reflect on and make decisions about the progress of the city resilience. (C1R2) Arrange multi-stakeholder debriefing meetings (C1R3) Develop a public platform to enhance sharing among city stakeholders.	(C1T1) Engage self-organization of cooperation among all stakeholders involved in resilience development (C1T2) Involve all stakeholders in the learning process
	Involvement in resilience networks of cities (C2)		(C2M1) Establish alliances with cities facing similar risks	(C2A1) Join a major network of European cities (C2A2) Develop formal partnerships with regional stakeholders	(C2R1) Participate proactively in regional, national and international networks to promote initiatives, exchange experiences and learning	(C2T1) Active involvement of local authority and stakeholders in networks (local, national, European and global) (C2T2) Encourage stakeholders to present their experience concerning the resilience building process as reference for other CITIES

SUBDIMENSIONS		STARTING	MODERATE	ADVANCED	ROBUST	VERTEBRATE
INFRASTRUCTURE & RESOURCES	**Reliability of CIs and their interdependences (I1)**	(I1S1) Develop cooperation/ collaboration agreements with critical infrastructure providers (I1S2) Develop plans to monitor critical infrastructure functionality (I1S3) Develop contingency plans for critical infrastructures	(I1M1) Identify interdependencies of critical services at local level (I1M2) Develop periodical maintenance procedures for critical infrastructures (I1M3) Develop measures to increase critical infrastructure redundancy and reliability (I1M4) Implement monitoring systems for identifying risk shocks and long term stresses (I1M5) Carry out audits for critical infrastructure providers	(I1A1) Develop flexibility measures		(I1T1) Establish the redundancy level of the infrastructure of the CITY (I1T2) Encourage the continuous improvement of policies, to take advantage of any shock and stress to bounce forward and improve or re-design (I1T3) Apply big data approaches to analyse the information obtained
	Resources to build up resilience and to response (I2)	(I2S1) Assess current initiatives and funding opportunities for the development of resilience (I2S2) Develop a list of the current response physical resources available (I2S3) Deploy a disaster relief fund for emergencies	(I2M1) Integrate the resilience action plan into the local government budget (I2M2) Promote resources /tool sharing among critical infrastructure providers within a region during crises	(I2A1) Promote and provide incentives to stakeholders to invest in resilience (I2A2) Implement centralised control of coordination of critical resources and activities during a crisis (I2A3) Encourage companies to have appropriate insurance coverage and develop business resilience plans (I2A4) Support citizens and private sector initiatives that contribute to building resilience at local levels e.g. via grants (I2A5) Incentivate the private sector to encourage the adoption of energy efficiency standards in new buildings	(I2R1) Promote and provide incentives to stakeholders for investment in R&D&I projects regarding resilience (I2R2) Encourage citizens to have appropriate insurance coverage and develop household resilience plans (I2R3) Monitor an effective use of resources to ensure the resilience building process performance	(I2T1) Assess the improvement and innovation effects to the resilience building process. (I2T2) Monitor the insurance level of citizens and companies

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SUBDIMENSIONS		STARTING	MODERATE	ADVANCED	ROBUST	VERTEBRATE
PREPAREDNESS	Diagnosis and Assessment (P1)	(P1S1) Assess and manage a full range of risks (P1S2) List and prioritize critical services and assets (P1S3) List existing plans and response mechanisms guidelines for shocks and stresses	(P1M1) Take account of interdependencies when assessing and managing risk (P1M2) Review best practices to deal with shocks and stresses used in different sectors and other cities (P1M3) Analyse lessons identified from past shocks	(P1A1) Use the Risk Systemicity Questionnaire to assess and manage risks (P1A1) Assess scenarios of shocks and their cascading effects	(P1R1) Undertake regular and long-term risk assessments using the Risk Systemicity Questionnaire	(P1T1) Engage a wide range of relevant stakeholders in the risk management process (P1T2) Assess the value added by CITY contributions to the resilience of other CITIES
	Education and Training (P2)	(P2S1) Conduct training and arrange emergency drills with the emergency teams and critical infrastructure providers (P2S2) Inform citizens of volunteering opportunities in the local community (P2S3) Develop a common understanding of the resilience approach among stakeholders	(P2M1) Conduct training and arrange emergency drills including volunteers	(P2A1) Provide training for citizens and public and private companies (P2A2) Conduct emergency drills at national level (P2A3) Develop education programs in schools about the resilience action plan (P2A4) Assess and refine the training programs	(P2R1) Establish a strong network of volunteers (P2R2) Conduct frequent joint training exercises between European cities	(P2T1) Develop training plans in cooperation with other CITIES (P2T2) Develop training activities for other CITIES (P2T3) Engage self-organization of involved agents to improve the development of the resilience of the CITY

SUBDIMENSIONS		STARTING	MODERATE	ADVANCED	ROBUST	VERTEBRATE
LEADERSHIP & GOVERNANCE	Municipality, cross-sectorial and multi-governance collaboration (L1)	(L1S1) Establish a working team responsible for resilience issues in the city (L1S2) Integrate resilience into visions, policies and strategies for city development plans	(L1M1) Establish a resilience department or committee and a cross-departmental coordination board and procedures (L1M2) Align, integrate and connect the resilience action plan with regional plans (L1M3) Adopt climate change preventive actions (L1M4) Establish a target for city-wide emissions reduction (L1M5) Promote equality of access to services and basic infrastructure to vulnerable sector of society	(L1A1) Align, integrate and connect the city resilience action plan with national plans (L1A2) Develop a plan for a multi-level governance approach involving the municipal, regional and national levels of governance	(L1R1) Align, integrate and connect the city resilience plan with regional, national and international resilience management guidelines	(L1T1) Support the development of other city resilience plans aligned, integrated and connected with regional, national and international resilience management guidelines
	Legislation development and refinement (L2)		(L2M1) Develop a white paper about multi-level governance approach	(L2A1) Develop a legislative framework for stakeholders involved in the implementation of the resilience action plan (L2A2) Conduct certification processes to achieve existing standards		(L2T1) Encourage all the involved agents, including citizens, to provide feedback about the resilience development plans and policies (L2T2) Contribute to the development of standards on resilience guidelines and policies
	Learning culture (learning and dissemination) (L3)	(L3S1) Develop a strategy to create a resilience culture	(L3M1) Promoting a culture of resilience	(L3A1) Formalize the learning process and institutionalize regular debriefing meetings	(L3R1) Create a learning city	(L3T1) Promote leadership for knowledge transferring and sharing among global cities, regions and nations (L3T2) Develop formal procedures to assess the effectiveness of the learning process
	Resilience action plan development (L4)	(L4S1) Identify the city requirements regarding the resilience process	(L4M1) Develop a resilience action plan to respond to shocks and long term stresses	(L4A1) Integrate lessons identified from past events into the resilience action plan (L4A2) Develop leading indicators for assessing the performance of the resilience action plan	(L4R1) Assess the efficiency of the resilience action plan periodically in order to continuously improve it	

Draft visual layout for Maturity Model

4.2.4 FEEDBACK FROM THE TIER-1 CITIES

The main aim of the 2nd Review Workshop was to provide feedback on the implementation of the Resilience Maturity Model and the Risk Assessment Questionnaire to the research partners developing the tools (organised back-to-back to the workshop in WP3). The tier-1 CITIES gave a presentation on the pilot activities in each one of them and the tier-2 CITIES provided additional feedback based on the webinars organised and the presentation by the implementing CITIES during the review workshop.

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FEEDBACK ON THE RISK SYSTEMICITY QUESTIONNAIRE

After a brief introduction on the session by ICLEI Europe, the representatives from each one of the tier-1 cities (Glasgow, Donostia, Kristiansand) were asked, one after the other, to provide feedback on the so far pilot implementation of the tools, based on a list of questions that were send to them, already a week before the workshop (presented earlier in this deliverable). The CITIES shared their experience not only regarding the trainings and the webinars, but also based on follow-up communication with training participants and stakeholders.

Glasgow started by giving a rather positive feedback on the stakeholder training workshop that took place in the CITY in February 2017. During the RSQ training, rather than looking at a CITY-wide level, and following Strathclyde's suggestion, Glasgow invited a new H2020 project called RUGGEDISED to test the Risk Systemicity Questionnaire. Five project team members were invited, all of whom are working directly on the RUGGEDISED project.

The three areas of social alienation, inequality and air pollution were a focus for the session. The highest risk level was identified in Social Inequality, similarly to Rome. In terms of general feedback, the summary sheet was found to be particularly useful. The facility to view the causal chains and loops was very useful. It was agreed that the RSQ is useful for a project in its early stage though, rather than for projects that are already advanced. The RSQ could be used to feed into a risk register for the RUGGEDISED project. It was considered that the tool could be able to distinguish between risks that may be relevant at a city scale compared to at a project scale, or other scales. The tool was found useful to ensure that projects are aligned with CITY objectives too. The RUGGEDISED project team will share the learning with their consortium. The risks that were identified as "I don't now but someone else knows" will be validated and investigated further by the team in the next weeks.

Glasgow would like to use the RSQ to strengthen relationships with partners, particularly after priorities change in the city following probable change in the administration following elections this year.

San Sebastian commented that throughout the pilot implementation, there were some challenges due to language barriers mainly, but also due to the fact that some stakeholders are not very familiar with co-creation processes and are more keen to try tools that are already finished and ready; there were some comments from stakeholders like: "why do we test something that is not ready yet" or "do we develop this or is it already done"?

Most of the higher risk levels and awareness among groups that tested the RSQ were quite similar.This probably means that the CITY actually is aware of the existing risks, but is definitely in need of risk mitigation strategies. As San Sebastian commented: "Sometimes participants were using the words awareness or the risk, without being sure about their meaning. This had to do with the fact that we used a two group setting; once we put the groups together, we could reach an agreement and things moved more smoothly."

The general feedback was that it was a good tool to trigger discussion, but some users felt that they did not gather enough new knowledge from the tool, as the topics included have already been discussed extensively in the city. Some other participants would have liked to go deeper into the topics, problems, consequences and suggested policies.

In Kristiansand, during the preparations for the RSQ workshop, the partners did not fully understand that external stakeholders were supposed to test the RSQ. In the end, the crisis was overcome and 5 stakeholders, mainly working for CITY NGOs attended. They were rather satisfied by the RSQ, while the facilitation was very effective by the SMR partners. There is always a language barrier, which was not an issue in this case, as the participants were speaking very good English; for future groups, language barriers should be taken into consideration. It is important for stakeholders to understand the value of the tool and to know whether the results would be used in their everyday work or in future meetings with the CITY. Some of the NGOs representatives wanted to meet afterwards and discuss further with the SMR partners.

There was a general argument that some of the stakeholders talked a lot based on their feelings throughout this training. The discussion indeed got very intense when talking about Kristiansand's sensitive social issues and challenges. Kristiansand commented: "When inviting stakeholders to trainings, it is important to trust their professional competences and to consider their intuition to be founded on experience and expert knowledge. While not all stakeholders can be experts on all topics, their competence nonetheless allows them to offer judgement and impressions with some level of authority". In general the SMR partners considered the session as very successful since they were able to meet with stakeholders that they did not collaborate so far.

Strathclyde remarked that it is important to manage expectations and to clearly communicate what we are trying to achieve with using the RSQ. The aim of the RSQ is to explore the relationships between risks rather than imparting new knowledge. The RSQ had not been initially designed for the purpose of use as part of a project, but the Ruggedised example shows that it was indeed useful and valuable.

FEEDBACK ON THE RESILIENCE MATURITY MODEL

Glasgow argued that since they have done a lot of work on stakeholder engagement, following the Glasgow partners' suggestion, the workshop was split into 4 focussed sessions according to the four dimensions of the Maturity Model. The discussion was mainly focused on the advanced and the vertebrate stages.

The stakeholders were split into four groups according to the four dimensions and the session went well. Those stakeholders who previously did not know about resilience or the project, left interested in the topic and in the project. Some participants who had not considered themselves experts on resilience were surprised to find that their work is, in fact, related to resilience and they therefore had useful contributions to make. Noteable was the workshop on preparedness; Glasgow has two resilience teams, which at some cases seem to not be able to collaborate or reach agreements, but by the end of the exercise the teams managed to cooperate well.

 San Sebastian argued that some of the policies may have negative influence for CITIES that are not so advanced in terms of resilience, if implemented in an erroneous timeframe; in general San Sebastian was very concerned about the interrelations between policies. Glasgow argued that all policy interrelations are either positive or just sometimes difficult to implement only; they definitely do not create any additional challenges or have any negative influence on the implementation of other policies. San Sebastian again finds the most challenging issue about the Maturity Model, the language barrier. Some of the policies are difficult to understand. The user manuals at least need to be translated in English; San Sebastian argued to ICLEI and the project coordinator that some project budget should be shifted for translation of materials on the tool, if not for translating the whole tool itself. Finally, San Sebastian pointed out that someone could argue that policies in a specific maturity stage of the model should be implemented earlier that some of the previous ones, subject to interrelations between policies and even subdimensions in some cases. Glasgow did not seem to agree with this statement.

From Kristiansand's side, the general feedback on the stakeholder training workshop on the Maturity Model was that it was sometimes difficult for the participants to understand the model and some of the policies; also they argued that some of them were misplaced in the maturity stages. There were several comments about the indicators, and basically the effect of resilience maturity depends not only on quantitative elements but rather on qualitative ones.

The stakeholders wished for some feedback or materials in return for the input they provided. As a representative from Kristiansand commented: "All of these different departments and sectors are driven by legislation. But in the end, they need to cooperate."

Kristiansand also pointed out the weakest part of the Resilience Maturity Model is the indicators. Many stakeholders did not agree with some indicators or found them difficult to use. Some connection between the indicators is also missing. So far, the indicators that Krisitansand is using in terms of resilience and crisis management are not public. There was a suggestion from Vejle to use some of the indicators that the 100 Resilient Cities initiative is using. Glasgow and Rome argued that while this initiative has shared with the CITIES enough indicators, this does not mean that they are actually effective in every scenario or situation.

4.2.5 FEEDBACK FROM THE TIER-2 CITIES

FEEDBACK ON THE RISK SYSTEMICITY QUESTIONNAIRE

Bristol and Riga argued that it is important to consider how to get the right mixture of stakeholders invited in the stakeholder trainings on the RSQ. The question is: Do you start with a wide audience, or start in small groups that meet later etc. The fact that the participants wanted to discuss further shows success. Vejle would like to know how to facilitate better the stakeholder training workshops in case they organise additional themselves in the future.

Bristol and Vejle collectively argued that apart from the user manuals it would be really important to have guidelines, not only on how to use the tool, but who is going to use it and why. Videos should be produced of experts explaining in a tutorial how to use the tool. Also Vejle remarked that "One thing is identifying the right thing to do. But this is always challenged by budget."

Riga and Bristol suggested that some of the linkages presented as vicious cycles didn't feel quite right sometimes. More time could be invested in making the scenarios more concrete through improving the causal links. Real-life checks should always take into place in order to tailor made the risk scenarios to specific CITYcontexts, a representative from Riga concluded.

Bristol's engagement in the Smart Mature Resilience project is one of the ways in which Bristol is taking steps to achieve its resilience aims, such as making the city's progress and success in terms of

sustainability and resilience available to all communities and citizens and addressing the challenges of inequality in health and access to economic opportunities by supporting and empowering the city's diverse communities. Bristol has been very active in providing input for the policies that are included in the Resilience Maturity Model, but also implementing their own session/workshop on the Risk Systemicity Questionnaire.

The language barrier was again very present in this discussion; Vejle and Riga insisted that SMR partners should explore scope for translating SMR tools into key European languages. All CITIES agreed that the biggest benefit of the RSQ is that it can bring stakeholders together and get them having a vivid and interesting discussion and become more aware of the different roles they have concerning the risk management in their CITY.

FEEDBACK ON THE RESILIENCE MATURITY MODEL

Bristol argues that the RSQ is a useful tool for encouraging debate on city resilience issues. Using a scenarios-based approach which investigates risk awareness and the likelihood of various scenarios playing out in a city, helps flush out different stakeholders' perspectives. Most participants in the Brisol testing of the RSQ found it an interesting exercise. Bristol tested an early version of the RSQ without the comment box that has been added in February; the comment box is considered very valuable. Bristol commented: "The RSQ has shown an appetite for discussion. It shows that in our jobs and in our everyday life, there needs to be more meeting of people, and the RSQ facilitates that."

It was agreed among all tier-2 CITIES that the Risk Systemicity Questionnaire could be very useful as a debate tool. It can be used by the various municipal departments and also to establish relationships and engage with external stakeholders. On the other hand, there are varying opinions reagarding its usefulness in terms of collecting knowledge. This is related to the topics themselves. Rome and Bristol also argued that some of the risk scenarios are quite obvious and some are not discussed throroughly due to time constraints. The technical aspects of the tool are quite soft and they could be more useful if the information was deeper in terms of technical aspects. All CITIES agreed on the usefulness of the tool as part of debate but said that workshops should go into deeper detail on some RSQ themes.

Bristol and Riga agreed that that the causal links need to be validated a bit more. Some of the connections in vicious cycles were somewhat dubious.The usefulness of the different topics depended very much on the department or sector that the relevant stakeholder came from. Bristol additionally argues that in order for it to work for everybody, the scenarios need to be very general, so that they

apply to all cities. Riga also seconded this argument. Being able to tailor scenarios to city contexts might focus the discussion a bit. Some topics draw more attention than others.

San Sebastian is quite sensitive about anything related to flooding or climate change; the same goes for Riga and Rome. Another suggestion was that it would be useful to be able to edit the RSQ as you go along, to correct scenarios that seem ineffective and to add more themes in the process, according to the outcomes of each group work.

Another problem in transferring the results to Vejle and the Danish landscape is that resources usually come from the national government and not from the local or regional government. Therefore, some policies in the Maturity Model and especially in the Infrastructure & Resources dimension need to be altered and take into account that not all the CITIES have local or regional resources, but that can also depend on decision making at national level.

Bristol also commented that while we are assuming that the Maturity Model validates the linear relationships, we do not have a clear idea about the transversal relationships. Additional work should be done to identify these relationships.

More detailed information about the tier-2 CITIES input and feedback on the webinars and the pilot implementation process can be found in the SMR project deliverable D5.4.

4.3. RESILIENCE BUILDING POLICIES SESSION

4.3.1 INTRODUCTION TO THE GROUP ACTIVITY

The session started with the University of Strathclyde presenting their vision about the Resilience Building Policies tool and then running a series of exercises with CITY participants on the second day of the SMR Review Workshop

Following some group discussion and questions, Strathclyde introduced CITY participants to a model which they had prepared in the Decision Explorer software which mapped the policies contained in the SMR Maturity Model (MM) (this mapping set out the causal arguments that were contained in the MM and that represented the interrelationship between policies), and which city participants would be asked to expand and validate.

Decision Explorer is a causal mapping software which is described in more detail in the WP2 deliverables, as well as in deliverable 3.3. No new content was added during the course of preparation of the causal map - the MM polices were copy/pasted directly to the Decision Explorer software, and then their interdependencies were captured by paying attention to the content of policies and linking phrases demonstrating causality such as 'in order to', 'because', to support' as well as logically implied causality. The questions asked of the MM material were: what is the policy expected to achieve (outcomes) and how is the policy expected to be delivered (inputs).

The reason for mapping the MM was to gain a better understanding of the means-ends causal relationships, which can be seen as 'may lead to' relationships, between the MM policies. The causal mapping of the MM policies was expected to help to validate the logic of policies, and identify whether further elaboration was required where high level policies may require more detailed policies to enable cities to appreciate what they needed to do in order to implement these policies. In addition the causal map might help begin building the Policy Tool.

The map revealed key policy clusters and networks such as 'promote a resilience culture', 'ensure efficient resilience', 'develop an effective resilience plan', 'make effective use of volunteers', etc. A segment of the causal map of the MM policies can be seen in Figure 1.

4.3.2 MAPPING THE RELATIONSHIPS BETWEEN POLICIES IN THE MATURITY MODEL

After the lunch break, Strathclyde displayed on a public screen the causal map model which depicted the interrelationship between the MM policies. City participants were divided into two groups sitting in circles formed around large tables, and one facilitator from Strathclyde University was assigned to each of the groups. The third facilitator was sitting in the back of the room and was operating the Group Explorer group decision support software which allowed the causal map to be displayed and edited.

A more detailed description of the Group Explorer group decision support can be found in the WP2 deliverables and in deliverable 3.3, as it had been used extensively in most of the previous SMR workshops. During the course of the session, facilitators displayed a series of policy clusters from the MM causal map, focussing on those areas of the map which could benefit most from further validation, namely; culture (with three different views focussing on different combinations of the MM

stages), and the problem of efficiency. Subsequently, Strathclyde facilitated group conversations, with each group separately but at the same time being asked whether they were satisfied with the content and structure of the map, and whether they wanted to add new policies (particularly examples of successfully applied policies) to the map. In the situations where there was strong agreement among the group to change the map, the causal map was modified accordingly and the resulting changes were noted and recorded as new or changed. In general, city participants were satisfied with the relationships between policies of the MM represented in the causal map. This outcome was encouraging given that the participants had been the source for the MM. The participants added 32 new example policies and elaboration of 'sub-policies' (which in most cases were refinement of the existing policies) and 31 new causal arrows.

Some of the contributions gathered during the session are shown on Figure 2 which focusses on the 'Starting' stage of the MM with respect to developing a resilience culture in cities. Figure 2 demonstrates how the causal map helps to understand how the MM policies support one another, and in which places city participants believed that further refinement of policies would help. For example, a policy from the 'Leadership' dimension, at the 'Mature' stage, states: 'promote a culture of resilience'. During the session the participants refined the portfolio of sub-policies which support that policy by adding a sub-policy 'find historical events and actions that demonstrate the impact of resilience', which then feeds into the sub-policy 'use resilience stories in media', which effectively leads into the policy about promoting culture of resilience.

 In other words, by implementing a portfolio of sub-policies a general policy may be implemented effectively, as otherwise the general policy only points to the direction for future actions but lacks substance with respect to what actually needs to be done to achieve this policy.

4.3.3 RESULTS AND CONCLUSIONS

By mapping the causal relationships in the MM it was possible to gain a clearer view of the hierarchy of policies in the MM. City participants reacted positively to seeing the means-ends structure of the MM policies and so provided an additional validation of the MM document.

The MM policies are the foundation for the System Dynamics tool and will form a part of the Policy Tool, and so this exercise built the foundation for an understanding of the integration between the MM, the Policy Tool, and the System Dynamics model.

The University of Strathclyde concluded that significant work is needed from their side, in terms of programming and content, in light of the 3rd Review Workshop in Glasgow (17-19 May 2017) in order to be able to gather maximum input by the CITIES that will help them to develop the tool.
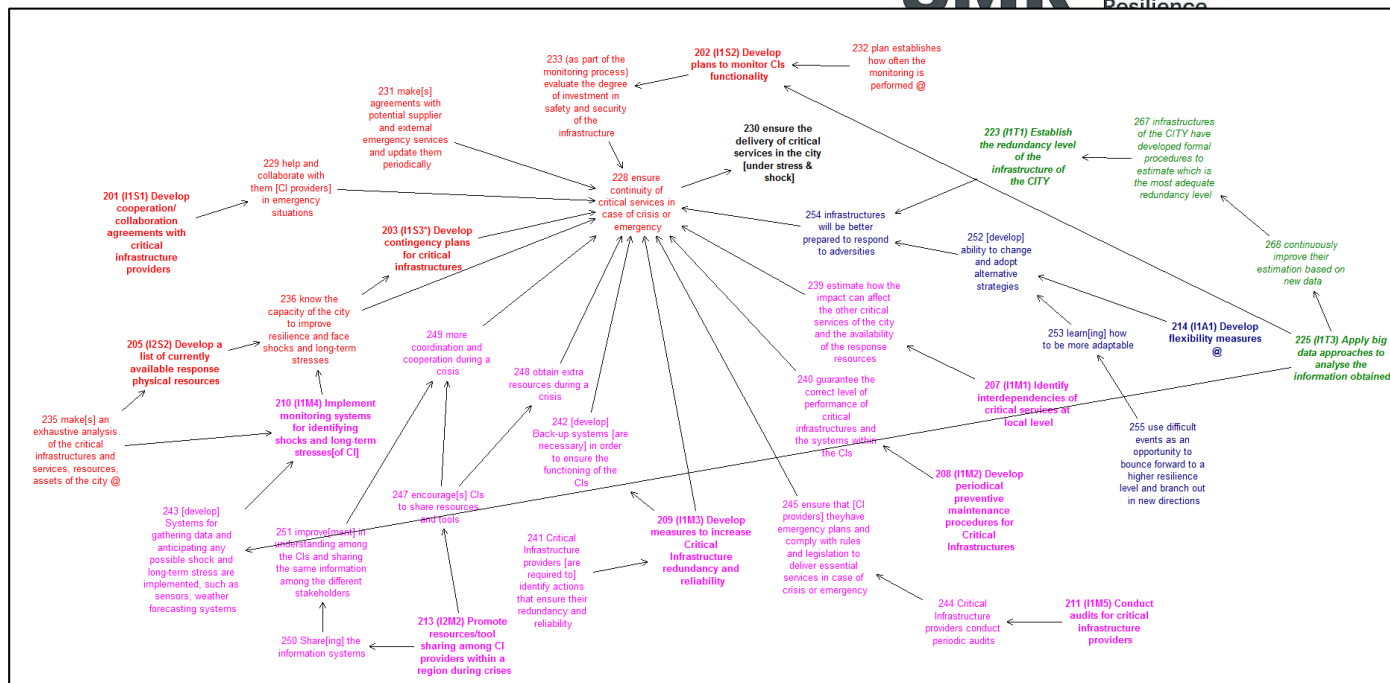
Figure 1: A segment of the Maturity Model policies map focussing on 'critical services'

Numbers before statements represent the sequence in which they were added on the map. Causal arrows signify 'may lead to' relationships. The acronyms in brackets refer to the dimensions of the MM. Red statements= Starting MM stage; blue statements= Advanced MM stage; pink statements= Mature MM stage; green statements= Vertebrae MM stage. Black statement is the goal.
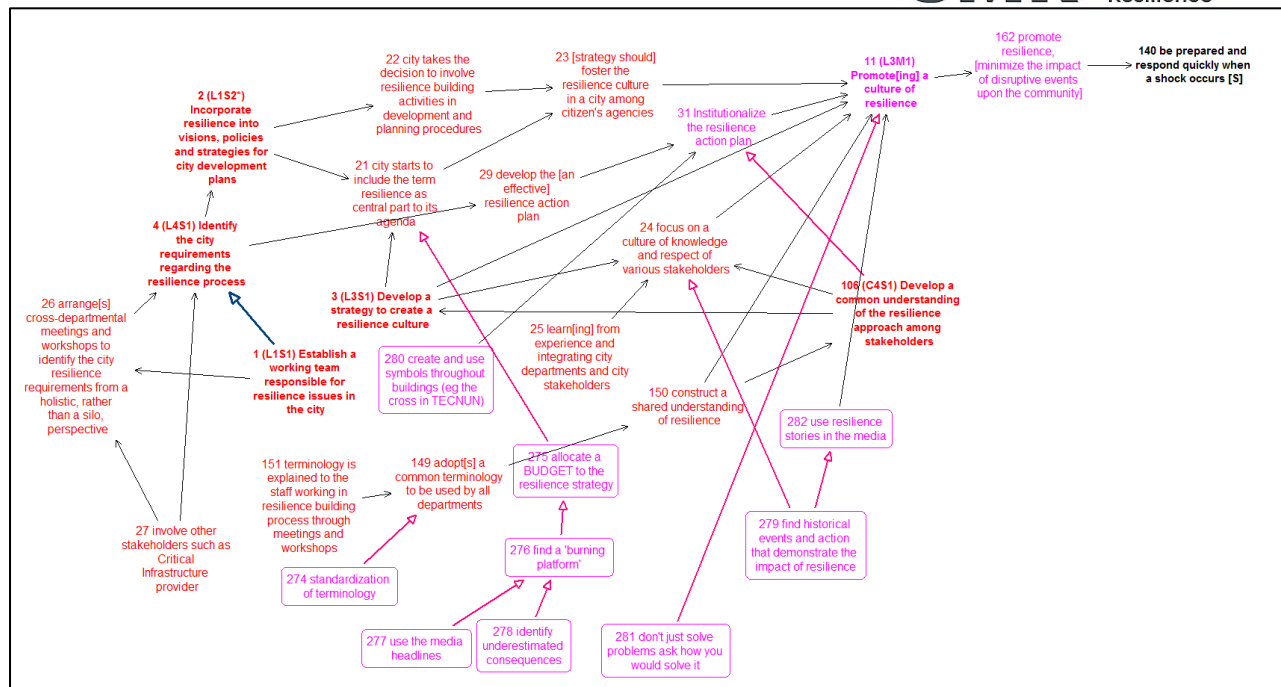
Figure 2: 'Starting' maturity stage with respect to promoting resilience culture

*Statements added by city participants during the session are in boxes. Causal links added by city participants during the session are bold arrows.

4.4. RECAP OF THE COMMUNITY ENGAGEMENT AND COMMUNICATION TOOL PILOT IMPLEMENTATION

4.4.1 STAKEHOLDER TRAINING WORKSHOP – SAN SEBASTIAN

The first stakeholder training took place in San Sebastian on the 26th of January 2017. It gathered 6 stakeholders, from various departments like the sustainability/resilience team, communications team and administrative employees. Also, a couple of citizens were invited in order to be identifying if the tool can actually be useful and interesting for the general public. The agenda of the training workshop can be seen in the following table:

| TIME	SESSION	DESCRIPTION
9.15-9:30	Arrival & Coffee	
9.30-9:45	Brief introduction to SMR project and the training activities	ICLEI & TECNUN
9:45-10:00	Introduction Resilience information Portal	TECNUN
10:05-12:20	Group exercise– Resilience information Portal Including Coffee Break	TECNUN
12:25-12:50	Results and Discussion	TECNUN
12:50-13:00	Wrap-up, WP5 Next Steps	Overview of the next steps, ICLEI
13:00-14:00	Lunch	

The session started with a brief introduction to the Smart Mature Resilience Project, by ICLEI Europe and Tecnun and then the participants were introduced to the resilience information portal. The exercises conducted were designed to serve as an introduction to the Resilience Portal for the end users, showcasing portal basics and focusing on the user page editing preferences. The participants were asked to 1) Create a new Organization, 2) create a new User, 3) create a new User Page, 4) edit User Pages, and 5) create a Data Structure. Each participant worked on his/her individual computer, while Tecnun provided with the following links that facilitated their work:

- StatusPage: http://smr-project-test.appspot.com/UserPage?PageKey=5659118702428160

- Manual: http://smr-project-test.appspot.com/UserPage?PageKey=5099593180119040

- UserPage Edition Tutorial: http://smr-project-test.appspot.com/UserPage?PageKey=5694209793196032

- UserPage Technical Edition Tutorial: http://smr-project-test.appspot.com/UserPage?PageKey=5654153720233984#Foot

- Tutorial Video1: https://youtu.be/ReJkcEl4bh8

- Tutorial Video 2: https://youtu.be/WIqUxWwM9pk

- Tutorial Video 3: https://youtu.be/wcbbl7ZIs3I

- Example of a user page: http://smr-project-test.appspot.com/UserPage?PageKey=5681777339269120

The participants were given time to work individually on the webpages that they created. In general all workshop activities were developed without any major difficulties and completed in the estimated time.

Following the technical part of the workshop, the participants were divided in two groups; the first group discussed which information and features that would facilitate and strengthen internal (within the municipality and the various departments) communication, should be added in the portal, while the second group had a similar discussion but focusing on external communication of the municipality with the various organizations and stakeholders that are active in the city.

4.4.2 STAKEHOLDER TRAINING WORKSHOP – KRISTIANSAND

The second stakeholder training took place in Kristiansand on the 1st of February 2017. It gathered 10 stakeholders, from various departments like the crisis management team, communications experts, first responders, municipal/county physicians and other administrative employees. The agenda of the training workshop can be seen in the following table:

TIME	SESSION	DESCRIPTION
9.15-9:30	Arrival & Coffee	
9.30-9.45	Brief introduction to SMR project and the training activities	ICLEI & TECNUN
9.45-10.00	Introduction Resilience information Portal	TECNUN
10.05-12.20	Group exercise – Resilience information Portal Including Coffee Break	TECNUN
12.25-12.50	Results and Discussion	TECNUN
12.50-13.00	Wrap-up, WP5 Next Steps	Overview of the next steps, ICLEI

The session started with a brief introduction to the Smart Mature Resilience Project, by ICLEI Europe and CIEM and then the participants were introduced to the resilience information portal. The exercises conducted were designed around two scenarios and aimed to facilitate discussion that will provide information on the tool's necessity for the city and the features that it should include. While the discussion was taking place, two representatives from CIEM, using their laptops were adding/deleting information on the portal, and projecting these activities on a big screen. The first scenario was around an extreme weather event that includes major flooding of critical city areas and the second one was around a pandemic that would seriously affect citizens' health, connected also with contamination of water and undergroung resources.

4.4.3 STAKEHOLDER TRAINING WORKSHOP – GLASGOW

The third and final stakeholder training took place in Glasgow on the 28th of February 2017. It gathered 8 stakeholders, from various departments like the Resilient Glasgow team, IT and communications

experts, public relations and administrative employees. The agenda of the training workshop can be seen in the following table:

TIME	SESSION	DESCRIPTION
9.30-9:45	Arrival & Coffee	
9.45-10.00	Brief introduction to SMR project	ICLEI
10.00-10.15	Participants Self-introduction and Q&A	
10.15-10.30	Introduction to the Community Engagement and Communication Tool	ICLEI/Glasgow City Council
10.30-10.45	Coffee Break	
10.45-11.45	Group exercise – Resilience information Portal	ICLEI/Glasgow City Council
11.45-12.00	Results, Wrap-up, Next Steps	Overview of the next steps, ICLEI
12.00	Lunch	

The session started with a brief introduction to the Smart Mature Resilience Project, by ICLEI Europe and then the participants were introduced to the resilience information portal. The participants were introduced to the portal, but instead of working hands on it, again scenario planning exercises were used, in order to trigger discussion about communication flows and to evaluate information relevance and importance. Also, as it became prevalent from previous communication with the Glasgow partners that the city has a large amount of available portals, an attempt to map them and to see which one would be most possible to incorporate the SMR Resilience Information Portal's features was done. While the discussion was taking place, ICLEI was adding/deleting information on the portal, and projecting these activities on a big screen.

4.4.4 MAIN RESULTS/RECOMMENDATIONS

In San Sebastian, it was striking that even participants without specific technical knowledge, tried some of the advanced features following the tutorials without problems. Consensus was reached at the end of the workshop regarding the necessity of providing a portal that would be accessible in different languages (at least in 3, Basque, Spanish, English) to reach all the citizens, and promote active participation, transferability and community engagement.

The present stakeholders agreed that the Resilience Portal would be needed for the city of Kristiansand. Consensus was reached that it is easier to fine-tune existing tools by using some of the tool box features, compared to adopting a new tool. The crisis management department of the city has established a good way in which they deal with extreme events or other social/environmental problems, therefore they would like to keep up with their activities and incorporate some of the Portal's functionalities in their work and website.

The portal should contain increased information on water and sewage, including a situation map of the most vulnerable areas of the city, but also the resources that would be available to the public in these cases. For example, if there is a power outage and there are several areas that have their own power generators, citizens could reach these areas to charge/use their mobile phones and subsequently get help from the civil defense or inform first responders about their needs.

Also, as for the city of Kristiansand it is rather important to know and engage with all stakeholders, the portal could have a double function: 1) an internal portal that would streamline information and facilitate integration, and 2) a public portal, which would be integrated in the Kristiansand Kommune Website (https://www.kristiansand.kommune.no/) and would include information about weather events, major crises and news from the city and would be updated by appointed municipal employees. In Norway, there are already several websites that would prepare citizens for climate events, abnd would also educate them, raise awareness and provide tips. Other topics that would be interesting for Kristiansand would be: air pollution, social alienation, youth loneliness, traffic management connected with extreme weather events. It was also highlighted that for minor events, ordinary and current procedures should be still kept, for example if there is minor flood in one part of the city, only SMSs should be sent out to people, as a more formal announcement, also through social media would possibly create confusion and chaos.

In Glasgow, the Resilience Information Portal allows creating a hierarchy of organizations (they are also refered as entities in the user manual that CIEM has prepared). This function would be interesting

for Glasgow. The Resilient Glasgow website, which was created in the framework of the 100 Resilient Cities, pioneered by the Rockefeller Foundation programme, has been inactive since October 2016 (when the 2 year funding was over).
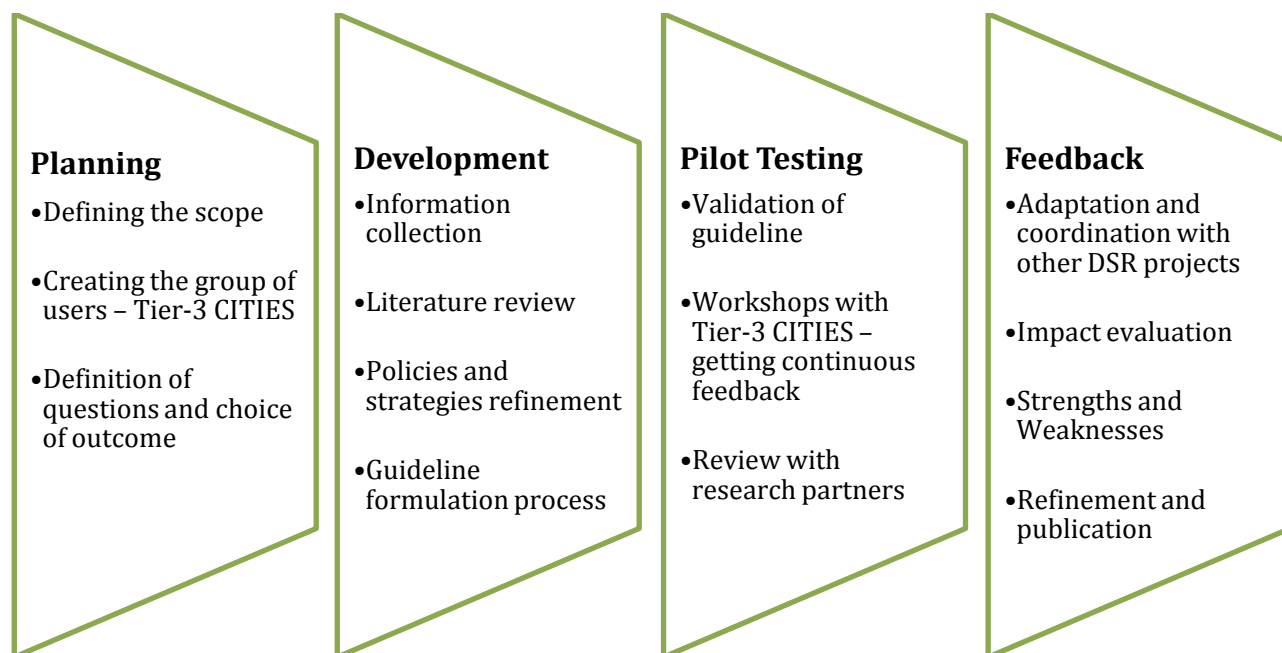
Therefore, the present stakeholders agreed that since the city owns the domain, that this website could be linked with the SMR Resilience Information Portal.

The workshop participants got the change to reflect on the usefulness and producibility of specific portal features in order to decide which of them should be implemented in the existing IT systems of Glasgow.

4.5. INTRODUCTION TO THE EUROPEAN RESILIENCE MANAGEMENT GUIDELINE

During this session, the SMR partners got the change to start brainstorming and reflect on the way that the European Resilience Management Guideline should be prepared, tested and validated. According to the Grant Agreement, the project Smart Mature Resilience (SMR) aims to develop a European Resilience Management Guideline to assist European city decision-makers in developing and implementing resilience measures. It focuses on three core areas: Critical Infrastructure, Climate Change, and Social Dynamics. The project develops tools to assess and enhance cities' resilience. Researchers work with cities to co-create tools which will be piloted, reviewed and evaluated by the participating cities and which will later are expected to be widespread and developed for commercial use.

ICLEI presented an initial idea about what the Resilience Management Guideline should entail, and also how it can be implemented, tested and validated with the Tier 3 CITIES. Regarding this group, ICLEI is already in contact with some cities regarding their potential participation and will start officially inviting them in April 2017. The following graph provides an overview of the 4 stages of development of the European Resilience Management Guideline:

Planning
- Defining the scope
- Creating the group of users – Tier-3 CITIES
- Definition of questions and choice of outcome

Development
- Information collection
- Literature review
- Policies and strategies refinement
- Guideline formulation process

Pilot Testing
- Validation of guideline
- Workshops with Tier-3 CITIES – getting continuous feedback
- Review with research partners

Feedback
- Adaptation and coordination with other DSR projects
- Impact evaluation
- Strengths and Weaknesses
- Refinement and publication

It was agreed that all partners should contribute in developing the European Resilience Management Guideline (ERMG) in three ways:

- By helping ICLEI to define the methodology for the production of European Resilience Management Guideline

- By developing the European Resilience Management Guideline through an iterative and co-creative process and integrating the 5 resilience tools

- By adapting the ERMG having the input of the different tiers of CITIES, in order for them to test and validate the tools and the whole ERMG as a concrete entity. In this process, the Tier-3 CITIES will test the ERMG, having the Tier-2 and Tier-1 CITIES as mentors/peer-reviewers

4.5.1 PILOT IMPLEMENTATION OF THE EUROPEAN RESILIENCE MANAGEMENT GUIDELINE

The pilot implementation process will take place from M30 to M34 of the project, in collaboration with the WP7 of the project (also led by ICLEI). In this way, already considered and available resources and capacities will be used. The main aspects of the Pilot Implementation of the Resilience Management Guideline will be:

- A Stakeholder Dialogue organized by ICLEI (as stated in WP7) targeting tier 2 cities (M30); This event will kick-start the pilot implementation of the Resilience Management Guideline testing and validation process by a group of tier 3 cities that will be invited to the Dialogue

- ICLEI will prepare a briefing document for tier 3 cities on requirements and capacities needed for the testing process (M28-M29)

- This group of tier 3 cities to be identified in 2017 (M20-M24) and will consist of cities in resilience networks, 100RC cities, ICLEI members, Green Surge cities

- At least 7 cities to be identified (2 per SMR city group, regional clusters for knowledge transfer) / (tbc) change of location from San Sebastian to a more central European city, easily accessible by the tier 3 cities (Berlin, Prague, Brussels)/ emphasis should be given on Southern and Eastern European cities, aiming to strengthen the EU Resilience Backbone concept

- A Stakeholder Workshop organized by ICLEI (WP7, Brussels) targeting tier-3 cities (M34) to summarize/review the pilot implementation of the Resilience Management Guideline

- ICLEI will be responsible for the program development/facilitation of both the Stakeholder Dialogue and Workshop; both events will include a session with next steps/transfer to the local context of the tier 3 cities; ongoing consultation will take place between ICLEI and tier-3 cities between M28 and M34 (budget from the consultancy visits will be used if needed)

Finally, a tentative timeline for the implementation of the European Resilience Management Guideline is presented in the following table:

ACTIVITY	DUE DATE	LOCATION	RESPONSIBLE	TARGET
Identification of Tier-3 Cities	March - April 2017	-	ICLEI (WP5/WP7) + LiU + CITIES	European cities in Resilience networks (focus on Eastern/Southern Europe)
Briefing Document/Manual on the 5 tools and the Resilience	October-November 2017	-	ICLEI & all 3 tool developers (TECNUN & STRATHCLYDE & CIEM) – LiU as official reviewer of the guidelines and consistence	Tier 3 Cities

Management Guideline as a whole			with resilience theories and definitions)	
Stakeholder Dialogue	November 2017	Central Europe (tbc)	ICLEI (WP5/WP7)	Tier-2 Cities & Tier-3 Cities (possibly also Tier-1)
Active guidance and consulting of Tier-3 Cities	November 2017 – March 2018	-	ICLEI	Tier-3 Cities
3 Webinars on the European Resilience Management Guideline	December 2017 – February 2018	-	ICLEI & all 3 tool developers (TECNUN & STRATHCLYDE & CIEM) + LiU as observer/developer of guiding questions document	Tier-3 Cities
Stakeholder Workshop	March 2018	Brussels	ICLEI	Tier-3 Cities
Finalization of the European Resilience Management Guideline	April 2018	-	ICLEI	All partners
Final Conference	April 2018	Bonn	ICLEI	Tier-4 Cities, all partners

4.6. COMMUNICATION AND EXPLOITATION PLANNING SESSION

4.6.1 EXPLOITATION PLAN

The five completed project tools will be integrated into one process, forming a Resilience Management Guideline. The SMR project aims to support the exploitation of the project's results by means of the following approaches:

- Informing further research

- Commercialisation: consultancy

- Informing local processes and policy

- Use of results in education and training

- Informing European policy

- Development of standards

- Uptake in cities of tools

During the exploitation session, the group brainstormed on which kinds of support were needed in order to facilitate the useability of the tools by a project-external target audience. They further contributed proposals for the ways in which their current work would naturally lead towards exploitation activities or could lead to exploitation with the support of a strategic plan.

Outcomes of the discussion were as follows.

Informing further research

Peer-reviewed papers are planned and research partners will endeavour to have SMR research cited by scientists in their field. Further, 2-3 possible follow-up projects were suggested that could capitalise on the findings of the SMR project. Research impact was discussed in the context of upcoming conferences and partners decided on attending the events mentioned in the table below as part of their dissemination activities for reaching the research community.

Commercialisation: consultancy

Partners responsible for developing the respective tools proposed possible consultancy services utilising the tools to ensure their take-up by project-external cities. Consultancy activities on the Resilience Maturity Model are planned by TECNUN and by Strathclyde on the Risk Systemicity Questionnaire. The Resilience Management Guidline could also be guided and presented through consultancy and training, and where needed, additional training could be offered on particular tools.

Informing local processes and policy

Stakeholder training activities have raised awareness of resilience issues in the SMR cities and policymakers are actively involved in the use of the tools. Upcoming city-focussed events and conferences will ensure that policymakers at a local level are reached at this stage.

Use of results in education and training

A programme called Resilience Online is in planning, whereby short videos on the topics of the SMR will be produced and hosted online. Parallel activities by the City of Vejle will ensure that this programme continues after project end.

Informing European policy

A policy brief targeted at policymakers on a European level is planned. Presentation of SMR at events and inviting European policymakers as panellists to SMR events was agreed in order to directly communicate project outcomes to the target group.

Development of standards

Exploitation by means of standardisation development is supported by the drafting of a CEN Workshop Agreement towards establishing standards.

Uptake in cities of tools

Several examples of use in cities of the tools independently and beyond what was foreseen in the Description of Work demonstrates very promising steps towards uptake in the cities. Rome carried out a session on the Risk Systemicity Questionnaire as described above in section 4.2.1. and an additional testing of the RSQ tool was also carried out in Bristol, which as a Tier 2 city, would normally not be expected to use the tool at this stage but only to comment on its Tier 1 partner's pilot testing.

Support materials

The following supporting materials are currently under development following discussion with the tool developers and cities as to the support needed in order to exploit the tools:

- Educational video clips on the Risk Systemicity Questionnaire, developed by ICLEI and featuring tool developers of the RSQ from Strathclyde

- Visual layouts and online version of the Resilience Maturity Model, a supporting handbook and a set of icons to allow the model to be displayed in a visual way

Communication and dissemination activities

ICLEI laid out communication activies for the project during the next period. The upcoming communication and dissemination events and activies were summarised as follows and partners were reminded to contribute their proposals and events.

15.03.2017	**Newsletter submissions and requests for 6th SMR newsletter**
01.04.2017	**6th newsletter and cities submit press release proposal**
04.04.2017	Standardization workshop "European Workshop for Resilience in Cities and Communities", Berlin
03.05.2017	Open European Day at Bonn Resilient Cities
04-06.05.2017	Bonn Resilient Cities (SMR showcase and SMR session on Standardisation)
17-19.05.2017	3rd Review Workshop (WP5) Glasgow
21-24.05.2017	ISCRAM conference (3 papers accepted)
15.06.2017	**Newsletter submissions**
20.06.2017	2nd year review meeting, Brussels
21-24.06.2017	EURAM conference in Glasgow, UK
26.06.2017	7th REA Symposium 'Poised to adapt: Enacting resilience potential through design, governance and organization'
01.07.2017	**7th newsletter**
01.08.2017	**Cities submit press release proposal**
14-18.08.2017	GDN conference in Stuttgart, Germany
15.08.2017	**Newsletter submissions**
01.09.2017	**8th newsletter**
15.11.2017	**Newsletter submissions**
01.12.2017	**9th newsletter**

5. SUMMARY AND CONCLUSIONS

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

ICLEI, TECNUN and Strathclyde University shared some concluding remarks on the next steps of the project, and in particular related to WP3 and WP5 interactions. In particular they touched upon the great amount of input that was received during the workshop and would help them improve and finalize the tools' functionalities.

The Resilience Maturity Model and the Risk Systemicity Questionnaire will be uploaded on the SMR website on the 31st of March 2017 and will be available for European CITIES to download them. The Risk Systemicity Questionnaire will include the 9 final themes, plus some additional features like a progress bar. The Resilience Maturity Model will be also accompagnied with an online version of it, with the help of ICLEI's online system developers. When and if the tool is put online, efforts will be done to incorporate a function that would provide immediate feedback on the performed activities and would provide an estimation of the effort needed by the CITY in order to move to the next maturity stage.

Tecnun confirmed that they will take all comments into consideration regarding the further development of the System Dynamics Model. One example is that instead of the tool deciding the implementation level, the user should decide how much he/she expends in implementing each policy and the model should provide the implementation level achieved. Additional attention will be given to the budget/financing function, while different weight will be added to the various policies. Finally, Strathclyde announced that a lot of work is needed before the 3rd Review Workshop in Glasgow on the Resilience Building Policies tool; since then, the Strathclyde partners are working on developing in detail the program for the next testing of the tool.

As already announced in the Grant agreement, the tier-3 CITIES will already be in established resilience networks (100 Resilient Cities, pioneered by the Rockefeller Foundation, "UNISDR Making Cities Resilient" campaign members, ICLEI European member cities working already on adaptation and resilience, EU-funded projects like Green Surge etc.). In this way, tha take-up of project outcomes will be maximized and wider input on the developed SMR resilience tools will be solicited. All SMR partners were also invited by ICLEI to provide with ideas regarding cities that are already in resilience networks until the end of March 2017.

The European Resilience Management Guideline will develop and promote a shared/common understanding of resilience in CITIES. It will not only provide with tailor made tools, but also with other guidance materials according to the real needs of the CITIES. It will raise awareness and preparedness for different stakeholders through resilience based training programs, and finally will create a commonly accepted, environmental and socio –economical "value" perspective of resilience, thus will embed the 'sustainability' principles into resilience thinking.

The discussion on the European Resilience Management Guideline will continue at the beginning of April, when European research projects working on the topic of resilience will come together at a unique workshop in Berlin to present their progress and discuss with cities their challenges and needs for becoming more resilient as well as sharing effective solutions and best practices. During the workshop, there will be an extended session on the European Resilience Management Guideline, while also the potential for the guideline to be standardized will be discussed.

Also, the final recap/debriefing discussion on the last day, aimed to gather input regarding the following topics: 1) the sessions that will be needed during the 3rd Review Workshop in Glasgow (17-19 May 2017), 2) dates and concept for the pilot implementation process of the System Dynamics Model and the Resilience Building Policies tool; Strathclyde and Tecnun will basically suggest dates for the cities to choose, as the tools are not yet ready and presentable for stakeholder training workshop.

It was agreed though that the pilot process will start already in June 2017 and will conclude by the end of September 2017. It was agreed that the first stakeholder training on the System Dynamics Model will take place on the 9th of June in San Sebastian. The webinars will still serve as a follow-up to the stakeholder training workshops, as this was a process that worked out well in the joint pilot implementation of the Resilience Maturity Model and the Risk Systemicity Questionnaire.

The second review workshop has definitely helped to provide a better and improved definition of the policies that need to be implemented in the specific stages of the Resilience Maturity Model and also supported the deeper integration of all the SMR resilience tools. These results are useful to understand better the dynamics of building resilience in European cities.

ANNEX I

WORKSHOP PARTICIPANTS

Partner Institution	Function	Internal/External	Gender
Vejle	Project manager	Internal	female
TECNUN	Researcher	Internal	female
Glasgow	Project officer	Internal	male
Rome	Project manager	Internal	male
Uni. of Strathclyde	Professor	Internal	male
Linköping Uni.	Professor	Internal	male
TECNUN	Ass. Professor	Internal	female
Donostia	City Councilor	Internal	male
CIEM	Professor	Internal	male
ICLEI Europe	Project officer	Internal	female
Uni. of Strathclyde	Professor	Internal	female
Vejle	Project manager	Internal	male
TECNUN	Ass. Professor	Internal	female
Vejle	Project manager	Internal	male
Donostia	Head of Strategy office	Internal	male
TECNUN	Professor	Internal	male
TECNUN	Project assistant	Internal	male

Donostia	City Councilor	External	male
TECNUN	Researcher	Internal	female
Linköping Uni.	Researcher	Internal	female
Rome	Project manager	Internal	male
Donostia	First responder	External	male
Riga	Project manager	Internal	male
DIN	Project manager	Internal	male
DIN	Junior project manager	Internal	female
TECNUN	Ass. Professor	Internal	female
Donostia	City Councilor	Internal	female
Kristiansand	Project manager	Internal	female
Uni. Of Strathclyde	Researcher	Internal	male
CIEM	Head of Lab	Internal	female
Donostia	First responder	External	male
Riga	Project manager	Internal	male
CIEM	Ass. Professor	Internal	female
TECNUN	Professor	Internal	male
Kristiansand	Crisis Manager	Internal	male
CIEM	Ass. Professor	Internal	male
ICLEI Europe	Project Officer	Internal	male
TECNUN	Professor	Internal	female

Rome	Project manager	Internal	female
Bristol	Project manager	Internal	female
Bristol	Project manager	Internal	female

WORKSHOP AGENDA

DAY 1

Time	Script	Partners responsible
09.00-09.15	Official Welcome	*Mayor of San Sebastian Eneko Goia*
09.15-10.15	Welcome and general project updates	*Project Coordinator*
10.15-10.35	Introduction the to the System Dynamics Model	*TECNUN-CIEM*
10.35-11.00	System Dynamics Model Session 1	*TECNUN-CIEM*
11.00-11.15	*BREAK*	
11.15-11.40	System Dynamics Model Session 2	*TECNUN-CIEM*
11.40-12.10	System Dynamics Model Session 3	*TECNUN-CIEM*
12.10-12.45	Sessions 2&3 Plenary	*TECNUN-CIEM*
12.45-14.15	*LUNCH*	
14.15-15.30	System Dynamics Model Session 3 – Presentation and Work in groups	*TECNUN-CIEM*
15.30-16.00	*BREAK*	
16.00-16.45	System Dynamics Model Session 3 – Plenary	*TECNUN-CIEM*
16.45-17.00	Wrap-up of 1st day	*Project Coordinator*

DAY 2

Time	Script	Partners responsible
09.00-10.00	Update on the Maturity Model and the Risk Systemicity Questionnaire	*TECNUN & Strathclyde University*
10.00-11.45	Review of the Pilot Implementation Resilience Maturity Model Risk Systemicity Questionnaire	*ICLEI – Tier 1 & Tier 2 Cities*
11. 45-12.00	*BREAK*	
12.00-12.15	Intro to Resilience Building Policies	*Strathclyde University*
12.15-13.00	Examples from current work on policies: Literature and MM policies, Literature and policies, MM policies interdependencies, RSQ policies	*Strathclyde - LiU*
13.00- 13.45	*LUNCH*	
13.45-15.30	Resilience Building Policies for the MM SESSION 1	*Strathclyde – ICLEI - LiU*
15.30-15.45	*BREAK*	
15.45-17.30	Resilience Building Policies for the MM SESSION 2	*Strathclyde – ICLEI - LiU*
17.30	Wrap-up of 2nd Day	*Project Coordinator*

DAY 3

Time	Script	Partners responsible
9.00-09.30	Feedback on the Stakeholder Training Workshops for the Community Engagement and Communication Tool	*ICLEI*
09.30-09.45	Exploitation Plan	*ICLEI*
09.45-10.00	Standardization Workhop Berlin	*DIN*
10.00-11.00	Pilot Implementation Planning	*ICLEI*
11.00-11.30	*BREAK*	
11.30–12.30	Initiate thinking on the Resilience Management Guideline	*ICLEI –* *All partners*
12.30-13.00	Debriefing and next steps	*Project Coordinator –* *All partners*
13.00-open	*LUNCH*	

PILOT REVIEW SESSION AGENDA

Time	Session	Responsible
10:00 – 10:05	Welcome and brief recap of the pilot activities	ICLEI
10:05 – 10:20	Overall Feedback on the pilot implementation of the Risk Systemicity Questionnaire	Tier-1 Cities, 5 minutes each, guiding questionnaire to be sent before hand
10:20 – 10:30	Q&A	ICLEI, Strathclyde
10:30 – 10:45	Peer-Review	Tier-2 Cities
10:45 – 11:00	Break	
11:00 – 11:15	Initial Feedback on the pilot implementation of the Resilience Maturity Model	Tier-1 Cities, 5 minutes each, guiding questionnaire to be sent before hand
11:15 - 11:25	Q&A	ICLEI, Tecnun
11:25 – 11:40	Peer-Review	Tier-2 Cities
11:40 – 11:45	Reflection-Lessons learnt	ICLEI