SMART MATURE RESILIENCE

DELIVERABLE 5.7: REPORT OF THE

REVIEW WORKSHOP 3

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	Report of the Review Workshop 3
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EXECUTIVE SUMMARY

The third and last review workshop of the Smart Mature Resilience (SMR) project took place between the 17th and the 19th of May 2017 in Glasgow (UK). The workshop focused on gathering feedback for the City Resilience Dynamics Model and the Resilience Building Policies Tool, their pilot testing process that had just started and also collecting input that would help the tool developers to further develop tailor made to the cities' needs tool, earlier in the process. Following agreement between partners and the European Commision, this workshop was executed earlier in the process, before the actual pilot implementation of the two tools has formally kicked-off.

At the workshop, the cities provided feedback on the City Resilience Dynamics Model and the Resilience Building Policies Tool; following presentations of the tools, an overview of the planned testing process was provided by ICLEI.

On day 1, TECNUN and ICLEI ran a City Resilience Dynamics Model (System Dynamics Model or SD Model as this was the work-in-progress name of the tool that was used from M21 to M27) session which demonstrated a continuation of the work on this tool from the workshop in San Sebastian. Subsequently, on day 2 of the workshop, ICLEI led a discussion among the project partners with respect to the development of the ERMG. On the same day, Strathclyde and LiU, with the help of other partners, ran a session dedicated to the Resilience Building Policies Tool (RBP Tool), in which a pilot web-based version of this tool was shown to city participants, and additional data was collected from city partners to inform this tool.

Finally, on day 3 of the workshop, DIN organised a session dedicated to the standardization possibilities as part of the SMR project, and ICLEI discussed with the project partners the results of the implementation activities as part of WP5.

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. The exercises that were conducted during the workshop were developed to receive feedback from experts from the cities and develop the preliminary versions of the City Resilience Dynamics Model (SD Model) and the Resilience Building Policies Tool (RBP). Finally, the evaluation and lessons learnt from the workshop are presented.

The acquired results are useful to understand better the dynamics of building resilience in European cities.

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1. INTRODUCTION

The third and last review workshop of the Smart Mature Resilience (SMR) project took place between the 17th and the 19th of May 2017 in Glasgow (UK). The workshop focused on gathering feedback for the City Resilience Dynamics Model and the Resilience Building Policies Tool, initiate their pilot testing process and collect input that would help the tool developers to further develop tailor made to the cities' needs tools. Following agreement between partners and the European Commision, this workshop was executed earlier in the process, before the actual pilot implementation of the two tools has formally kicked-off.

During the review workshop, the current versions of the City Resilience Dynamics Model and the Resilience Building Policies Tool, which SMR partners are currently developing, were presented and the participants had the chance to ask questions around their nature and functionalities. The tools are designed to support cities and emergency services and build resilience at local level. Together with the Resilience Maturity Model (RMM), the Risk Systemicity Questionnaire (RSQ) and the Resilience Engagement and Communication Tool (aka Resilience Information Portal) constitute the European Resilience Management Guideline (ERMG), which is the last and most important deliverable of the Smart Mature Resilience project.

The European Resilience Management Guideline (ERMG):

1. Provides guidance and consultancy services to cities and local governments in assessing their local resilience status

2. Sets measurable targets together with local stakeholders, using the 5 SMR Resilience Tools to help the city further build local resilience and progress within the maturity stages

3. Defines an operational framework that provides guidance and aims at training and supporting municipalities and relevant stakeholders in implementing an integrated management system that enhances city resilience

During the workshop, the Tier 1 and Tier 2 cities provided feedback on the tool development and participated in interactive group exercises developed by the Strathclyde and TECNUN universities and facilitated by ICLEI together with them.

The aim of this deliverable is to illustrate the execution of the workshop, describing the activities carried out and summarizing the obtained results. WP3 and other work packages and deliverables (such as the upcoming D3.2, with which there will be much duplication in sections or the upcoming D3.4) majorly draw input and conculsions from the workshop activities. Some of the sub-chapters

included in this document is replicated from the WP3 deliverable, D3.2. These sub-chapters were drafted through collective work of the tool developers that implemented the respective workshop

2.WORKSHOP PREPARATION

The main objective of the third review workshop of the SMR project was to familiarise the project cities with the City Resilience Dynamics Model and the Resilience Building Policies Tool, to gather feedback on the cities' experience on testing the tools through interactive exercises, and to gather input for further development and finalization of the tools.

Preparation activities

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

- Periodic teleconferences between ICLEI and the tool developers
- Exercises and screenplays for them were developed and shared between partners
- 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:

- Participants list (see Annex I)
- Workshop agenda (see Annex II)
- Internal planning document (see Annex III)

Especially for the discussions about the European Resilience Management Guideline, as this was a work-in-progress that started in the 2nd Review Workshop in Donostia/San Sebastian and continued in the Standardization Workshop in Berlin and then in Glasgow, the European Resilience Management Guideline User Journey was shared with all partners before the workshop. The SMR partners were asked to provide with feedback on the User Journey, while during the workshop, a new version of the User Journey was created, and another reviewing round was scheduled to take place until the review meeting with the European Commission in Brussels, 20th June 2017.

3.**WORKSHOP EXECUTION**

As said already, the third, and final, review workshop described in this deliverable took place in Glasgow, UK, during 17th-19th May 2017. On day 1, TECNUN and ICLEI ran a City Resilience Dynamics Model session which demonstrated a continuation of the work on this tool from the workshop in San Sebastian. Subsequently, on day 2 of the workshop, ICLEI led a discussion among the project partners with respect to the development of the ERMG. On the same day, Strathclyde and LiU, with the help of other partners, ran a session dedicated to the Resilience Building Policies tool, in which a pilot web-based version of this tool was shown to city participants, and additional data was collected from city partners to inform this tool. And finally, on day 3 of the workshop, DIN organised a session dedicated to the standardization possibilities as part of the SMR project, and ICLEI discussed with the project partners the results of the implementation activities as part of WP5.

3.1 CITY RESILIENCE DYNAMICS MODEL (SYSTEM DYNAMICS MODEL, SD MODEL)

3.1.1. IMPROVED VERSION OF THE CITY RESILIENCE DYNAMICS MODEL

The following session recap and information is also included in the WP3 deliverable D3.2. Based on the comments gathered from cities during the workshop in San Sebastian, several improvements were added to the City Resilience Dynamics Model. Apart from the ones determined above, additional ones have also been introduced in the new version of the model. The additional improvements are as follows:

Changes to the initialisation page

- A brief explanation of the resilience maturity model was included as an introduction to the City Resilience Dynamics Model user. Figure shows an overview of the initialization page of the improved version of the tool.

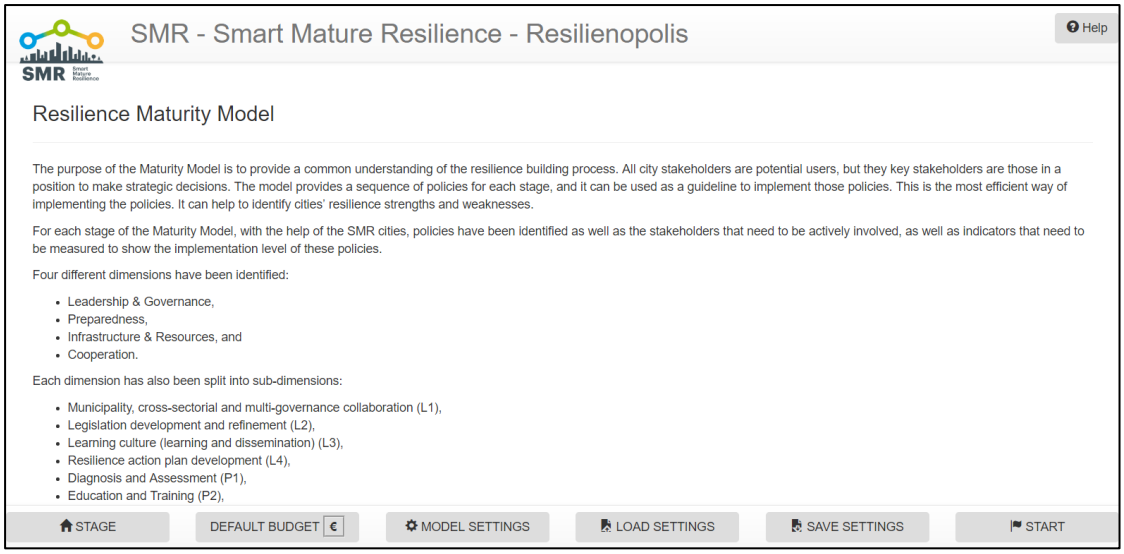


Figure 1: Initialisation page of the City Resilience Dynamics Model

- The option to *decide the default annual budget* was made available through clicking in the "Default budget" bottom shown in the above figure.

- The possibility to customize parameters of the model was introduced. Figure shows a screenshot of the interface where the user can customize the main parameters of the model per policy.

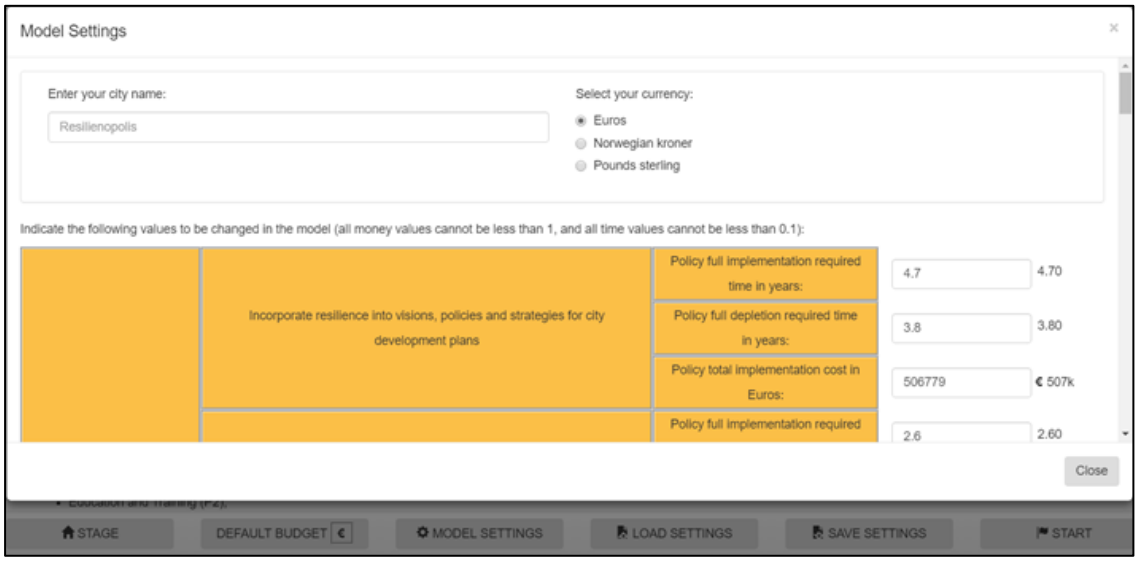


Figure 2: Customization of the main parameters of the model per policy

- Options to save and load model initial settings (city SMART stage, default annual budget, and model parameters) to a file was introduced through clicking in the "Save Settings" and "Load Settings" bottoms respectively.

Changes to the simulation page

- Instead of asking the user to decide on *policies implementation level*, the user should decide how much money to spend on implementing these policies (see Figure below).

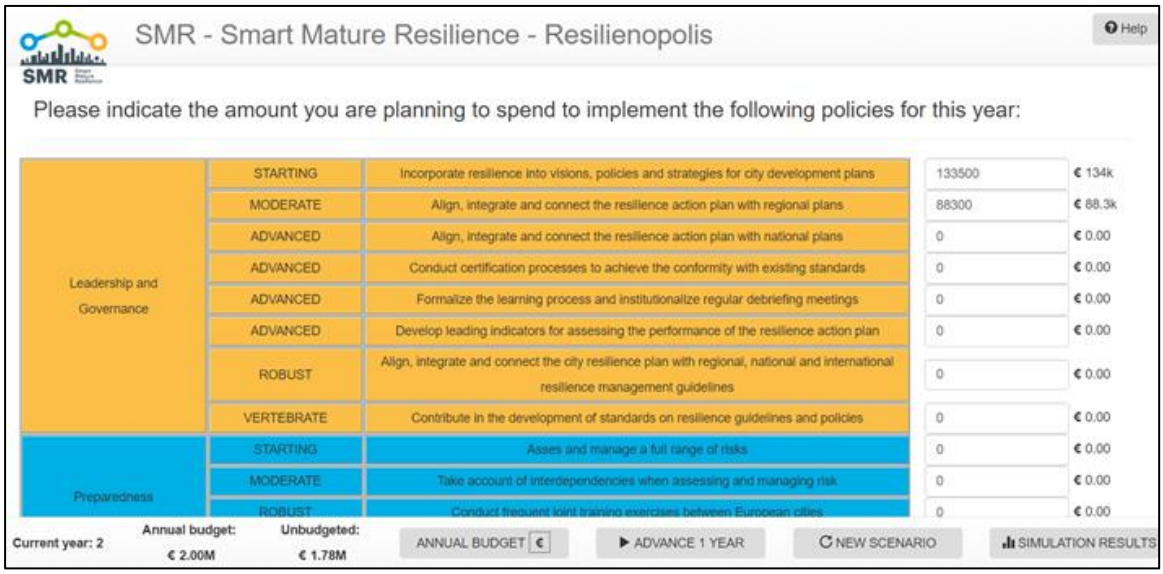


Figure 3: Deciding how much money to spend on implementing the policies in the SD model

- The option to simulate *budget cuts* was made available (see **Error! Reference source not found.** below).

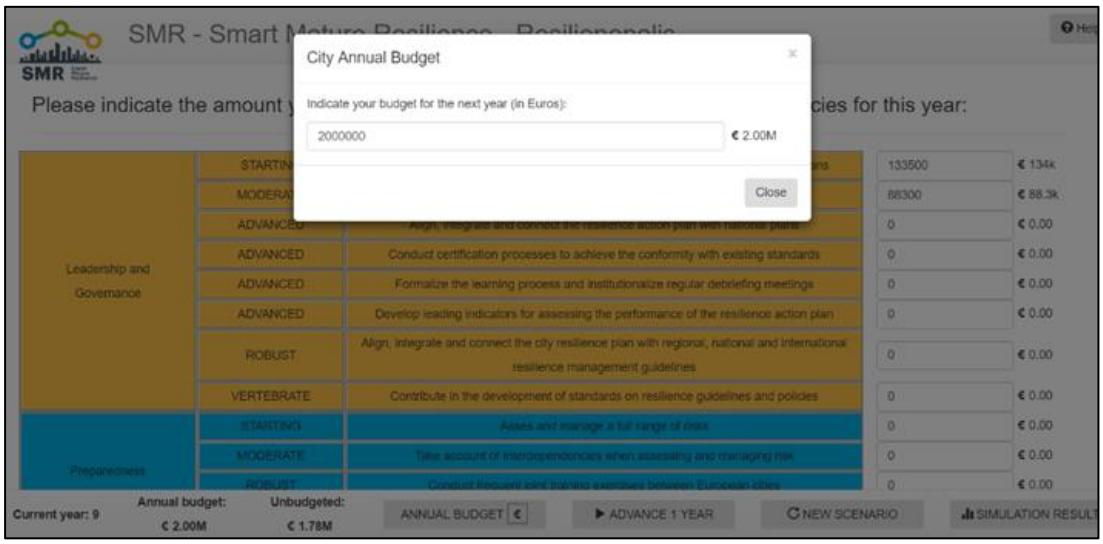


Figure 4: Simulation of budget cuts

- *Budget* and *time* are highlighted.

- When putting the mouse over the policies, the definition of each policy and the values of the main parameters of the policies are presented (see Figure below).

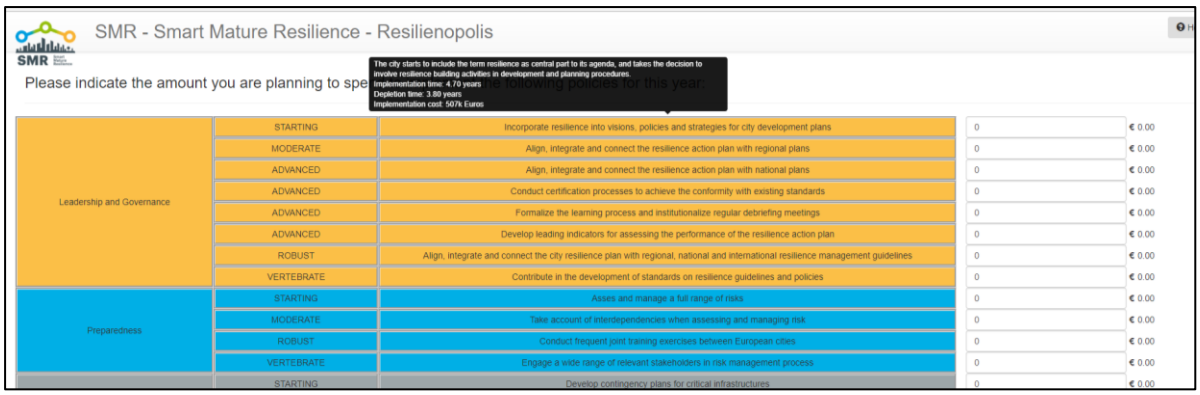


Figure 5: Definitions of each policy and the values of the main parameters of the policies

Changes to the results page

- *Money spent on each dimension* is shown (Figure).

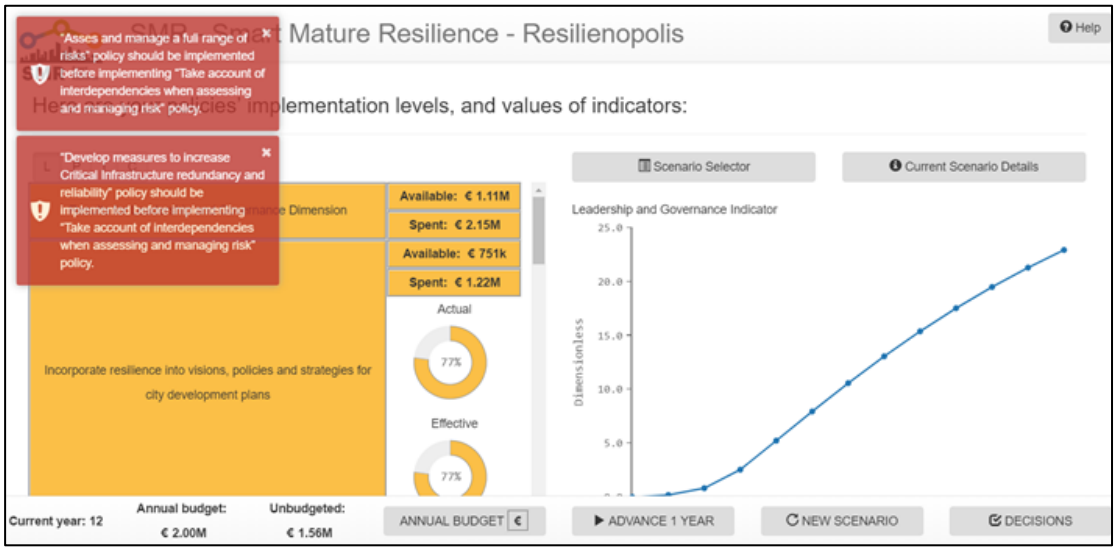


Figure 6: City budget spent on each policy

- Policies mentioned in the *Help Messages* should be *highlighted* in the decisions page (Figure).

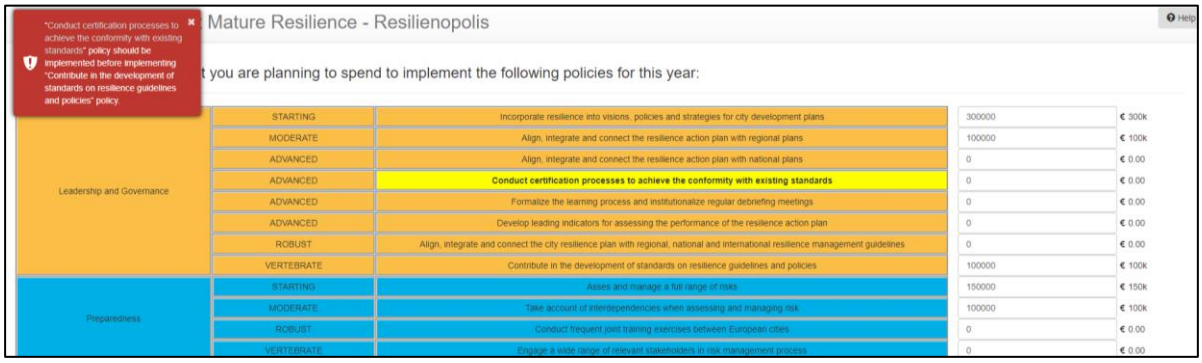


Figure 7: The feature highlighting policies mentioned in the Help Messages in the SD model

- A graph with the *evolution of the spending* was included (Figure).

Figure 8: A graph depicting the accumulation of city's spending

- *Accumulated expenses* are now shown in the SD model (Figure Figure).

Figure 9: A feature of the SD model displaying the accumulation of city's expenses over time

- Instead of showing graph legends on a particular dialogue-box, it is introduced under graphs for all the graphs.

- The tool gives the user an opportunity to *save the results of the simulations to allow sharing* them with colleagues; this is done by making *detailed scenario results* available and possible to print as PDF.

Changes in all pages

- Whenever the mouse pointer hovers over a policy, a *definition of the policy* should appear so that it is clearer what each policy means.
- *Clearer names* to indicate that buttons' functionalities replaced the previous names.
- *Clearer pop-up messages* to understand what the buttons and other widgets mean and how they were added.
- A help button was added in all pages to take the user to a quick user guide.

Transversal relationships

Regarding the transversal relationships, TECNUN analysed the results obtained from the workshop in San Sebastian and developed a new precedence relationships graph. Based on the new graph, before the workshop, a questionnaire was sent to cities to validate the transversal relationships and include the new precedence relationships in the improved version of the SD model.

Thus, the exercises conducted in Glasgow regarding the SD model met the following three objectives:

- Technical validation of the SD model tool.
- Validation of the requirements of the SD model tool.
- Playing with the tool in order to achieve a target.

3.1.2. EXERCISE REGARDING THE TECHNICAL VALIDATION OF THE TOOL

Before starting to work in small groups, a member from TECNUN and CIEM presented the new version of the SD model tool. First, they reminded the participants of the objectives and the basic structure of the tool. Then, they explained the new functionalities included in the tool and gave a short tutorial regarding the functioning of the improved tool.

Divided into four small groups, the participants validated the technical part of the tool and provided comments regarding the new functionalities. Furthermore, they were asked to complete a usability questionnaire in order to get feedback about the improved functionalities and the new ones that have been introduced in the model.

3.1.3. EXERCISE REGARDING THE VALIDATION OF THE REQUIREMENTS OF THE TOOL

In addition to validating the technical part of the tool, the requirements that the tool should fulfil were also validated during the workshop. The main requirements identified were the following:

- *Training tool:* Decision makers need to be able to train themselves with tools which represent real life scenarios. To do so the SD model should fulfil the following three characteristics:
    - *Holistic perspective:* The SD model should provide and encourage a holistic perspective that ends the silo mentality users might have. The SD model would not only be aware of their specific area but also understand other sectors.
    - *Temporal order between policies:* The policies should be applied in a specific order, since they are interrelated. The SD model should show the user which is the most efficient path to implement them.
    - *Relationships between policies:* The SD model should interactively represent the existing temporal and interdisciplinary relationships between policies, as well as the impact when the policies are not implemented in the proper order.
- *Trustworthy:* The SD model should represent a city and show trustworthy results in order to provide decision makers a tool to study and forecast the impact of a decision of implementing some policies and make aware of the counterintuitive consequences of this decision. Therefore, the SD model should allow the user to parametrize the model with real cities' data.
- *Flexible:* The SD model should be flexible, enabling decision makers to adapt the game to different situations and contexts such as socio-cultural aspects, economic structures or different types of critical infrastructures, as well as enable to choose the type of disasters the SD model will simulate.

In addition to explaining the requirements, some evidence about how these requirements were fulfilled by the SD model tool were explained:

- *Training tool:*
    - *Holistic perspective:* The SD model encompasses the policies defined in the four resilience dimensions: Leaderships and Governance, Preparedness, Critical Infrastructures and Cooperation. The user should have a holistic view of the problem and not just a view of its particular area. As a consequence, the SD model enables the user to make aware that the decisions taken could influence not only one resilience dimension but also others. The SD model shows the evolution of the resilience dimensions over time.

- *Temporal order between policies:* In order to make users aware of the effects of the implementation order of the policies, two variables are represented per policy: the actual implementation level of the policy and the effective implementation level of the policy. Actual implementation level: it represents to what extent this policy has been implemented based on the resources that have been invested in the policy.

  Effective implementation level: based on the linear and transversal relationships, it represents the level of effectiveness of the implemented policies.

  The objective of these variables is to show the importance of the implementation order in order that the implemented policies have an effect in building city resilience.

- *Relationships between policies:* The SD model takes into account the precedence linear and transversal relationships between the policies. Every four years of simulation, the SD model shows pop-up messages to the user explaining the errors the user has committed. The SD model enables the user to make aware and learn which precedence relationships exist between policies and therefore understand better the optimum path towards resilience.

- *Trustworthy:*

  - The SD model has been parametrized through a workshop with 7 European cities. Therefore, the showed results represent the real scenarios and the impact of the decisions for a standard European city. The resulting graphs indicate the implementation level of each resilience dimension and the speedometer graphs indicate the maturity stage of each resilience dimension.

- *Flexible:*

  - The SD model allows the user to stablish the initial maturity stage level. The SD model enables the user to change the available annual budget during the game in order to be able to represent budget cuts or budget reductions. The SD model also enables the user to adjust the critical parameters that define the characteristics of the represented city: implementation cost of the policies, implementation time of the policies, and depletion time of the policies. The SD model enables the user to save and share the obtained results, therefore, it provides an opportunity to learn from other users' experiences. However, the actual SD model is not prepared to be particularized to specific disasters. Thus, the next steps could be to develop an updated version which allows users to particularize the SD model to the disaster under study.

After the presentation, the participants were divided into small groups and they started validating these requirements. They were asked to indicate if the identified requirements were sufficient or if there were additional requirements that should be added to the list. Then, they had to look for

evidence to justify these requirements or suggest ideas to be added to the tool in order to fulfil these requirements.

3.1.4. PLAYING WITH THE TOOL IN ORDER TO ACHIEVE A TARGET

Up to this stage, the partner city representatives had been introduced to the new version of the SD model and its functionalities and had tested the SD model. The objective of the last exercise was to get them to use the SD model in a competitive context.

Formed in four groups, every group was asked to use the SD model to achieve the same objective. They were asked to start from the STARTING stage and achieve 100% on all of the RMM dimension indicators except 60% for the Infrastructure and Resources indicator, by using an annual budget that cannot exceed two million Euros.

Two of the groups were able to achieve very good results, yet one of them had slightly better results and won the competition. Cagiltay et al. (2015) showed that the competition style in using serious games helps users to achieve significant improvement in learning and motivation.

3.1.5. RESULTS

In general, participants were satisfied with the new features of the SD model that had been added since the workshop in San Sebastian. They specifically highlighted the following new features to be very useful:

- Being able to change policies' implementation cost, and implementation and depletion times.
- Being able to save the settings and reload them later.
- The SD model helps to debate resilience and to come up with questions and suggestions regarding the ways in which city resilience is achieved.

Nonetheless, they asked for few additional changes:

- As a training tool, having 98 policies feels too much, perhaps something in the middle. Finally, we have decided to make two versions of the tool, a reduced one with 19 policies and a more extended one with 46 policies (since 98 policies was also too many based on computational capacities of the software). These 46 policies are the most representative ones and they cover all the main actions addressed in the RMM.
- Currency could be adaptable to cities. We have included the option for choosing between Euros, Sterling pounds, and Norwergian kroners.
- To have a panel on the side to inform the cost and the time needed for to maintain policies. However, currently in the SD model, whenever the mouse pointer hovers over a policy, a pop-

up message appears with the information about the implementation cost, implementation time and depletion time. Therefore, we consider that it is redundant to establish a panel on the side with this information.

- Deciding the initial maturity stage is global, yet the results are given per dimension, perhaps the user could choose the initial maturity stage per dimension or per policy. The model has been updated to provide the option to directly choose the current stage of the city taking into account all the dimensions, or the option to set the implementation level of each policy individually. So we can say that with this option, the user can also establish the maturity stage per dimension or per policy.

- As it is a learning tool, it could be interesting to only show the policies in the city's current maturity stage during the simulation. This comment has not been implemented since, based on the tool's use as a learning tool, we consider that users should see and know which policies have been implemented, the ones that are going to be implemented and the ones that could be implemented in the future in order to learn about the resilience building process.

Participants also highlighted some points were either out of scope or already implemented in the tool in a different way. For example, several comments requiring the tool to suggest an amount to be spent per policy were received. However, such a feature would prevent the users from having an opportunity to learn from their own mistakes whilst working with the simulation.

Validation of the Requirements

The participants suggested several new requirements that the SD model tool should fulfil:

- *User friendly*: They considered that the SD model tool should be user friendly for the cities and easy to access. They stated that this requirement is being fulfilled through the visual design of the tool and the tutorial guide which is available in the help menu. Furthermore, the access to the tool is through a web-based browser so the cities do not need to install anything or buy anything to use it.

- *Simplicity of functionalities*: the functionalities of the tool should be simple to learn and use it otherwise the cities wouldn't use the tool.

- Visual: the tool should be visual since it is a serious game and not an analytical tool. The cities consider that the tool should provide results in a very visual way in order to better understand the main message and get the conclusions as soon as possible.

Regarding the requirements presented the participants added the following evidence to the following requirements:

- Temporal order between policies: they consider that it would be interesting if the model showed the precedence relationships among the policies in order to be easier to know how

the policies are related. However, some of them argue that they are not sure whether the cities need to know about interrelationships or not.

- Trustworthy: the cities stated that the tool should be transparent with the calculations behind the tool in order to trust the results. They consider that qualitative results help a lot but the quantitative results make the user doubt the logic behind the model.
- Flexible: the cities suggest that in order to make the model more flexible, it would be good if the tool allowed new policies to be introduced.

Playing with the tool to achieve a target

The four groups played for around 45 minutes with the tool to achieve the target mentioned above (Figure , Figure , and Figure). Each group discussed their decisions and appointed one member to enter the decision to the SD model. The results are listed in the following table. Group 3 and 4 achieved the best results with an edge to Group 4. Group 4 achieved a smooth progress over the simulation period. Nevertheless, it is clear that Group 3 was more conscious in terms of budget spending. Group 1 faced some troubles in time due to intense discussion concerning the content of the MM. Although such discussion was not very relevant to the exercise, we believe it is healthy behavior, as one of the main purposes of the SD model is to start such discussions. Group 2 was doing well in the beginning of the simulation; however this was followed by a slow decline caused by decreased spending.

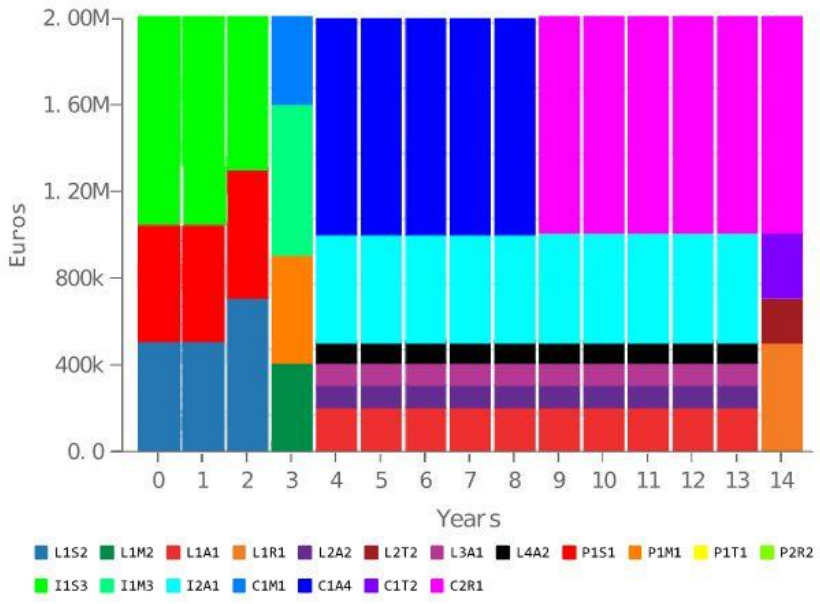
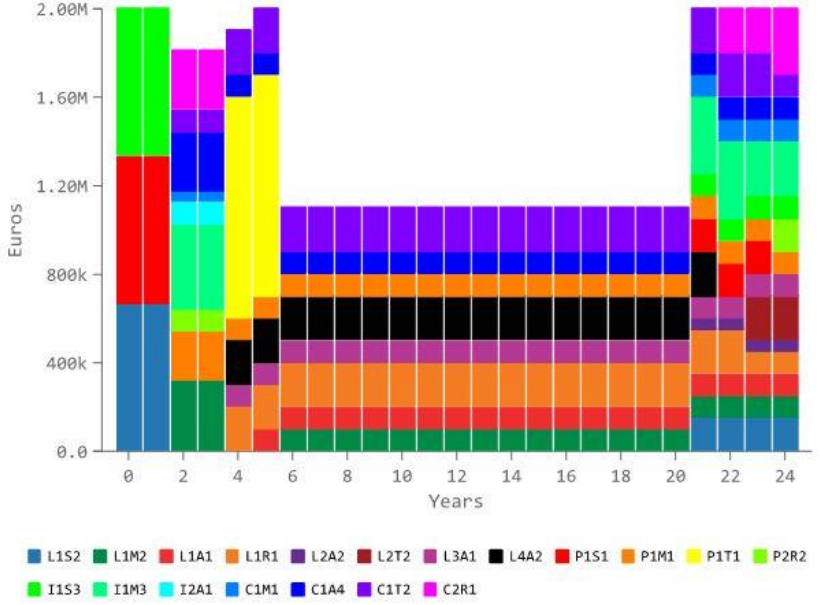
Group 1	Group 2
Budget decisions: 	Budget decisions: 

Figure 10: Results of the SD model group exercise (a)

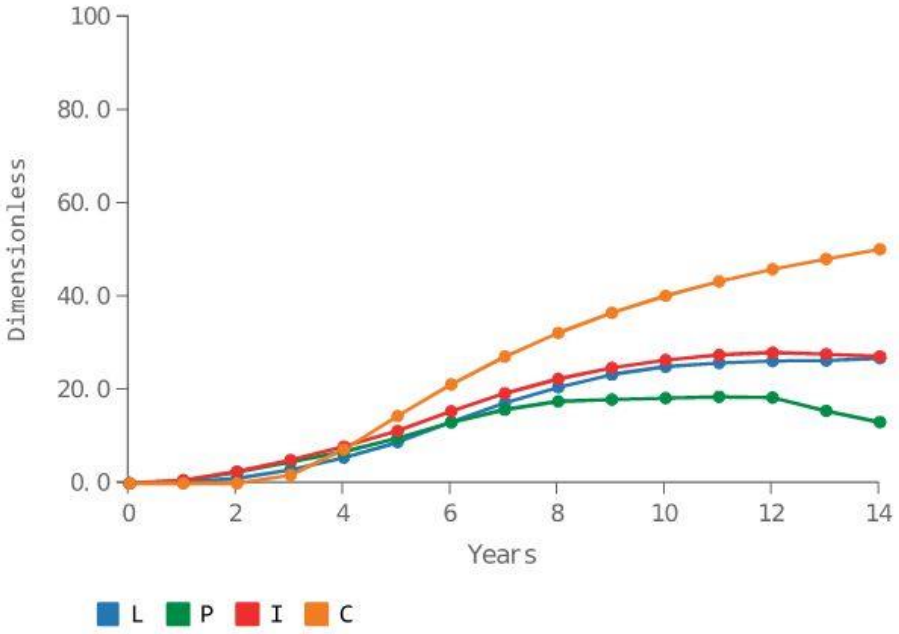
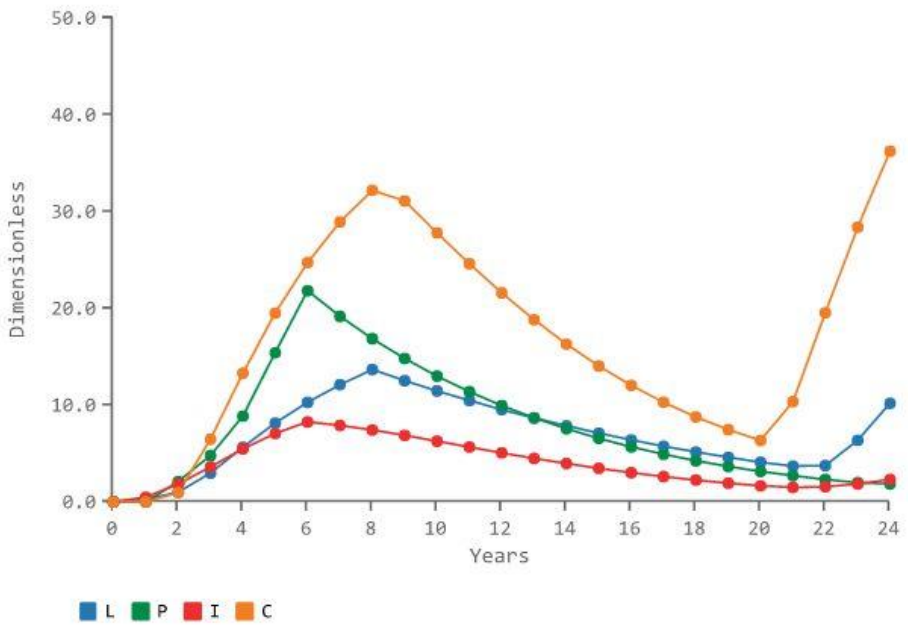
Group 1	Group 2
SMR dimensions indicators: 	SMR dimensions indicators: 

Figure 11: Results of the SD model group exercise (b)

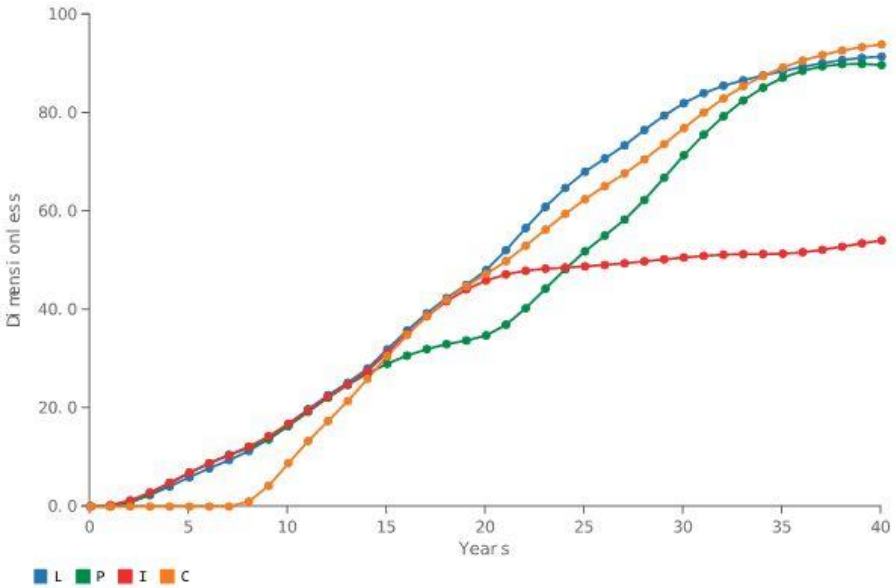
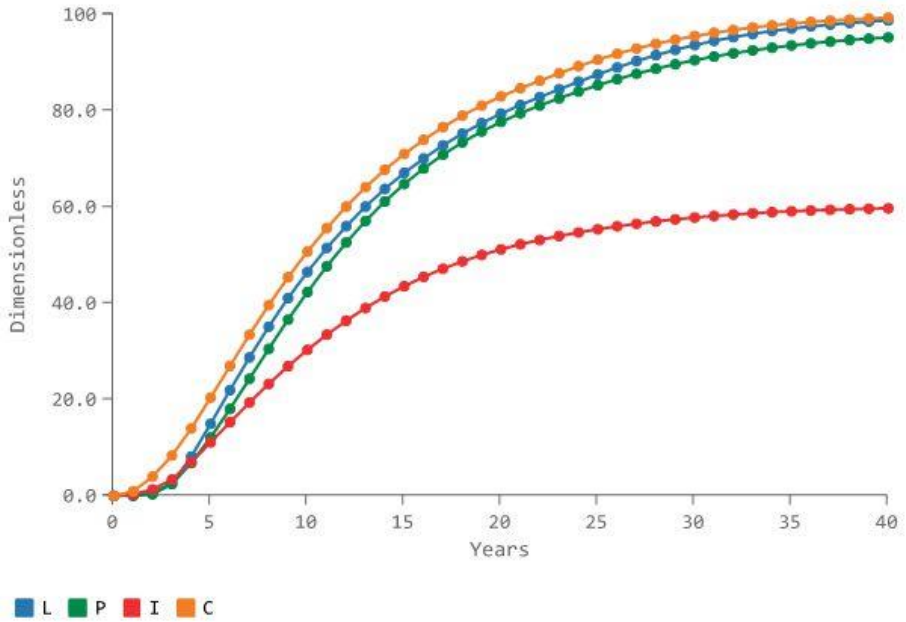
Group 3	Group 4
SMR dimensions indicators: 	SMR dimensions indicators: 

Figure 12: Results of the SD model group exercise (c)

3.1.6. CONCLUSIONS FROM THE CITY RESILIENCE DYNAMICS MODEL SESSION

Similarly to the workshop in San Sebastian, the cities believe that the SD model tool is useful as a training tool in order to better understand how the MM could be implemented in a city and understand the path towards resilience development. We have improved the initialisation, simulation and result pages of the SD model user interface, based on the feedback from city users. In general, the changes introduced in the improved version of the SD model tool were useful and appropriate for the cities to increase the usability of the tool.

Some participants suggested that the tool could also be used as a decision support tool as the model could highlight in each simulation step policies that should be implemented in order to efficiently improve the resilience level of the city.

Although this could be an interesting additional use of the SD model tool, this approach can be considered as being out of scope of the SMR project's objectives. As expressed in the SMR project proposal, the SD model is intended for raising awareness of city stakeholders regarding the counter-intuitive consequences of the policy options and as a reflective model, but not as a decision support tool. For more information regarding the SD Model, please take a look at: D3.5 System Dynamics Simulation Model: City Resilience Dynamics Tool

3.2. EUROPEAN RESILIENCE MANAGEMENT GUIDELINE SESSION

In accordance with the Objective 8, ICLEI prepared a session that continued the brainstorming among partners and reflected on the way that the ERMG as a whole, including all the 5 SMR tools, should be prepared, tested and validated. The session aimed to further compliment the sessions that took place in the previous review meeting in San Sebastian and in the Standardization Workshop in Berlin, receive feedback on the ERMG User Journey and further engage partners in the co-creation process of the ERMG until the end of the project's lifespan.

The session took place in two parts (during days 1 and 2 of the 3rd Review Workshop in order to also take into account the participants' feedback on the SD Model and the Resilience Building Policies tool).

ERMG SESSION IN BERLIN

At this point, it is necessary to add some further information on the brainstorming activities that helped ICLEI develop the User Journey, including the WP5-WP6 meeting in Berlin. In Berlin, ICLEI organised

a Back-Casting Exercise with the involvement of all present partners. Backcasting is defined as "generating a desirable future, and then looking backwards from that future to the present in order to strategize and to plan how it could be achieved" (Quist and Vergragt, 2006). In a backcasting planning method, different stakeholders brainstorm to create a vision about their city or community in the future taking into account their current or future resilience building efforts. In the process, they are asked to work backwards and identify policies, indicators and programs that allow building pathways that will lead to realising a given vision. ICLEI invited the participants to set a vision for the European Resilience Management Guideline and discuss how the project could deliver a Guideline as tailor made and relevant as possible for the partner CITIES and their needs.

The outcomes of the exercise, thus the vision for the SMR European Resilience Management Guideline, can be summarized in the following lines:

- The SMR European Resilience Management Guideline should include a comprehensive approach to all the 5 SMR tools
- The SMR European Resilience Management Guideline should be used by all CITIES by 2020
- The SMR European Resilience Management Guideline should be easily understandable
- The SMR European Resilience Management Guideline should include a SMART introduction (to resilience)
- The SMR European Resilience Management Guideline needs a good identity or label
- The SMR European Resilience Management Guideline should support the creation of city action plans
- The SMR European Resilience Management Guideline should increase each CITY's maturity level
- The SMR European Resilience Management Guideline should provide a management standard on resilience
- The SMR European Resilience

Management Guideline should include a maturity process **Figure 13: Back-casting Exercise** accumulation of city's spending

- The SMR European Resilience Management Guideline should refer to funding mechanisms
- The SMR European Resilience Management Guideline should focus on getting stakeholders to buy in
- The SMR European Resilience Management Guideline should create space for cross-sectorial decision-making
- The SMR European Resilience Management Guideline should be a living document and account for the changing nature of resilience needs
- The SMR European Resilience Management Guideline should be taken up by the private sector

During the exercise, Strathclyde was keeping track of the participants' input and created a casual map based on the backcasting exercise and the discussions:

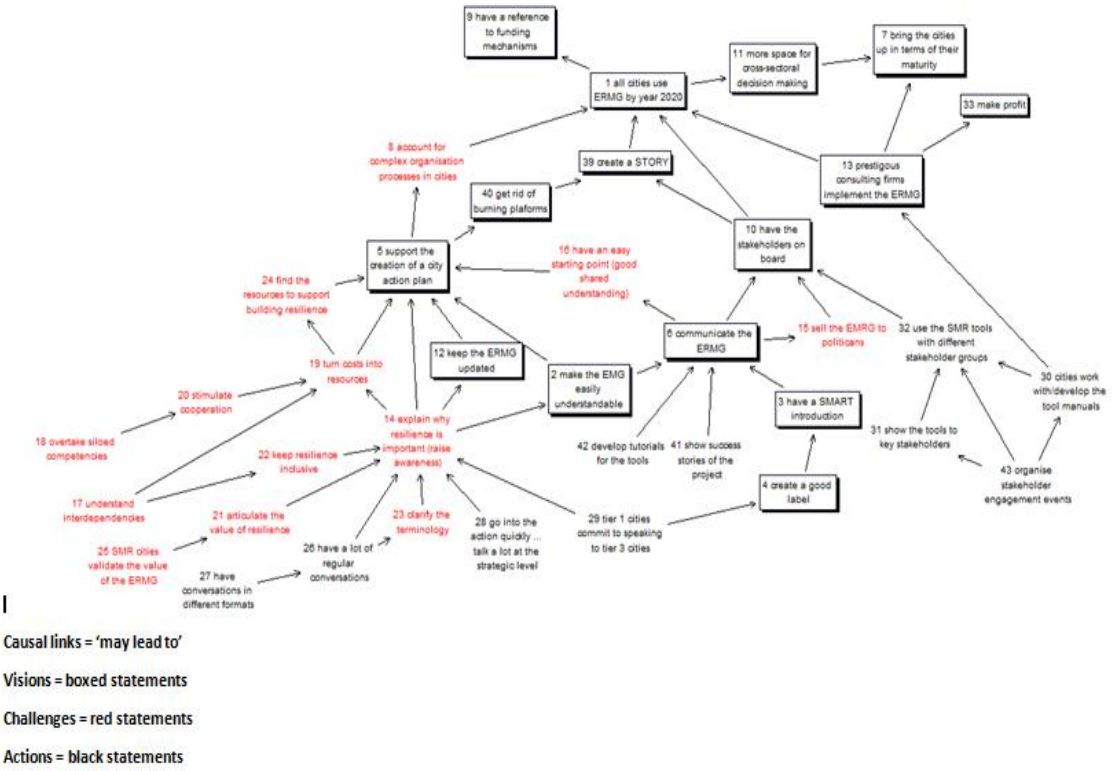


Figure 14: Draft casual map for the Back-casting exercise on the European Resilience Management Guideline (*low resolution as outcome of the Group Explorer software)*

As a summary of the day, the partners agreed on the following task points regarding the European Resilience Management Guideline:

- Develop and promote a shared/common understanding of resilience in CITIES
- Develop, tailor made tools and guidance materials according to the real needs of the CITIES
- Feed the 5 SMR tools into an integrated guide for building resilience in CITIES, but also accompany it with other elements that will make it more attractive
- Raise awareness and preparedness for different stakeholders through resilience based training programs
- Create a commonly accepted, environmental and socio –economical "value" perspective of resilience – embed the 'sustainability' principles into resilience thinking

ERMG SESSION IN GLASGOW

Description and results of the session

ICLEI presented the ERMG User Journey (developed following the 2nd Review Workshop in San Sebastian and the Standardization workshop in Berlin) to the workshop participants and asked for their feedback on three main issues:

- Who are the main users of the ERMG? Which are the most important target groups and user cases?
- What are the main elements of the ERMG? What are the steps to be followed in order for a CITY to enhance its resilience building efforts?
- Which are those additional elements that should be included in the ERMG and will increase its validity, usability and user-friendliness?

As a result of the session, the ERMG User Journey that was initially presented by ICLEI was updated. It was also agreed that the ERMG User Journey would be included in the second periodic report of the SMR project, while there would be another reviewing round among all partners before the second review meeting of the project on the 21st of June. The following version of the ERMG User Journey was shared with the participants and served as a basis for a facilitated by ICLEI discussion:

- *Baseline assessment*: strategic management
    - Self- diagnosis of maturity stage across four dimensions (leadership & governance, preparedness, infrastructure & resources, cooperation) through application of the RMM.

- *Risk awareness:* strategic management and municipal staff
    - Assess risk awareness in a multi-departmental context through application of the RSQ.
- *Identification of policy types by maturity stage:* strategic management and municipal staff
    - Select strategically effective policy types to be implemented through use of the RMM.
- *Establish prioritization of policy types:* strategic management and municipal staff
    - Map order of implementation of policy types through use of the SD model and the RMM.
- *Map policies for priority implementation for both resilience and risk:* strategic management
    - Map the order of implementation of policy types through use of the SD model and the RMM.
- *Replicate use cases for each policy:* strategic management and municipal staff
    - Develop and implement specific transformative action plans working in reference to sample cases and literature reference in Resilience Building Policies tool.
- *Integrate communication platforms:* strategic management and IT department
    - The city reviews its communication infrastructure and links internal channels through use of the Resilience Information Portal toolbox.

The updated version of the ERMG User Journey is included in the 2nd Periodic report of the project, while the final version of it, outcome of this session and the feedback gathered in May-June 2017, before the partners move on from the User Journey to the draft European Resilience Management Guideline is included below:

USER JOURNEY final version

DEFINITION

The European Resilience Management Guideline aims to provide guidance and consultancy services to cities and local governments in assessing their local status/situation of resilience, setting measurable targets together with local stakeholders, using resilience tools to further progress with the resilience maturity stages and monitoring/evaluating success in achieving them. The European Resilience Management Guideline defines an operational framework that provides guidance and aims at training and supporting municipalities and their stakeholders in implementing an integrated management system for resilience. This framework will be initially based on the User Journey of the Resilience Management Guideline that has been co-created with all SMR project partners. It will incorporate guidance for local resilience planning; based on the use of all five SMR resilience tools.

PREREQUISITE

The European Resilience Management Guideline should always refer back to the SMR definition of city resilience: ‘’City Resilience is the ability of an urban system or community to resist, absorb, adapt and recover from shocks and long-term stresses to keep the city functioning as a functional unit (vertebra) of European resilience backbone, and to learn from on-going processes through city and cross-regional collaboration to anticipate future demands, to understand the risk environment and strengthen the general preparedness”.

END-USERS: If everyone who makes up a city – from governments and policy-makers, communities and individuals, organizations and the private sector – are to collectively support and foster a more resilient future, there needs to be a common understanding of what constitutes a resilient city and how it can be achieved. Therefore, the European Resilience Management Guideline will inform, influence and support (directly or indirectly) the following four (4) end-user groups:

(1) Municipal Representatives/Employees and Critical Infrastructure Managers engaged in sustainability, climate adaptation, resilience, environmental planning, strategic planning *by providing guidance and training on resilience*
(2) Decision Makers (EU, national, regional, local) *by improving the current EU guidelines*
(3) City actors and stakeholders involved in resilience activities *by supporting their local decision making and complimenting their planned activities*
(4) Citizens, NGOs, Associations, Volunteers *by supporting their local decision making and strengthening their involvement in resilience co-creation through providing knowledge and tools*

OPERATIONAL STEPS

1. **Baseline assessment:** strategic management and municipal staff engaged in vulnerability assessment, city topography, climate adaptation and resilience, resource management

   Self- diagnosis of the city's maturity stage across four dimensions (leadership & governance, preparedness, infrastructure & resources, cooperation) through initial application of the Resilience Maturity Model – the model promotes self-assessment, transparency, city openness, best practice transfer among cities and regions; requires that stakeholder mapping and vulnerability assessment is done

2. **Risk awareness:** strategic management and municipal staff engaged in vulnerability assessment, city topography, climate adaptation and resilience, resource management

   Assess risk awareness and potential risk vicious circles in a multi-departmental context through application of the Risk Systemicity Questionnaire – this tool is useful to fill in the gaps in risk awareness, promotes conversation on risks, increases city openness and transparency and can be used to fill in the gaps in risk awareness and management; requires that stakeholder mapping and vulnerability assessment is done

3. **Identification and description of policy types by maturity stage:** strategic management and municipal staff of different disciplines across the RMM dimensions

   Select strategically effective policy types to be implemented through use of Resilience Maturity Model. The focus is shifted on the identification of policies, on making a city adaptable and flexible to future challenges, providing a holistic view on city processes and information on dealing with external and internal risks – can be used tool to structure the conversation with politicians and lobby for resilience at local level

4. **Establish prioritisation of policy types:** strategic management and municipal staff

    Map order of implementation of policy types through use of System Dynamics Model and Resilience Maturity Model, - the combination of the two tools offers an overview of holistic resilience building activities and promotes changing of behaviour and citizens' approach towards resilience – creation of a resilience culture at city, community, local level

5. **Map policies for priority implementation for both resilience and risk and set up the implementation of resilience building activities:** strategic management and municipal staff

    Map the order of implementation of policy types through a combined use of the System Dynamics Model and Resilience Maturity Model; the combination of the two tools accompanied with information and guidelines for budget allocation interdependences when implementing specific policies, implementation timeline, cross-sectoral and across the Resilience Maturity Model dimensions and policy success or performance indicators

6. **Replicate existing use cases for each policy:** strategic management and municipal staff

    Develop and implement specific transformative action plans working in reference to sample cases and literature reference in Resilience Policy tool; cities learn from each other through successful case studies and support in knowledge transfer; provision of scroll down, filtering system to find most relevant use cases

7. **Integrate communication platforms and engage with city stakeholders:** strategic management and IT department

    The city reviews its communication infrastructure and links internal channels through use of the Resilience Information Portal toolbox; cities get consulting on how to better communicate resilience and replicate use cases from other resilient cities, the communication platform integrates all the other tools and provides download links to user manuals, resilience case studies and events

Finally, the partners assessed a variety of additional elements and features the European Resilience Management Guideline may or may not entail. The following table shows these elements and the decision around them.

ADDITIONAL ELEMENTS

GUIDELINE ELEMENT/FEATURE	DECISION
Level Zero (0) activities – State of the art for each CITY regarding resilience and planned activities	YES
Glossary, Terminology, Resilience topics and their importance for Level Zero	YES
SMR CITIES statements on resilience, paragraphs on each CITY's work on resilience	YES, in
Commonly accepted guidelines on resilience building in CITIES (EC, local/regional level at least for the 7 partner CITIES) – Refer to important agreements and guidelines, link with WP1 and the other DSR7 projects	NO, only partially in some cases where a direct link would be obvious
Existing standards lists (the most important ones, not the whole list)	NO, possibly some mentions only
List of indicators for each policy, maturity stage and dimension/sub-dimension (indicators in ISO standards and indicators identified in Maturity Model training workshops to inform this section	YES, partially
Co-creation exercises for municipal staff and stakeholders – for example: Stakeholder mapping, back casting, breaking-the-ice exercises, adaptation options	YES (but should not shift the focus from the SMR tools)
User manuals, tutorials, links to videos and the website online applications	YES

Dissemination guidelines – communication strategy (press releases, identification of communication streams)	NO, this will be part of the communication strategy
Use cases, one case study for each dimension and various stages to show the ideal path to resilience	YES

3.3. RESILIENCE BUILDING POLICIES TOOL

The second day of the workshop in Glasgow was dedicated towards developing the initial conceptualisation of the Resilience Building Policies which had been worked on by Strathclyde, LiU, TECNUN, and ICLEI. The session was organised into three exercises. In the first exercise a pilot web-based version of the Resilience Building Policies tool was presented to city participants and feedback was sought from cities. The aim of the second exercise was to gather suggestions of case studies from city representatives, which could illustrate the implementation of different policies which form the Maturity Model – those case studies were intended to subsequently form a part of the Resilience Building Policies online tool. And finally, in the third exercise, a Group Explorer session was used to gather policies suggestions from cities to expand the policies contained in the RSQ tool. The following session recap and information is also included in the WP3 deliverable D3.2.

3.3.1. 1ST EXERCISE ON DAY 2: GATHERING FEEDBACK ON THE ONLINE PILOT OF RESILIENCE BUILDING POLICIES

The objective of the 1st exercise was to gather feedback from city participants on a pilot web-based version of the Resilience Building Policies tool. City participants were organised into three groups and their discussion was facilitated by the scientific partners. The discussions focussed on gathering critical feedback from city participants with regards to the structure, usability, and practicality of the proposed design of the tool**.**

During the exercise, city participants were advised that the structure of the Resilience Building Policies tool was designed based on the web-based version of the MM (Figure). The Resilience Building Policies tool extends the MM by allowing the user to click on the policies in the MM and access further supporting information for that policy. This additional information includes:

- Definitions and relevant concepts from the literature.
- Case studies describing how cities implemented the policy in question.

- Related policies, including those contained in the RSQ, and related links (for example to the 100 Resilient Cities).
- Links between policies in the MM shown through a means-end diagram. This enables the user to understand how the given policy can be implemented, and what the consequences are of implementing that policy.
- References for the given policy.

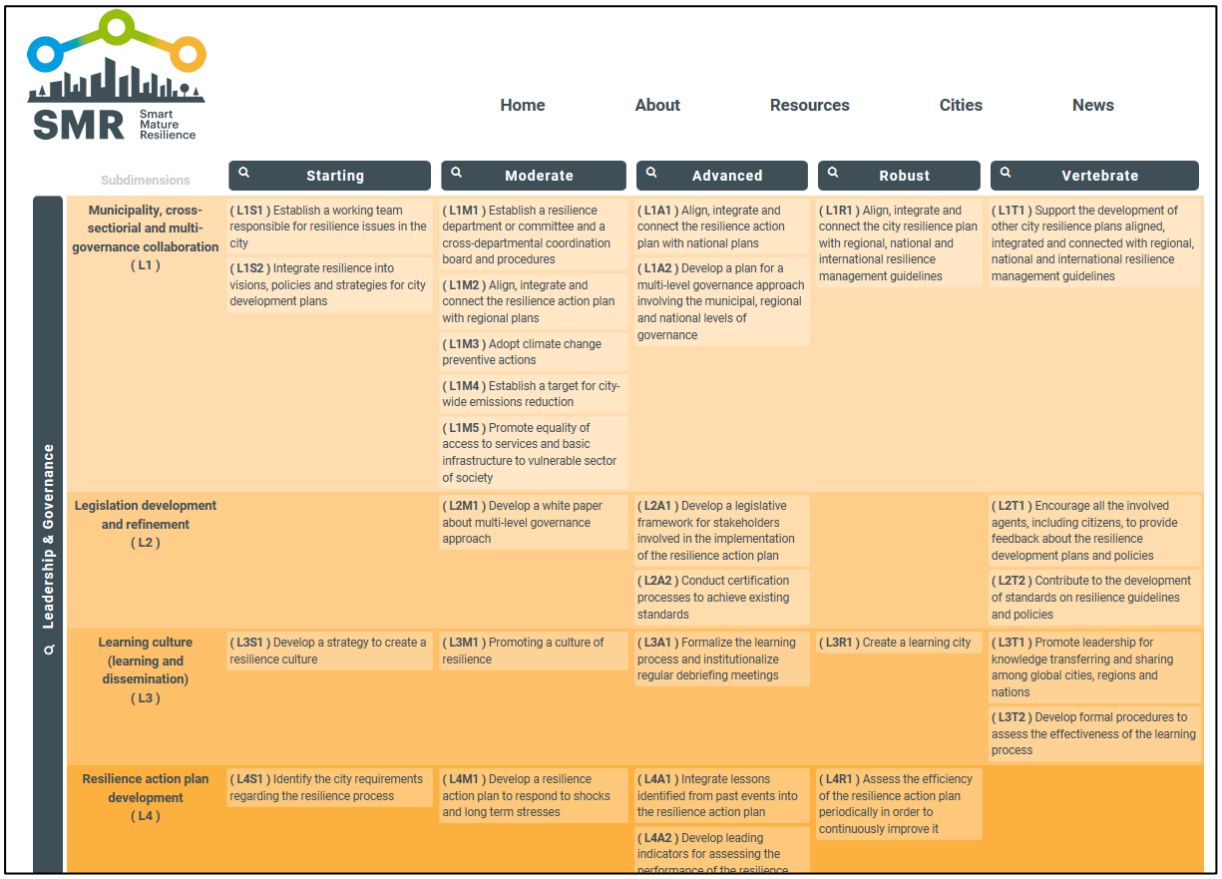


Figure 15: A section of the Web-based version of the Maturity Model which serves as the basis for the Resilience Building Policies tool

Feedback gained in the first exercise on day 2

A wide range of feedback was gained and key feedback is summarised below. This feedback will be taken into consideration as the tool is further developed.

General feedback regarding the online tools

- It is important for cities to be able to update the content of online tools. Cities will require information about who will be responsible for uploading information and how it can be done. However, this should be discussed for all SMR project tools.

Visual interface of the online MM

- Participants wished to easily filter the content by criteria such as different stakeholders and possible challenges faced by cities.
- Some participants felt that the policy labels (e.g. P1S2) could be made clearer with the use of descriptive names.
- The online version of the MM is the most user-friendly version of the MM so far.

Visual interface of the online Resilience Building Policies Tool

- In general the navigation is good and the tool looks good. It will be easier to provide more exhaustive comments once more after content has been added to the tool.
- Navigation may be improved with the use of a navigation bar.

Case studies

- In general case studies were viewed as a useful part of the tool as exposure to the 'best practice' of other cities is seen as being important.
- Case studies related to the same policies should complement each other - offer descriptions of different features/areas.
- Case studies should explain the broader context of the city that implemented the policy as part of the case studies.
- A template should be used so that all case studies follow a consistent structure.
- Case studies can become outdated and thus a facility to add current case studies would be useful.

Links to the 100 Resilient Cities, pioneered by the Rockefeller Foundation initiative

- Including links to the 100 Resilient Cities themes as part of the tool is considered to be useful by city participants.
- It was recognized that the SMR project has a focus on defining resources and policies while 100 Resilient Cities has a focus on networking. Thus both can usefully complement one another.

Links between policies (means-end diagram)

- The relationships between policies shown in the 'means-ends' diagram is interesting but could be made more interactive, otherwise the material could be presented as text.
- The different colours used by the concepts and large numbers of arrows in the diagrams may be confusing.
- The diagrams need to be very basic so that they can be easily understood. It can be difficult to understand what the given policy actually achieves and why it should be implemented.

However, if the “how this can be achieved” diagram is too simple and obvious, then it won’t help.

- The tool may be most useful for NGOs and local volunteers. It is similar to Group Explorer as a way to visualize individual perspectives for different people.

For more information regarding the means-end diagram and the exercise conducted in Group Explorer, please check deliverable: D3.4 Resilience Building Policies here: http://www.smr-project.eu/fileadmin/user_upload/Documents/Resources/WP_3/D3.4_Final.pdf

3.3.2. 2ND EXERCISE ON DAY 2: GATHERING CASE STUDIES FOR THE RESILIENCE BUILDING POLICIES TOOL

In the second exercise dedicated to the Resilience Building Policies tool on day 2 of the workshop, the aim was to gather suggestions for case studies from cities. City representatives were split into 3 groups, and each group was coordinated by a facilitator and a note taker. Each group was given a series of flipchart papers with a matrix of policies relating to the dimensions of the MM and the corresponding S-M-A-R-T stages. City representatives were asked to write on post-it notes examples of case studies from their city/region which illustrated the policies contained in the RMM (see Figure). Facilitators explained that it was important to ensure that case studies are relevant to the RMM policies and thus needed to reflect the information contained in the RMM with respect to what the policy is aiming to do and how it achieves this. For this purpose facilitators checked the suggested case studies against the 'means-ends’ causal map of the RMM policies which includes all of the relationships between policies that are discussed in the RMM. Approximately 50 case study suggestions were collected across the different maturity stages. Each case study example was signed by the respective city so that the scientific partners could contact them following the workshop in order to gather more information regarding the case study as part of the further development work on this tool.

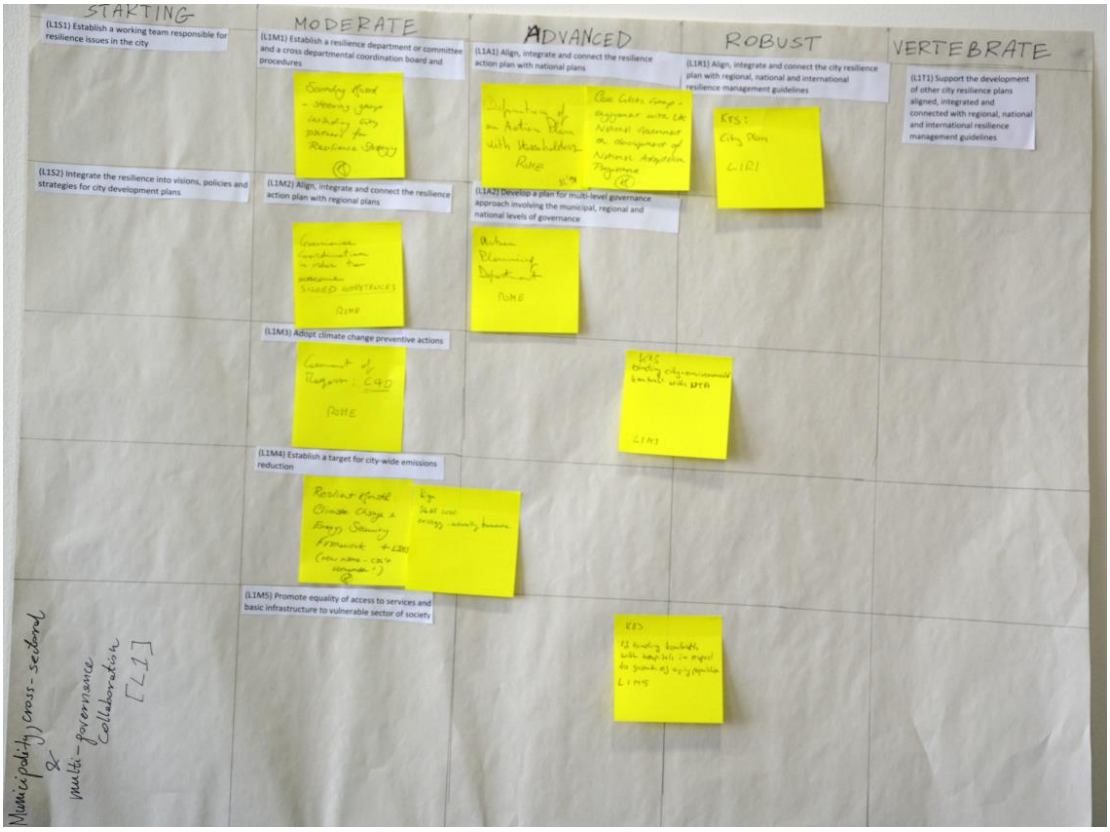


Figure 16: A segment of results from the case studies gathering exercise

3.3.3. 3RD EXERCISE ON DAY 2: GROUP EXPLORER SESSION AIMED AT GATHERING POLICIES FOR THE RESILIENCE BUILDING POLICIES TOOL

In the final Resilience Building Policies exercise on day 2, a Group Explorer session was dedicated to embellishing and extending the policies included in the RSQ. This linked to objective 3.3 in the project proposal which states that the project will 'Identify a range of resilience building policies with respect to critical risk scenarios'. This third exercise sought to identify such policies with respect to the risk scenarios contained in the RSQ.

The workshop followed the same methodological approach as described in each of the following: section 2 of this deliverable (workshop in Kristiansand), the four deliverables regarding the WP2 workshops, and D3.2. Participants were divided into city pairs, and each pair was given a laptop computer. An extract of a risk scenario causal map that was created during WP2, was projected on a public screen. The displayed causal map represented scenarios of interest to two topics of the RSQ which required further elaboration: namely 'loneliness' and 'flooding'.

City participants were then asked to contribute statements and links which address the displayed risk scenarios on the public screen via the laptops. Participants were advised that policies and evidence of policy implementation were of particular interest. During the course of the exercise city participants

contributed 97 statements (policies) and 152 causal links which helped to elaborate the existing data with respect to the RSQ policies.

3.3.4. SUMMARY OF RESULTS FROM THE RESILIENCE BUILDING POLICIES EXERCISE IN GLASGOW

Most of the second day of the workshop in Glasgow was dedicated to making further progress towards completing the SMR Objective 5: Develop a portfolio of Resilience Building Policies that enable the CITIES's progression towards higher maturity levels. The sessions advanced the work with regards to this objective in a number of ways. Firstly, a web-based pilot version of the resilience building policy tool was presented to city participants for the first time, which resulted in a considerable amount of valuable and practical feedback which will inform the forthcoming work on the construction of this tool. Based on the received feedback, it was decided, as part of the development of the Resilience Building Policies, to place the main focus of the presentation of case studies on implementation of resilience policies – as this is what the cities found particular helpful. It was also appreciated that the online version of the RMM is seen as user-friendly and therefore it serves as the good basis for the development of Resilience Building Policies tool. However, it will be important to pay attention to having easy navigation and a good level of interactivity when using the tool.

Secondly, the session gave an opportunity to gather more data which will be used to develop this tool further, namely: case studies from cities which illustrate the implementation of policies relevant to the Maturity Model, and development of policies included in the RSQ. Consequently, the exercises contributed towards both testing the conceptualisation of the Resilience Building Policies tool, as well as providing data to input to the tool development that will take place until its submission in September 2017.

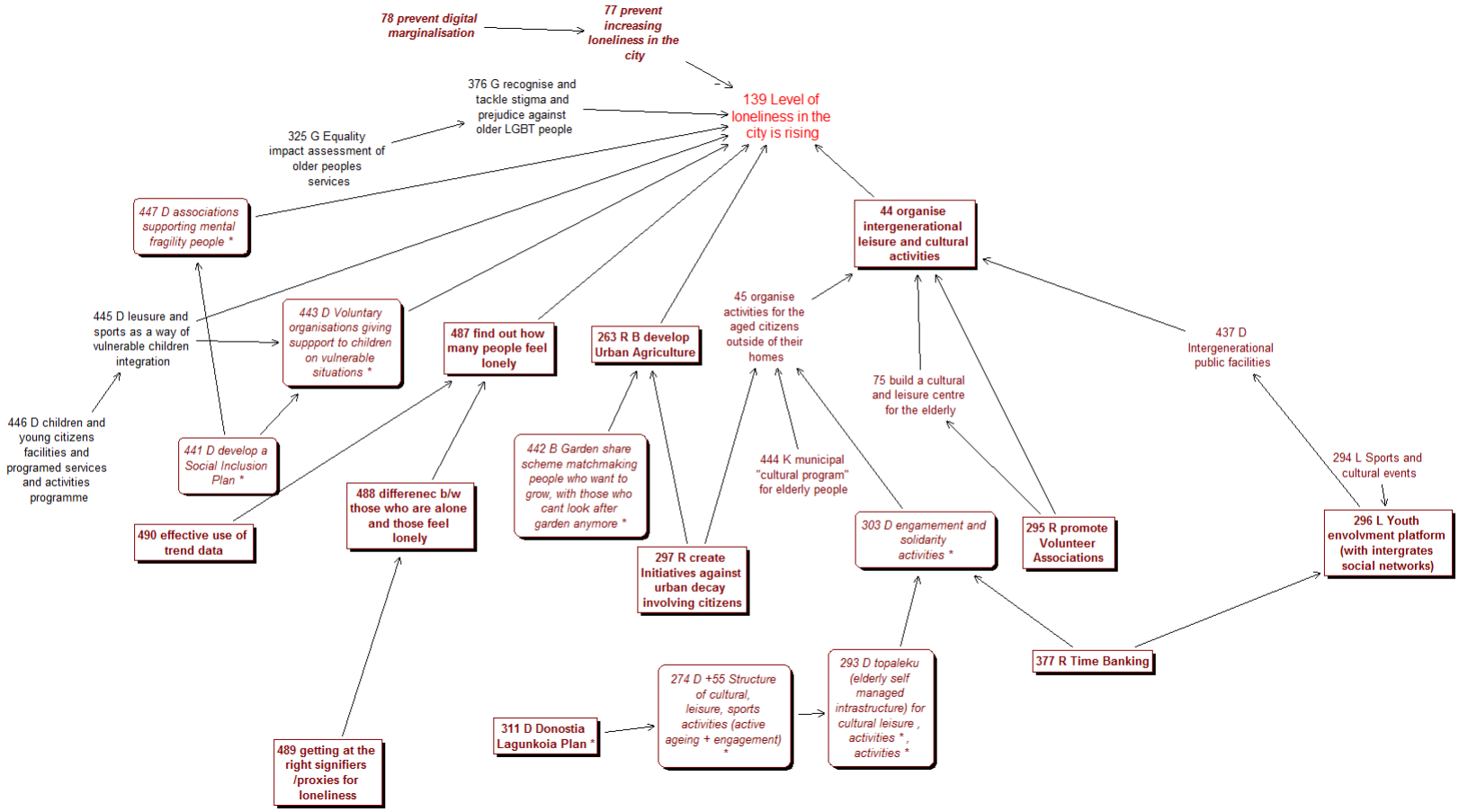


Figure 17: A segment of the causal map developed during the Group Explorer session

*Arrows signify 'may lead to' relationships. Statement in red font is the risk which was being explored, and statements in brown font are the policies for which cities have evidence of implementation.

3.4. DAY 3: STANDARDIZATION SESSION

The standardization session took place at the beginning of the third and final day of the workshop. Along with Objective 10 – Promote the Smart Mature Resilience project's results by standardization, task T6.2 - Identification of Standardization potential, and task T6.3– Initiating standardization activities, DIN prepared a standardization session on the last day of the Glasgow workshop with the following objectives:

- Update the consortium with new standards published and standards under development in the last year.
- Getting insights on the needs of cities for future standardization activities.
- Provide information on the upcoming standardization activities within the SMR project.

Detailed results of the session will be given in D6.2. The following session recap and information is also included in the WP3 deliverable D3.2.

3.4.1. SUMMARY OF RESULTS FROM THE STANDARDIZATION SESSION

At first DIN presented standards of relevance for city resilience that have been published within the last year or are currently under development. The information of these standards will be integrated in the standards list prepared within the SMR project. Besides these standards, also tools developed within the SMR project and beyond as well as other solutions for city resilience are summarizing the support or supply side for city resilience.

In order to receive the demand side for city resilience WP6 had previously conducted a survey and a European Workshop on Resilience in Cities and Communities. Based on these activities the aim within the standardization session was to gain further insights from city representatives regarding the challenges they face and their needs for improvements. City representatives initially discussed these questions within their own city groups and presented the results to all partners. Examples of feedback from this exercise are as follows:

- Lack of cross-sectorial coordination.

- Communication challenge and effective usage of communication platforms.
- Availability of resources to coordinate resilience actions.
- Minimum activities to involve citizens.
- Commitment of the city stakeholders.
- Support to training activities.
- Protocol for monitoring the resilience actions.

The results were clustered into different topics (e. g. Volunteer Management, Citizens involvement, Administration, ICT). Figure presented below gives a broad overview of the collected results.

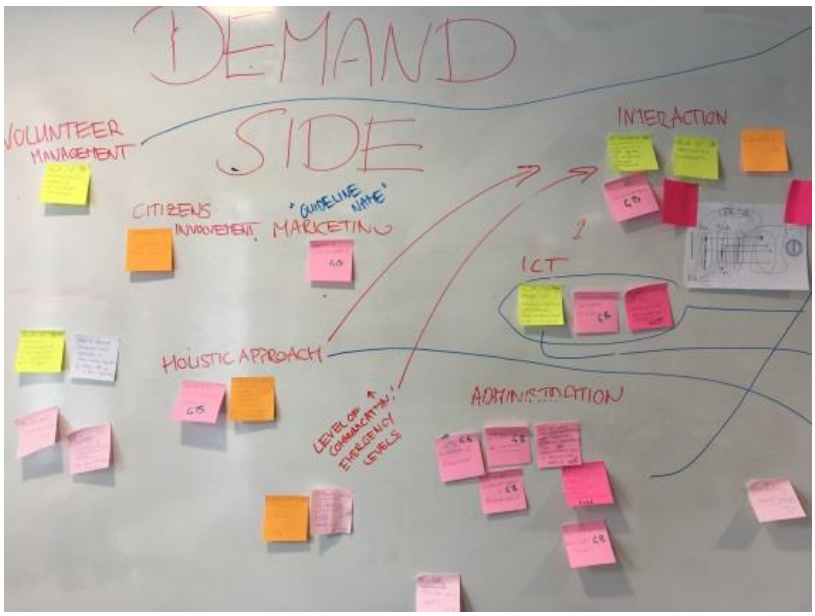


Figure 18 - Overview of city's structural challenges and needs for improvement

The results of the activities mentioned above summarize the demand side for city resilience. The outcomes of the support and demand side are the initiation of new standardization activities.

The last item of the standardization session was an outlook on the upcoming standardization activities within the project. The first proposed and already initiated activity is the CEN Workshop on a Functional Specification for the Community Engagement tool, of which the Kick-off was envisaged to take place on 21st June 2017. Other standardization activities of the SMR project were proposed such

as a general city resilience related standard, that is based on the ERMG and the identified needs of the cities, as well as a standard on some of the tools (e. g. on the maturity model and its policies). DIN then presented the procedure of developing a standard within a research project like SMR by showing the process of the development of a CEN Workshop Agreement (CWA).

Figure presents the discussed elements of the standardization session, i.e. the support side with the new standards published, the demand side with the challenges and needs of the cities, and with the envisaged standards of the SMR project to match both sides and to contribute to the enhancement of city resilience.

Figure 19 - Elements of the standardization session

3.4.2. FOLLOW UP TO THE WORKSHOP – PLANNED STANDARDIZATION ACTIVITIES FOR YEAR 3 OF THE PROJECT

After the Glasgow workshop, the SMR Partners agreed to commence standardization work with respect to three of the SMR resilience tools. Brief descriptions of the CWAs (CEN Workshop agreements) that are envisaged are listed below. For more information regarding the identification of the standardization potential, please see deliverables D6.2 Summary of Standardization Potentials.

- CWA on “City Resilience Development - Information Portal”

  This CWA is expected to define a list of requirements on how municipalities will equip an information system that facilitates building up resilience through collaboration, communication, and engagement. This marks the functional specification for the Resilience Information Portal. As described in section 2.3 of this report, the Resilience Information Portal is a communication platform that will be used for communication between the municipalities and their stakeholders, including citizens. The requirements for the Portal are aimed towards a broad-purpose, easy-to-use platform that provides versatility and flexibility. The CWA is directed

towards IT professionals and Chief Information Officers (CIOs). It provides them with decision support as well as operative help for the development process.

- CWA on “City Resilience Development – Operational Guidance”

  This CWA will define an operational framework that provides guidance and aims at training and supporting municipalities and their stakeholders. This framework will be initially based on the user journey of the ERMG that has been co-created with the participation of all SMR project partners. It will incorporate guidance for local resilience planning; based on the use of all five SMR resilience tools. The developed standard is targeting City Representatives and Municipal Employees engaged in sustainability, Decision Makers (EU, national, regional, local) and Critical Infrastructure Managers, City Stakeholders, Citizens, NGOs, Associations and Volunteers.

- CWA on “City Resilience Development - Maturity Model”

  This CWA will define a framework to show the ideal path in the resilience building process of a city. This framework will be based on maturity stages a city should go through. The standard is targeted to policy and decision makers at city level and councillors working for resilience in their city, as well as to any other city stakeholders working on resilience (e.g. critical infrastructure providers, emergency services, citizens, media, non-governmental organizations, academic and research institutions).

3.5. DAY 3: PILOT IMPLEMENTATION PLANNING

In accordance with the Objective 8 of the SMR project, ICLEI prepared a session that aimed to present to all the partners an internal planning document for WP5 (including also links to other WPs like WP3, WP6 and WP7). This document is prepared in the framework of WP5, i.e. the WP coordinating the pilot implementation of the ERMG, through a testing process of all the five resilience tools that are being developed within the SMR project. Also, this session aimed to use the setting with all partners present and set the (still tentative in some cases) dates for the next stakeholder training workshops and webinars. The internal planning document was shared with partners following the Glasgow workshop, while it can be accessed in the Annex of this report. The following session recap and information is also included in the WP3 deliverable D3.2.

3.5.1. DESCRIPTION AND RESULTS OF THE PILOT IMPLEMENTATION SESSION

The planning document provides detailed information on the joint pilot implementation of the Resilience Building Policies tool and the SD model, as well as the ERMG as a whole, summarizing the activities that will take place in the following months until the end of the project lifespan, following the detailed Roadmap/Timeline for these activities that was prepared in year 2016.

The document also serves as a guide for ICLEI and for all the partners (if consulting is needed), when trying to identify requirements and planning for their capacities needed throughout the pilot implementation and the last 12 months of the project. Finally, this session aimed to present to partners the planned activities involving tier-3 CITIES, while it was agreed that permission from the EC would be asked in order to change the location for the Stakeholder Dialogue/ERMG Pilot Kick-off from Donostia/San Sebastian to one of the tier-3 CITIES.

The internal planning document was shared with partners following the Glasgow workshop, while it can be accessed in the Annex III of this report.

4. FEEDBACK FROM THE PARTNER CITIES

As a matter of fact, during this review workshop, the Tier-1 CITIES provided only their initial feedback on the joint pilot implementation of the Resilience Building Policies Tool, developed by the University of Strathclyde and the System Dynamics Model, developed by Tecnun, University of Navarra. In more detail, the joint pilot implementation process for the Resilience Building Policies and the System Dynamics Model was scheduled to take place between project months 23 and 28 (April 2017 – September 2017) in the three tier-1 CITIES of Kristiansand, Donostia/ San Sebastian and Glasgow, and again would be peer-reviewed by the four tier-2 CITIES Bristol, Vejle, Riga, and Rome. Tool testing activities will be guided by the tool developets will ICLEI will be acting as ´external coach` and coordinator, facilitating knowledge and information exchange between partners and city officials and representatives.

The Glasgow workshop was pushed earlier in the process to let the researchers further develop the tools before the pilot actually startsand get early feedback from the CITIES. Therefore, the tier-1 CITIES provided only minimal and quite generic feedback on the two tools, while the same happened

for tier-2 cities of Vejle, Bristol, Rome and Riga. This feedback is summarized in the table below, while more information on detailed feedback from the pilot and the peer-review process can be found in the WP5 deliverable D5.6.

CITY FEEDBACK	System Dynamics Model (City Dynamics Tool)	Resilience Building Policies Tool
Kristiansand	Buildsknowledge to support municipal staff in budgeting the resources needed	Useful to create a database in the form of a resilience wikipedia
	The budgetary element may be confusing for cities though – budget is relevant and does not only reflect financial amounts (but also human resources, donations etc.)	Cities need illustrative real case studies of policy implementation in cities – the webpage could do some matchmaking between cities that share the same challenges or problems
	Limited available budget for resilience may create issues for setting a budget in the model – resilience is not yet in the national agenda as a prerequisite for sustainable development	The Policy tool is very user-friendly, the colours and icons have made it easy to understand even for those who do not have a direct understanding for the resilience building process in a city
Glasgow	Unsure about the tools usability with some stakeholder groups but do feel that it supports understanding of the resilience Maturity Model. The city of Glasgow feel that some users would be sceptical about using the tool and feel there would be challenges to set the budget for	The Policy tool promotes education and capacity building – provides a practical point of reference and good practice examples for cities considering the implementation of related policies – should include links to the policies that are interrelated with each case study. ***Action taken***: the final version of the tool includes

	future years. They felt this is impossible to predict especially for longer timeframes. ***Action taken:*** there are two final versions of the tool (one including 19 policies and one including 49 policies). Longer timeframes and more elaborate exercises/simulations using the tool should use the 49 policy version.	links to the policies that are interrelated with each case study.
	Connects to maintaining continuous productivity of other development investments;	It would be good if the tool prompted site visitors to give feedback on what they see – it could include short targeted questionnaires or surveys in real time that can better optimise the tool. ***Action taken:*** Users can provide feedback through the wiki function to ICLEI Europe.
Donostia/San Sebastian	The tool supports the resilience building process in terms of analysing budgetary deviations during the maturity process At the same time difficulties related to budged specifications allocation should be bear in mind. The partial knowledge of budged from of the potential users the tool might lead to restrain of use of the tool.	The tool should include references to other sources that provide details of case studies of policy implementation in cities – for example links to the 100 Resilient Cities strategies, especially for cities that are not part in the initiative. ***Action taken:*** The final version of the tool includes references to other sources like the 100RC.
	Supports understanding of the	The Policy Tool should have

	Resilience Maturity Model and gives the opportunity to city officials that do strategic management to re-consider decisions and plans that would seem effective at first glance, but would be proved ineffective in the long run.	Wikipedia functionalities – cities should be able to continuously update the tool, also after the end of the project lifespan – who would moderate this information, is a good question though...***Action taken:*** a wiki function has been added. ICLEI is managing the wiki, while cities are encouraged to get log-in details and add their case studies to the tool.
Vejle	The use of the Model can translate into transgenerational investment in the future of a city, region, community – proper usage and tailoring the tool to other cities' needs is therefore needed – apart from the 7 SMR partner cities	Supports understanding of the Resilience Maturity Model and the evolution of policies from stage to stage.
	Supports deep understanding on the impact of the temporal order in which the policies should be implemented	It provides illustrative detail for the policies in the SMR Maturity Model and the System Dynamics Model
Rome	The tool complements the Maturity Model and can enhance strategic planning that integrates disaster risk assessment and consideration into existing processes in a city	The webpage linkage to the Maturity Model is very useful – easy and conveniently navigated
	While the format is user-friendly, especially for those familiar with	The tool should include the other tools that could operate as a click

	simulation models, the starting page is confusing, as it mainly gives information on the Maturity Model and not the System Dynamics Model. ***Action taken***: the starting page has become user friendly and self explanatory.	map – even better the policy tool could link on the European Resilience Management Guideline – ***Action taken:*** All tools link to the ERMG and the various steps of it.
Riga	The model supports deeper understanding of the Maturity Model and the interlinkages between policies of different dimensions, but also the logic behind prioritising policies	The Policy Tool provides a practical point of reference for cities considering the implementation of related policies
	The starting page is confusing, as it mainly gives information on the Maturity Model and not the System Dynamics Model. The downside banner should be highlighted for the user to know where to start from. ***Action taken***: the tools cross-reference each other, while an introduction to the Resilience Maturity Model was added in the City Resilience Dynamics Model (SD Model previously) to discuss the interlinkage between policies across the SMART steps and the dimensions/sub-dimensions.	The tool seems very helpful, but also definitely needs to be free as an open source tool for web servers – other cities outside the SMR consortium should be encouraged to contribute with case studies or links to their resilience building activities. ***Action taken:*** all SMR tools are open access and accessible /downloadable in the SMR website: http://www.smr-project.eu/tools/
Bristol	The model supports deeper understanding of reasons for	It is useful that it comprises illustrative real case studies of policy

	budgetary decisions for resilience strategizing, especially for cities that are still beginners in the resilience building process – good and useful for level zero activities planning.	implementation in cities – it may be easy then for cities at starting and moderate stages to replicate, transfer and adopt policies, activities and actions undertaken by other more advanced cities.
	The use of the tool allows cities to monitor and compare their progress through periodic re-assessment after every period of implementation.	The policy tool is not self-explanatory – it should incorporate a user experience package that would be comprehensive and detailed. It seems easy to navigate from the Maturity Model to the Policy Tool, but not the other way round. ***Action taken:*** the Policy Tool includes reference to the Maturity Model, while the links between the policies have been clear.

5. SUMMARY AND CONCLUSIONS

The workshop in Glasgow built strongly on the work already commenced in San Sebastian, and so a strong emphasis was placed on the remaining two tools which are due to be submitted in September 2017, namely the SD model and the Resilience Building Policies tool. In terms of the SD model, the workshop was another opportunity to test the updated pilot version of the tool with city participants and collect valuable feedback. In general, the feedback received from the users was positive and they liked the changes made in the tool to improve its usability. Furthermore, the users had a chance to understand better the uses and the potential of the tool in the resilience building process of the city. Thereby, a better understanding was achieved with regards to the different possible uses of the SD model.

As part of the Resilience Building Policies, a web-based pilot version of the tool was presented for the first time to city participants, which proved very useful in the context of conceptualising this tool so that it can be suitable for practical application in cities. The received feedback indicated that cities felt that it was useful for the presentation of case studies to focus on implementation of resilience policies – as this is what the cities found particular helpful. It was also appreciated that the online version of the MM is seen as user-friendly and therefore serves as the good basis for the development of Resilience Building Policies tool. Furthermore, additional information was gathered from city participants that indicated what case studies that could be gathered from each city to inform subsequent developmental work on the Resilience Building Policies.

The workshop in Glasgow gave to the Tier 1 and 2 CITIES the chance to provide initial feedback on the two tools, before the actual pilot implementation takes place from June to October 2017. More information and detailed feedback from the pilot and the peer-review process can be found in the WP5 deliverable D5.6.

And finally, the workshop in Glasgow, following the earlier WP6 workshop in Berlin, also gave an opportunity for the Consortium to discuss the standardisation opportunities deriving from the SMR project, as well as to continue the collective discussion in terms of the conceptualisation of the ERMG which will bring all the five SMR tools together.

ICLEI, TECNUN and Strathclyde University ended the 3rd review workshop in Glasgow by sharing some concluding remarks on the next steps of the project, and in particular related to WP3 and WP5 interactions. All partners agreed that the forthcoming Stakeholder Dialogue within WP7 should take place in one of the newly recruited Tier 3 CITIES. Two candidate cities that showed interest to host the Dialogue were Malaga and Thessaloniki.
Following the end of the workshop, the remaining participants attended a presentation and discussion by Konstantina Karydi, Associate Director, 100 Resilient Cities, pioneered by the Rockefeller Foundation.

ANNEX I

WORKSHOP PARTICIPANTS

Partner Institution	Role	Gender	Partner Institution	Role	Gender
Vejle	Project Manager	Female	Riga	Project Manager	Male
ICLEI Europe	Officer	Male	DIN	Project Manager	Male
Glasgow	Officer	Male	CIEM	Ass. Professor	Male
Rome	Project Manager	Male	TECNUN	Researcher	Female
Uni. of Strathclyde	Professor	Male	Donostia	Senior Technician	Female
Linköping Uni.	Professor	Male	Kristiansand	Project Manager	Male
TECNUN	Ass. Professor	Female	Uni. of Strathclyde	Researcher	Male
Riga	Project Manager	Male	CIEM	Researcher	Female
CIEM	Professor	Male	ICLEI Europe	Officer	Male
ICLEI Europe	Officer	Male	Riga	Project Manager	Male
Uni. of Strathclyde	Professor	Female	CIEM	Ass. Professor	Female
Vejle	Director	Male	TECNUN	Professor	Male
DIN	Junior Officer	Female	Kristiansand	Crisis Manager	Male
Vejle	Project Manager	Male	Uni. of Strathclyde	Researcher	Male
Donostia	City Councilor	Female	Rome	Director	Female
Linköping Uni.	Researcher	Female	Rome	Senior Expert	Male
Donostia	City Councilor	Male	100 Resilient Cities	Ass. Director	Female

*external participant (following the end of the workshop)

ANNEX II

WORKSHOP AGENDA

DAY 1: 17th May 2017

09.00 - 09.30	Official Welcome – Setting the Context in Glasgow	*Glasgow City Council*
09.30 - 10.00	General Project Updates	*Project Coordinator*
10.00 - 10.15	Update on the Berlin Workshop – Setting thevision for the European Resilience Management Guideline	*ICLEI*
10.15 – 11.00	European Resilience Management Guideline Interactive Session	*ICLEI*
11.00-11.15	*BREAK*	
11.15-11.30	Update on the System Dynamics Model	*TECNUN-CIEM*
11.30-12.30	System Dynamics Model Session 1	*TECNUN-CIEM*
12.30-13.30	*LUNCH*	

13.30-15.00	System Dynamics Model Session 2	*TECNUN-CIEM*
15.00-15.30	BREAK	
15.30-16.30	SD Model Review Session	*TECNUN-CIEM-ICLEI-CITIES*
16.30-16.45	Wrap-up of 1st day	*Project Coordinator*
	SOCIAL PROGRAM	
17.30-18.00	Tour of the City Chambers, George Square	
18.00	Civic reception, City Chambers	
19.00	Dinner at The Corinthian Club	http://www.thecorinthianclub.co.uk/ 191 Ingram Street, Glasgow

DAY 2: 18th May 2017

09.00-09.10	Reflection of Day 1	*Project Coordinator – TECNUN/CIEM*
09.10-10.30	Update and Feedback on the Resilience Building Policies Tool	*STRATHCLYDE*

10.00-10-30	Policy Case Studies	*STRATHCLYDE*
10.30-11.00	BREAK	
11.00-12.30	Policy Case Studies	*STRATHCLYDE*
12.30-13.30	LUNCH	
13.30-15.00	RSQ Policies Session	*STRATHCLYDE-ICLEI-CITIES*
15.00-15.30	BREAK	
15.30-16.00	RSQ Policies Session – continued	*ICLEI-TECNUN-STRATH-CIEM*
16.00-16.45	European Resilience Management Guideline Interactive Session 2	*ICLEI-LiU-CITIES*
16.45-17.00	Wrap-up of 1st day	*Project Coordinator-ICLEI*
SOCIAL PROGRAM		
17.00-18-15	Free time	
18.15-19-00	City Tour	*Optional*
19.00	Meeting and travel together with the underground to the West End	
19.30	Dinner at Ubiquitous Chip	http://www.ubiquitouschip.co.uk/

		12 Ashton Lane, Glasgow

DAY 3: 18th May 2017

Time	Script	Partners responsible
9.00-09.30	Overview of the Pilot Implementation	*ICLEI*
09.30-10.45	Updates on the CWA – Standardization session	*DIN*
10.45-11.00	*BREAK*	
11.00-12.00	Next steps-Planning-Updates	*ICLEI-TECNUN*
12.00-12.30	100 Resilient Cities Presentation (tbc)	*K.Karydi*
12.30-13.30	*LUNCH*	
13.30-15.00	*Optional Tour, depending on how many people are staying longer in Glasgow*	

ANNEX III

INTERNAL PLANNING DOCUMENT

TABLE OF CONTENT

IN A NUTSHELL

This document 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 document provides with detailed information on the joint pilot implementation of the Resilience Building Policies and System Dynamics Model tools and the Resilience Management Guideline as a whole, summarising the activities that will take place in the next months and until the end of the project lifespan, following the detailed Roadmap/Timeline for these activities that was already prepared in October 2016. These activities include the involvement of the so-called Tier 3 CITIES, but also the standardization activities and the development of 3 CWAs until the end of the project.

The document also should serve as a guide for ICLEI European Secretariat and for all the partners (if consulting is needed), when trying to identify requirements and planning for their capacities needed throughout the pilot implementation and the last 12 months of the project.

PLEASE TAKE NOTE:

All partners are invited to consult the document and make sure that they attend the events, meetings and workshops that require their participation!

All partners should check upon budget availability per GA and if there are doubts or suggestions please consult with the project coordinator and/or ICLEI.

PILOT IMPLEMENTATION – SYSTEM DYNAMICS MODEL AND RESILIENCE BUILDING POLICIES

The joint pilot implementation process for the Resilience Building Policies and the System Dynamics Model is scheduled to take place between project months 23 and 28 (April 2017 – September 2017) in the three tier-1 CITIES of Kristiansand, Donostia/ San Sebastian and Glasgow, and again will be peer-reviewed by the four tier-2 CITIES Bristol, Vejle, Riga, and Rome. Tool testing activities will be guided by the tool developets will ICLEI will be acting as ´external coach` and coordinator, facilitating knowledge and information exchange between partners and city officials and representatives.

ITEMS OF THE PILOT PROCESS

1. 3RD REVIEW WORKSHOP IN GLASGOW, UK IN 17-19 MAY 2017

   During this workshop, the tier-1 CITIES provided their feedback on the pilot implementation process to Tecnun and Strathclyde University, while the tier-2 CITIES shared their additional feedback and summarize their recommendations for the finalization of the tools through a combination of facilitated discussion, based on guiding questions, and interactive exercises in breakout groups.

   In paraller to the workshop, videos with interviews and tutorials for the tools will be shooted. CLG to prepare participants and send guiding questions for the supporting videos. These clips are not intended to replace in-depth facilitation and consulting, but to be used as complimentary material for workshops and website use. Some partners were not yet approached for creating videos, this will take place in the next months in a second round of shootings.

2. THREE (3) STAKEHOLDER TRAINING WORKSHOPS ON THE SYSTEM DYNAMICS MODEL (1 in each Tier-1 CITY)

   Specifically during months 25 and 28, and in order to facilitate the finalization of both tools and strengthen the co-creation process, 3 stakeholder training workshops on the System Dynamics Model will be organized and conducted in

the three Tier-1 CITIES aiming to train city stakeholders to use the tool, and introduce their main qualities and functionalities. ICLEI will be the coordinator of these trainings, responsible for facilitation together with the local research partners. The stakeholders that will be invited in these workshops will be, more or less, from the same departments that were invited in the Maturity Model trainings (if not the exact same stakeholders). In total, at least 12 stakeholders should be present, 3 for each MM dimension)

3. THREE (3) WEBINARS on the SYSTEM DYNAMICS MODEL

Following the stakeholder training workshops in each tier-1 CITY, ICLEI will conduct 3 webinars during which the implementing CITIES will present the activities and processes conducted so far and the tier-2 CITIES will have the opportunity to ask questions and provide their insights and feedback on the ongoing SD Model tool development. The webinars aim to present the main tools functionalities to city representatives and stakeholders, strengthen the co-creative development of the tools and facilitate dialogue between the two tiers of cities that will help the developers finalize the tools.

- ✓ Given the different nature of each tool in this pilot process, 6 webinars will be conducted instead of 3 (3 webinars will focus on the Resilience Building Policies and 3 webinars will focus on the System Dynamics Model). This will of course double the needed capacity for ICLEI as organizer and facilitator of the webinars.

- ✓ Briefings with the Tier 2 CITIES will be needed, before each webinar – VL responsible for these. For each briefing, approx. 45 minutes will be needed, in the form of a webinar between ICLEI and Tier 2 CITY-CITIES

4. THREE (3) CO-CREATION STAKEHOLDER TRAINING WORKSHOPS (1 in each Tier-1 CITY)

In September 2017, and in order to facilitate the finalization of the Resilience Policies Tool, but also to provide a test bed for the subsequent pilot implemention with the tier-3 CITIES, instead of 3 stakeholder training workshops focusing on the Resilience Policies Tool alone, the trainings will focus on all the 5 SMR tools and how they integrate with each other to provide the Resilience Management Guideline.

The trainings in this case will ínvite a close group of stakeholders that are already familiar with the SMR project and ideally have attended 1-2 of the previous trainings. The exercises will focus on how the tools integrate with each other (MM-SD model, MM-Policy Tool, RSQ-Policy Tool etc.) The stakeholders will be asked to **work on a specific scenario** that is relevant for each CITY and which can be within the **security sector** selected at project year 1.
Also, ICLEI in collaboration with the city partners will identify the existing action and master plans existing in each CITY on sustainability, climate change and environmental management and try through the workshops to find how the SMR tools and the integrated ERMG process can compliment the already existing frameworks. The CITY partners will be approached earlier by ICLEI to further organize in details this last set of stakeholder trainings.

PLEASE TAKE NOTE: One research partner representative per each tool will be needed to attend these trainings and conduct the exercises, together with ICLEI!

5. THREE (3) CO-CREATION WEBINARS (1 in each Tier-1 CITY)

   Following the co-creation stakeholder training workshops in each tier-1 CITY, ICLEI will conduct 3 webinars during which the implementing CITIES will recap the trainings, provide feedback on the Resilience Policies Tool and discuss the requirements and suggestions by the tier-2 CITIES that will need to be taken into consideration for the following tier-3 pilot on the ERMG.

6. USER MANUALS for the SMR Tools (to be still developed)

   a. The System Dynamics Model Manual will be comprised by a printed-pdf manual (similar to the MM one) and youtube video tutorials. ICLEI and Tecnun will be responsible for the printed version and CIEM for the video tutorials.

b. The Risk Systemicity Questionnaire will be accompagnied with a set of videos that will explain the main tool functionalities and will hint on the facilitation process of the RSQ themes workshops; in addition, a short train-the-trainer booklet will be developed, which will provide guidance on running RSQ workshops
c. The MM manual is already finalized. Printed versions will be ready for the CoU event in Brussels, September 2017
d. The EC has specifically asked for Support-to-each-Tool material (videos, handouts, tutorials). ICLEI will be in touch with the tool developerd on delivering these. Not all of them need to come in a form like the MM handbook, can be shorter or of different nature.

TABLE WITH DATES, RESPONSIBLE PARTNERS and ICLEI STAFF

ACTIVITY	DUE DATE	LOCATION	RESPONSIBLE	TARGET
3rd Review Workshop	17-19 May 2017	GLASGOW	ICLEI & TECNUN/STRATHCLYDE	ALL PARTNERS
1st Stakeholder Training Workshop / SD Model	7-9 June 2017	DONOSTIA	ICLEI / TECNUN	DONOSTIA STAKEHOLDERS
1st WEBINAR / SD Model	19 July 2017	ONLINE	ICLEI / TECNUN	DONOSTIA/BRISTOL
2ndStakeholder Training Workshop / SD Model	15 September 2017	GLASGOW	ICLEI / TECNUN	GLASGOW STAKEHOLDERS
2nd WEBINAR / SD Model	15-25 September 2017 (tbc)	ONLINE	ICLEI / TECNUN	GLASGOW/ROME/RIGA
3rdStakeholder Training Workshop /	26 September 2017	KRISTIANSAND	ICLEI / TECNUN/CIEM	KRISTIANSAND

SD Model				
3rd WEBINAR / SD Model	27-30 September 2017 (tbc)	ONLINE	ICLEI / TECNUN	KRISTIANSAND/VEJLE
1st Stakeholder Training Workshop / Co-Creation and Policy Tool	18 September 2017	GLASGOW	ICLEI / STRATH/TECNUN	GLASGOW STAKEHOLDERS
1st WEBINAR / Co-Creation and Policy Tool	19-26 September 2017 (tbc)	ONLINE	ICLEI / STRATH/TECNUN	GLASGOW/ROME/RIGA
2ndStakeholder Training Workshop / Co-Creation and Policy Tool	20 September 2017	KRISTIANSAND	ICLEI /STRATH/CIEM	KRISTIANSAND STAKEHOLDERS
2nd WEBINAR / Co-Creation and Policy Tool	19-26 September 2017 (tbc)	ONLINE	ICLEI / STRATH/CIEM	KRISTIANSAND/VEJLE
3rdStakeholder Training Workshop / Co-Creation and Policy Tool	2 October 2017	DONOSTIA	ICLEI / TECNUN/STRATH/CIEM	DONOSTIA STAKEHOLDERS
3rd WEBINAR / Co-Creation and Policy	5-15 October 2017	ONLINE	ICLEI / TECNUN/STRATH/CIEM	DONOSTIA/BRISTOL

Tool

PILOT IMPLEMENTATION – RESILIENCE MANAGEMENT GUIDELINE / WP5-WP7

ICLEI committed to engage with potential tier-3 CITIES that will be invited to participate in the SMR project, and in particular to test the Resilience Management Guideline and the 5 SMR Tools as an entity anymore. This pilot implementation process will take place from M30 to M34 of the project, in collaboration with the WP7 of the project. In this way, already considered and available resources and capacities will be used. This process has been approved by the European Commission.

ITEMS OF THE PILOT PROCESS

- This group of tier 3 cities is getting identified between project months M23-M26 and includes cities that are already in resilience networks, 100RC cities, ICLEI members working on adaptation and resilience
- A Stakeholder Dialogue targeting tier 2 cities will be organized by ICLEI (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; the event will take place in one of the tier 3 cities, Thessaloniki, Greece on the 7th of November 2017, followed by the kick-off of the CWA on the ERMG on the 8th of November – ALL partners should be represented in the Stakeholder Dialogue with at least one participant
- The Tier 2 CITIES per GA are asked to participate with 4 people each (2 city partners and 2 external stakeholders per Tier 2 CITY)
- ICLEI will prepare a briefing document for tier 3 cities on requirements and capacities needed for the testing process (M28-M29)
- At least 7 cities to be identified with emphasis 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) will summarize/review the pilot implementation of the Resilience Management Guideline; The Stakeholder Workshop will be combined with the established ICLEI event series, Breakfast at

Sustainability's – **PLEASE TAKE NOTE:** ALL partners should be represented in the Stakeholder Dialogue with at least one participant!

- 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)
- In addition to these two events and between December 2017 and February 2018, 2-3 co-creation webinars will be organized. The tier 1 and 2 CITIES will be invited to act as mentors for the tier 3 CITIES in these webinars.

ACTIVITY	DUE DATE	LOCATION	RESPONSIBLE	TARGET
Identification of Tier-3 Cities and official invitation	ASAP (April – August 2017)	-	ICLEI	Southern, Eastern European cities in Resilience networks
Briefing Document/Manual on the 5 tools and the Resilience Management Guideline as a whole	October 2017	-	ICLEI & all 3 tool developers	Tier 3 Cities
Stakeholder Dialogue	7 November 2017	Thessaloniki, Greece		Tier 2 Cities & Tier 3 Cities
Active guidance and consulting of Tier-3 Cities	November 2017 – March 2018	-	ICLEI	Tier 3 Cities
2-3 Webinars on the Resilience Management Guideline	December 2017 – February 2018	-	ICLEI & all 3 tool developers	Tier 3 Cities

Stakeholder Workshop	March 2018	Brussels	ICLEI	Tier 3 Cities

IMPORTANT EVENTS/CONFERENCES – WP7

In all the conferences/events below SMR will be present with presentations, tool showcases or workshops

- Community of Users Event Brussels / 13-14 September 2017
- Cities and Climate Conference 2017 – Potsdam Germany, 19-21 September 2017
- ISCRAM-med 2017 : The Fourth International Conference on Information Systems for Crisis Response and Management in Mediterranean Countries / Xanthi, Greece October 2017
- European Regions and Cities Week / Brussels / 9-12 October 2017
- ISO TC 268 Sustainable Cities and Communities Plenary Meeting / Cancun, 22-26 October 2017
- 2nd European Urban Green Infrastructure Conference - Budapest / November 2017
- Healthy Cities Network of the Czech Republic – Annual Conference / December 2017
- 9th World Urban Forum – Kuala Lumpur, February 2018
- OPEN EUROPEAN DAY 2018 - Bonn / 25th April 2018
- BONN RESILIENT CITIES 2018 - Bonn / 26 -28 April 2018
- FINAL JOINT CONFERENCE – Brussels / April 2018
- ICLEI WORLD CONGRESS – June 2018, Montreal/Canada

CEN WORKSHOP AGREEMENT – WP6

ACTIVITY	DUE DATE	LOCATION	RESPONSIBLE	COMMENTS
Preparatory Meeting	1st June 2017	Berlin	DIN	With ICLEI Europe
CWA Intitiation Session	21st June 2017	Brussels	DIN	3 hour session
Kick-off of CWA	8th November 2017	Tier 3 CITY (tbc)	DIN	In conjunction with the Stakeholder dialogue
Mid CWA Workshop	February – March 2018	Brussels	DIN	In conjunction with the Stakeholder workshop
Final CWA Workshop	April 2018	Bonn	DIN	In conjunction with the final conference

DELIVERABLES

Deliverable (number)	Deliverable (Name)	WP	Responsible	Official Reviewer	External Reviewer	First Version delivery Date	Final delivery Date
D5.1	List of relevant Stakeholders	5	ICLEI Donostia, Ksand, Glasgow	TECNUN	Strathclyde	April 30th, 2016	May 30th, 2016
D5.2	Peer-Review Report 1	5	ICLEI, Bristol &Riga & Rome & Vejle	CIEM Donostia & Kristiansand & Glasgow	Bristol &Riga & Rome & Vejle	August 30th, 2016	October 21st 2016
D5.3	Report of the review workshop 1	5	ICLEI	Strathclyde Donostia & Kristiansand & Glasgow	Bristol &Riga & Rome & Vejle	August 30th, 2016	October 21st 2016
D5.4	Peer-Review Report 2	5	ICLEI, Bristol &Riga & Rome & Vejle	DIN Donostia & Kristiansand & Glasgow	Bristol &Riga & Rome & Vejle	February 28th, 2016	March 31st, 2017
D5.5	Report of the review workshop 2	5	ICLEI	TECNUN, Strathclyde, Donostia & Kristiansand & Glasgow	Bristol &Riga & Rome & Vejle	February 28th, 2016	March 31st, 2017
D5.6	Peer-Review Report 3	5	ICLEI, Bristol &Riga & Rome & Vejle	DIN Donostia & Kristiansand & Glasgow	Bristol &Riga & Rome & Vejle	September 30th, 2017	October 30th, 2017
D5.7	Report of the review workshop 3	5	ICLEI	TECNUN, Strathclyde Donostia & Kristiansand & Glasgow	Bristol &Riga & Rome & Vejle	September 30th, 2017	October 30th, 2017
D5.8	Official document regarding the further use of the tools	5	ICLEI, Donostia, Ksand, Glasgow	DIN, LiU, Vejle, Riga, Bristol, Rome	Donostia, Ksand, Glasgow	December 30th, 2017	January 30th, 2018
D5.9	Resilience Management Guideline	5	ICLEI	TECNUN, Strathclyde, CIEM, DIN	Linköping, All cities	March 28th, 2018	April 30th, 2018

**D5.9 can integrate information from the user manuals, while feedback collected from European stakeholders during the stakeholder dialogue and workshop will be also included*