SMART MATURE RESILIENCE

D5.6 – PEER REVIEW MEETING 3

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EXECUTIVE SUMMARY

This report was prepared in the framework of Work Package (WP) 5, i.e. the WP coordinating the pilot implementation process of the tools developed in WP3. It is the third of three peer-review reports aimed at summarizing the feedback from the partner CITIES on the pilot implementation process. Specifically, this report summarises the feedback from the partner cities on the joint pilot implementation of the City Resilience Dynamics Model, developed by TECNUN, University of Navarra and the Resilience Building Policies Tool, developed by the University of Strathclyde, between project months 25 and 29.

The aim of this report is to provide important input to the partners that are responsible for the finalization of both the aforementioned tools. The report demonstrates and highlights the main outcomes of the stakeholder training workshops that took place in the three tier-1 CITIES from June 2017 to October 2017, the organized webinars between the tier-1 and tier-2 partner CITIES, as well as a summary of the input received and the results of the 3rdreview workshop, which took place in Glasgow, UK from the 17th to the 19th of May 2017 (more detailed information on this workshop can be found on deliverables D3.2 and D5.7 though).

Throughout the process, the tier-1 CITIES provided collective input having participated in thisjoint pilot implementation of the tools, while the tier-2 CITIES shared their additional feedback having followed the peer-reviewing activities within WP5, mainly through webinars and additional one-to-one calls. The report summarizes the recommendations of the partner CITIES for the finalization of the tools, assesses the impact of both the tools for the stakeholders of each tier-1 CITY and states some general conclusions and recommendations.

This input will be the basis for designing the subsequent pilot implementationof the European Resilience Management Guideline and the 5 SMR resilience tools as a whole entity in this case, with the new group of the tier-3 CITIES that will be introduced in the project from month 30. These CITIES are all in resilience networks and have been recruited by ICLEI during project months M22 and M25. The list of tier-3 CITIES are: Amman, Jordan; Münster, Germany; Thessaloniki, Greece; Athens, Greece; Malaga, Spain; Reykjavik, Iceland; Greater Manchester, UK; Stirling, UK; Malmö, Sweden.

The report is divided into five parts: The 1st part provides an introduction to the main elements and parts of the pilot implementation process, while it also provides information on methodology and process details. The 2nd part provides an overview of the pilot implementation of the City Resilience

Dynamics Model, while the 3rd part follows the same structure, but this time focusing on the Resilience Building Policies Tool.Both chapters summarize the feedback from Kristiansand, Donostia/San Sebastian, and Glasgow, respectively, and present the reports on tools and webinars that have been produced by their respective, matching tier-2 peer(s).The 4th and final part of this report provides a general outlook on the pilot process, summarizes the tools' strengths and weaknesses as elaborated by the peer-review CITIES during the webinars and the review workshop and provides with some final recommendations for both the tools.

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1. INTRODUCTION TO THE PILOT IMPLEMENTATION

1.1. IN A NUTSHELL

This report is prepared in the framework of Work Package (WP) 5, i.e. the WP coordinating the pilot implementation of the European Resilience Management Guideline (ERMG), through a testing process of all the five resilience tools that are being developed within the SMR project. The report summarises the feedback from all partner CITIES on the joint pilot implementation and the peer-reviewing process of the City Resilience Dynamics Model, developed by TECNUN, University of Navarra and the Resilience Building Policies Tool, developed by the University of Strathclyde, between project months 25 and 29.

As a matter of fact, during project months 25 and 29, the Smart Mature Resilience project has been undergoing an intensive period of local stakeholder training, where local stakeholders in the core CITIES of Donostia, Glasgow and Kristiansand received in-depth training on the use of the SMR tools that have been developed so far. All tier-1 partner CITIES have been able to use and test the different versions of these tools, throughout the pilot process. The report highlights and summarizes important inputs received from the peer-reviewing cities that will be used for the finalization of both the tools within WP3 and their integration within the ERMG at the end of the project. .

Apart from the pilot elements presented in the next pages, throughout the iterative pilot process, the tier-1 CITIES in close cooperation with their respective research partners, when needed, organized additional workshops and bilateral meetings with identified stakeholders to further explore synergies and collaboration potential between institutions, municipal departments and utilities and the Smart Mature Resilience project.

Throughout this process, the tier-2 CITIES acted as critical friends or peer-reviewers, attending the webinars and providing feedback on tool development and arising challenges. In order for the tier-2 CITIES to be able to provide concrete and accurate input, since they have not tested the tools themselves, ICLEI always briefed them before and during the webinars on what had taken place in the stakeholder training workshops and what the most crucial tool updates at the time are.

1.2. THE TOOL TESTING PROCESS

The joint pilot implementation of the System Dynamics Model, developed by TECNUN, University of Navarra and the Resilience Building Policies Tool, developed by the University of Strathclyde, between project months 25 and 29 (June 2017 – October 2017) took place in the three tier-1 CITIES, Kristiansand, Donostia-San Sebastian and Glasgow, and again was peer-reviewed by the four tier-2 CIIES of Bristol, Vejle, Rome and Riga. The tool testing activities have been guided by the respective tool developers (Tecnun and Strathclyde University), while ICLEI was acting as an external coach and coordinator, facilitating knowledge and information exchange between partners and CITY official and representatives.

During this period, partners and representatives of the three tier-1 CITIES had the chance to explore and validate both tools in the security sectors that were already identified (T5.2) and to provide input to the developers for the finalization of the tools. Additionally, the general public in the tier-1 CITIES, therefore invited citizens were also involved in he workshops in order to better engage with the general public and to make sure that the tools will be as much as possible tailor made to the three tier-1 CITIES' needs. Not many citizens responded to this call, something that reinforced the adopted approach that the SMR tools are mainly targeting crisis and infrastructure managers and municipal staff and stakeholders engaged in strategic planning and management; in some cases though, there were a couple of citizens that joined the trainings and provided feedback on the tools.

Specifically during months 25 and 29, and in order to facilitate the finalization of both tools and strengthen the co-creation process, 3 stakeholder training workshops on each tool were organized and conducted in the three Tier-1 CITIES aiming to train city stakeholders to use the tools, and introduce their main qualities and functionalities.

Following these 6 (3+3) training workshops, ICLEI conducted 6(3+3) webinars during which, the implementing CITIES presented the activities and processes conducted so far and provided with detailed feedback on the stakeholder training workshops, while the tier-2 CITIES had the opportunity to ask questions and provide their insights and feedback on the ongoing tool development.

The webinars aimed 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, it was agreed among partners that 6 webinars should be conducted instead of 3 joint ones; therefore,

- 3 webinars focused on the City Resilience Dynamics Model and
- 3 webinars focused on theResilience Building Policies Tool

The webinars served for the Tier-2 CITIES as a way to receive a summary of the results, provide feedback and gain an insight into the outcomes of the training. Following each webinar, the respective tier-2 CITIES prepared a short report of 1-2 pages for the tools. These peer-review short reports have been an integral part of this document and are presented in the following chapters.

TOOL INTEGRATION IN THE SPOTLIGHT

In September 2017, and in order to facilitate the finalization of the Resilience Building Policies Tool, but also to provide a test-bed for the subsequent pilot implementation with the tier-3 CITIES, the trainings focusednot only on the Resilience Building Policies Tool, but on the European Resilience Management Guideline itself, providing a showcase of the interconnecting SMR tools to the participants and giving them the chance to work on a real case study, within the security sector of each CITY.

The trainings invited a close group of stakeholders that were already familiar with the SMR project and ideally have attended 1-2 of the previous trainings. The exercises focused on how the tools integrate with each other (MM-SD model, MM-Policy Tool, RSQ-Policy Tool etc.).The stakeholders were asked to work on a specific scenario that was considered relevant for each CITY and which could be placed within the security sector selected at project year 1 (T5.2). The tier-1 CITIES worked closely with ICLEI to create these scenarios, while tier-1 representatives co-facilitated the workshops with ICLEI.

Also, ICLEI in collaboration with the city partners identified the existing action and master plans existing in each CITY on sustainability, climate change and environmental management and tried through the workshops to find how the SMR tools and the integrated ERMG process can compliment the existing frameworks and also to identify gaps and potential challenges that have not been considered when developing these action plans.

WEBINAR METHODOLOGY

Each webinar involved the respective implementing city; the assigned tier-2 city/cities, Tecnun or Strathclyde University as a research partner and responsible for the tool development and ICLEI as moderator/facilitator. All webinars followed a structure that was result of the ongoing collaboration between ICLEI and the research partners through skype calls:

- Both tier-1 and tier-2 CITIES were introduced to the current state of the reviewed tool (City Resilience Dynamics Model and Resilience Building Policies Tool)
- The implementing tier-1 CITIES presented the challenges and constraints experienced during the stakeholder training workshop on each tool
- The tier-2 cities asked questions based on a guideline questionnaire prepared in advance by the research partners. This was to make sure that the most relevant aspects for the tool development would be questioned and analyzed. The tier-2 cities' representatives posed additionally their own questions;
- The research partners concluded with lessons learnt and knowledge gathered that would help them finalize the tools

In anticipation of the webinars, the research partners provided guiding questions in advance of the discussion in order to include specific issues in the debate. These questions meant to foster a better understanding of requirements needed for the finalization of the tools and to make sure that the most relevant aspects of the tool development would be questioned, analyzed and highlighted during the webinars. The guiding questionnaires can be found in the Appendix of this report. In the cases that the Resilience Information Portal was also tested during the Stakeholder Training Workshops, CIEM was consequently invited to participate in the webinars as well and provide with an overview of the discussions and feedback they received.

REVIEW WORKSHOP

A crucial part of the testing and review process was thethird review workshop in Glasgow, UK in May 2017. ICLEI, in cooperation with TECNUN and Strathclyde Universitywas responsible for the program development and facilitation of the workshop.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 Commission, this workshop was executed earlier in the process, before the actual pilot implementation of the two tools has formally kicked-off. More information on what happened in this workshop, what were the main outcomes and conclusions can be found in the SMR Deliverables D5.7 and D3.2. 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. The participants were also engaged in the co-creation of the European Resilience Management Guideline.

City representatives, critical infrastructure stakeholders, first responders, climate change and resilience experts, simple citizens and university students have been invited and attended the implemented training workshops and webinars. In all of them, identical methodology was used aiming to ensure replicability, comparability, and transferability and to put the emphasis on the Circle of Sharing and Learning.

1.3. PILOT IMPLEMENTATION TIMELINE

The steps and dates of the joint pilot implementation of the City Resilience Dynamics Model and the Resilience Building Policies Tool are shown in the following table:

ACTIVITY	DUE DATE	LOCATION	RESPONSIBLE
3rd REVIEW WORKSHOP	17-19 May 2017	GLASGOW	ICLEI & ALL PARTNERS
STAKEHOLDERTRAININGWORKSHOP City Resilience Dynamics Model Donostia	9 June 2017	DONOSTIA	ICLEI & TECNUN & CIEM
WEBINAR City Resilience Dynamics Model Donostia-Bristol	19 July 2017	ONLINE	ICLEI & TECNUN & CIEM

STAKEHOLDERTRAININGWORKSHOP City Resilience Dynamics Model Glasgow	15 September 2017	GLASGOW	ICLEI & TECNUN & CIEM
WEBINAR City Resilience Dynamics Model Glasgow-Rome-Riga	05 October 2017	ONLINE	ICLEI & TECNUN & CIEM
STAKEHOLDERTRAININGWORKSHOP City Resilience Dynamics Model Kristiansand	20 September 2017	KRISTIANSAND	ICLEI & TECNUN & CIEM
WEBINAR City Resilience Dynamics Model Kristiansand-Vejle	2 October 2017	ONLINE	ICLEI & TECNUN & CIEM
STAKEHOLDERTRAININGWORKSHOP TOOL INTEGRATION Glasgow	18 September 2017	GLASGOW	ICLEI / STRATH/TECNUN
WEBINAR Resilience Building Policies Tool Glasgow-Rome-Riga	05 October 2017	ONLINE	ICLEI & STRATHCLYDE
STAKEHOLDERTRAININGWORKSHOP TOOL INTEGRATION Kristiansand	26 September 2017	KRISTIANSAND	ICLEI /STRATH/CIEM

WEBINAR Resilience Building Policies Tool Kristiansand-Vejle	2 October 2017	ONLINE	ICLEI & STRATHCLYDE
STAKEHOLDERTRAININGWORKSHOP TOOL INTEGRATION Donostia	2 October 2017	DONOSTIA	ICLEI & TECNUN & STRATHCLYDE
WEBINAR Resilience Building Policies Tool Donostia-Bristol	10 October 2017	ONLINE	ICLEI & STRATHCLYDE

Table: Pilot implementation dates and timeline

2. PILOT IMPLEMENTATION OF THE CITY RESILIENCE DYNAMICS MODEL

2.1. IN A NUTSHELL

The City Resilience Dynamics Model (SD Model) is a strategy and policy tool that is based on the Resilience Maturity Model, therefore it also enables cities to self-assess their resilience status and provides a roadmap for how cities' resilience development could be rolled out, but it additionally inserts the budgetary element in this process and investigates the interrelations and interdependencies between the transversal policies of the Resilience Maturity Model (RMM).

The City Resilience Dynamics Model provides with a collaborative environment that facilitates awareness and integrated planning for resilience building activities.

During months 25 and 29, and in order to facilitate the finalization of both tools and strengthen the co-creation process of the City Resilience Dynamics Model, three (3) stakeholder training workshops were organized and conducted in the three Tier-1 CITIES aiming to train city stakeholders to use the Resilience Maturity Model and the City Resilience Dynamics Model, and introduce the main qualities and functionalities of both tools, but with greater emphasis on the latter.

An introduction to the Resilience Maturity Model showed to the participants of each workshop that I should be used as a tool for discussion that helps create consensus on what needs to be done to build or enhance resilience guiding the decisions making process, contributing mainly to the following aspects:

- Common and holistic understanding of resilience concept:
- Enhancing communication among stakeholders:
- Identifying and supporting development of resilience-strengthening strategies

Therefore, theResilience Maturity Model should be used periodically to evaluate the CITY's progress in the resilience building process.

The Model is programmed as an interactive online learning game, while:

- It can be used as part of strategic planning and helps to build knowledge to support staff in budgeting the resources needed for the resilience building process and also analysing budgetary deviations during the development of resilience
- It supports deep understanding of reasons for budgetary decisions for resilience strategising and the logic behind prioritising policies
- It supports deep understanding on the impact of the temporal order in which the policies should be implemented and finally

It provides with enhanced understanding of the Resilience Maturity Model, but contrary to the RMM use, the City Resilience Dynamics Model is intended for raising awareness of city stakeholders regarding the counter-intuitive consequences of the policy options and to be used as a reflective model, but not as a decision support tool.

2.2. STAKEHOLDER TRAINING WORKSHOPS

The stakeholder training workshops on the City ResilienceDynamics Model took place from the June 2017 to September 2017 in the three tier-1 CITIES (the 1st one in San Sebastian and then in Glasgow and Kristiansand). The aim of each session was to gather enough information from experts and help the researchers/tool developer further develop the tool, but also train the stakeholders in using its Beta version, with the hope that they will be able to use the tool in their CITIES, following its finalization at the end of the SMR project.

The present stakeholders were informed and advised that this process should be repeated periodically to evaluate the city progress in the resilience building process and to check the counter-intuitive consequences of the policy options and activities they are choosing and implementing each time; as discussed already, they were advised to use the tool as a reflective, but not as a decision support tool. The City Resilience Dynamics Modelshould be considered as a training tool that aims to teach and train de user in the city resilience building process. The tool has been developed based on the Resilience Maturity Model of the SMR project. Therefore, the simulation tool helps the cities to better understand how the Resilience Maturity Model works. Also it can be used by cities as a training tool to understand the process to improve the resilience level and help cities to identify the unexpected consequences when certain decisions are made.

The training workshops aimed to help testing and validating the tool, while also initiated stakeholder thinking on how it could fit within the European Resilience Management Guideline (ERMG). Therefore, the participants were also introduced to the ERMG, which is currently under development.

2.2.1. METHODOLOGY

Each workshop was facilitated by ICLEI and started with a presentation on the Smart Mature Resilience Project and the European Resilience Management Guideline, followed by a presentation on the City Resilience Dynamics Model and its main functionalities, usability and features. The linkages between the tools were highlighted, while the tier-1 CITIES' partners were also involved in the workshops, having a co-facilitator role.

PARTICIPANTS

The invited experts + project partners discussed upon the different dimensions, while all groups were facilitated by representatives from ICLEI and the present research and the tier-1 CITIES' partners.
Each workshop invited and gathered 10-12 experts from various disciplines, therefore:

- 3 experts worked on leadership and governance (stakeholders from the municipality, in high level positions and elected officials)
- 3 experts worked on preparedness (with linkages to civil protection, emergency services, crisis management)
- 3 experts worked on infrastructure and resources (critical infrastructures and other type of infrastructures)
- 3 experts worked on cooperation (these were stakeholders involved in international networks, departments that work in the cooperation with other stakeholders, city departments that promote citizens participation,NGOs)

OBJECTIVES

The objectives of the Stakeholder Training Workshops of the SD Model were the following:

- Present the European Resilience Management Guideline, which is under development and get initial feedback on it
- Showcase the tool to different stakeholders of each tier-1 CITY and explain its potential as a training tool for the resilience building process at local level
- Help the stakeholders get familiar with the Beta version of the tool
- Identify the tool's potential and discussabout its utility as a training tool and its potential adoption by the strategic planning and management departments of each CITY
- Validate the tool and suggest potential improvement possibilities

EXERCISES

In total five differentactivities/exercises were conducted in each workshop and each CITY;

1. General presentation of the SD Model; powerpoint presentation
2. Detailed presentation of the SD Model; online assessment, in tutorial mode

3. Participants' free-play with the tool in small groups, based on the dimensions of the Maturity Model (see group division above)
4. Breakout group exercise – guidance on how to achieve 100% resilience level for the city of XXXX following the steps below.
    a. Calibration of the tool for the city of XXX.
    b. Determination of the strategy that you the group aims to follow in order to obtain the highest resilience level for the city of XXX, additionaldiscussion on foreseeing the potential results
    c. Application of the strategy on the tool and comparison of the obtained results with the ones the group had initially predicted
    d. Facilitated discussion about the deviations that might have happened between the predicted results and the obtained results
    e. Process repetition until 40 years of simulation.
5. Participants took some time to fill-out a questionnaire developed by TECNUN and CIEM (the questionnaire is available at the ANNEX of this report)

LINK TO EXISTING CITY STRATEGIES AND PLANS

In addition to the above exercises, in each of the workshops, the CITY partners were invited to share with the participants updates (through a presentation) on the CITY's strategic Action Plan related to resilience and sustainability.

In this respect, the stakeholders referred always back to the CITY's vision, strategic priorities and planned activities, when working with the SD Model in order to achieve the maximum level of resilience building.

2.2.2. MAIN FEEDBACK AND RESULTS FROM DONOSTIA/SAN SEBASTIAN

The 1st Stakeholder Training Workshop took place on the 9th of June 2017 in Donostia/San Sebastian; the workshops lasted for approximately 5 hours, while the agenda can be accessed at the Annex of

this report. Following an initial discussion, facilitated by ICLEI and the Donostia Strategy Office, the participants were consulted that the city of Donostia/San Sebastian is positioned between the STARTING and MODERATE stages of the Resilience Maturity Model (rather at the beginning of the MODERATE stage, but with policies in the STARTING stage that have not been implemented at all so far). Therefore, all the discussionsof the day should take this information as a prerequisite.

In overall, Donostia stakeholders found the RMM/SD Model as a helpful tool for thinking strategically about resilience in their cities, and an effective systematic way of discussing the allocation of budget for advanced policy implementation. Almost all the stakeholders recognized the need for tool availability for integrated and strategic planning. They thought that the City Resilience Dynamics Model helps addressing the need for strategic management, but also for allocation of specific financial resources within a CITY that will support resilience building; however they would like to see more information on resource requirements. The stakeholders argued that the tool supports the resilience building process in terms of analyzing budgetary deviations during the resilience maturity process. At the same time, difficulties may be faced when using the tool without having a facilitator present, especially regarding what is considered as a resource in the city. Many participants argued that in recent years, municipalities and local governments work a lot with agreements between the city and sponsors, while most times an established agreement may also include allocation of human resources, volunteers and offer of materials or advertising campaigns.

The main consensus regarding the tool, but also the ERMG as a whole, was that one of the hardest challenges when progressing resilience is to encourage thinking in a systematic way, something that the City Resilience Dynamics Model does for a city manager or a strategic management team. The participants also highlighted the fact that finding ways to overcome silos are very difficult nowadays. All of the SMR tools assist with this process in some way and are therefore felt to be useful.

2.2.3. MAIN FEEDBACK AND RESULTS FROM GLASGOW

The 1st Stakeholder Training Workshop took place on the 15th of September 2017 in Glasgow; the workshops lasted for approximately 4 hours, while the agenda can be accessed at the Annex of this report. Following an initial discussion, facilitated by ICLEI and the Glasgow City Council, the participants were consulted that the city of Glasgow is positioned between the ADVANCED to

ROBUST stages of the Resilience Maturity Model. Therefore, all the discussionsof the day should take this information as a prerequisite.

The workshop in Glasgow was the one that provided with the most feedback on the European Resilience Management Guideline, as the participants found this quite relevant and useful as a framework that could complement the city's resilience building efforts, following their involvement in the creation of a resilience strategy, under the 100 Resilient Cities programme. Very early in the discussionabout the ERMG structure, the present stakeholders commented: "The ERMG structure takes a similar approach to Impact and assessment around equalities. It is heartening to see this and it will not look unfamiliar to people" or that the ERMG is "A good framework to pull together other agencies including national providers such as Critical Infrastructure and local authorities". There were a lot of comments around the importance of communication; there are good practice examples of campaigns to raise awareness of citizens, e.g. the recent Scottish water campaign. "Raising awareness is essential". The main consensus was that the ERMG needs to be clarified to show communication is a key issue when implementing resilience in a city.

Regarding the City Resilience Dynamics Model, the main comments were around the "city budget dedicated for resilience" element; many stakeholders wondered: How do we define this? What do partners bring to the table? Should partners' budget be considered? - For example this could include housing projects – including City Deal, significant infrastructure – not ring fenced resilience budget. It was noted the model "Doesn't advise what budget you would require to properly achieve a resilient city. Another opinion that received a lot of support was that: "It's almost as if we are expected to make a decision about funding before we know what we are required to do". The consensus was that it is difficult to identify and make connections between existing programmes, while many stakeholders argued that the city should include resilience into its existing activities and not create new policies for resilience instead. Since a lot of the discussion was around the budget issue, the stakeholders were asked to share their opinion on the topic one by one; their answers were:

- "Finance should come at the end and not at the beginning of the process – a city management team should first set priorities that improve quality of life and build up resilience and then look into the available resources for getting these activities done"
- "It would be interesting to consider the model allowed us to front-end city population stats to affect the outcome – i.e. The size of population relates to taxable income and therefore city budget"

- “The City Resilience Dynamics Model assumes that increased spend means we are more effective”
- “The City Resilience Dynamics Model assumes that if we have to realign budgets this means we aren’t resilient”
- “If you deliver under budget then how does the City Resilience Dynamics Model reflect this?”
- “Shouldn’t we be measuring efforts and not money”

The participants agreed that the City Resilience Dynamics Model should be offering an approach that measures the impact and if the city has improved. This impact should also be fed again, after a re-assessment, into the model to show the policy effectiveness on the simulation page. The tool should help the city administration looking at where the city is going i.e. educational attainment or health in early years – this data would show that the city is building up resilience for the future and therefore making the city more resilient – this would also require less investment in the future possibly. On the negative side, some participants argued that: the model doesn’t allow them to get into the fine detail or that for some stakeholders it may look good for corporate high level overview, but not for city work.Finally, someone noted that the model may struggle based on monetary value rather than resources. On the positive side, many argued that the used graphics are useful and that the tool’simplicitly is the essence to allow the model to be at most user friendly. Some final recommendations were the following: “It could be useful if it was used to forecast a budget or justify effective use of budget” or that: “Time dimension should be considered –would be very useful to look back at what went wrong, where key decisions were ineffective and how we can learn lessons from this?”

2.2.4. MAIN FEEDBACK AND RESULTSFROM KRISTIANSAND

The 3rd and last Stakeholder Training Workshop on the City Resilience Dynamics Tool took place on the 20th of September 2017 in Kristiansand; the workshop lasted for approximately 6 hours, while the agenda can be accessed at the Annex of this report. Following an initial discussion, facilitated by ICLEI and the KristiansandCommune partners, the participants were consulted that the city of Kristiansand is positioned between the MODERATE and ADVANCED stages of the Resilience Maturity Model. Therefore, all the discussionsof the day should take this information as a prerequisite.

Just like in the previous two workshops in Donostia/San Sebastian and in Glasgow, the discussion focused a lot around the budget issue, therefore, the stakeholders were asked to share their opinion on the topic one by one; in this respect, their answers were:

- "We don't often have the resource to plan ahead year after year – most of the times the budget that we have is dependant on national prioritization of topics and themes to focus upon''
- "It would be useful if there was an indication about what percentage of the budget would be beneficial to allocate to each dimension"
- "The City Resilience Dynamics Model seems to a business model instead of a local authority model – we can't be sure that we will be able to use this, unless we see a final version of it that will actually reflect completely the way a CITY works and plans its activities and urban agendas"

The City of Kristiansand has introduced co-creation in their newly developed Action Plan, while they have committed to create a resilience culture and to share experiences and lessons learnt from the SMR project with other cities with which they have been in contact through projects and city-matching processes. The city still has a long way to go in this respect, but co-creation for resilience has already reinforced across-silo cooperation and has led to the establishment of strategic partnerships and involvement of volunteers in crisis and emergency management processes. The City Resilience Dynamics Model could be a good starting point in bringing stakeholders together in meetings and a consultation process for advancing the CITY's resilience maturity. The tool can be used also for lobbying activities and as a decision-support tool for convincing other levels of governance on the importance of resilience building in Norwegian cities. The CITY has a city action plan in place, but this does not break down activities per year or any other period. The plan refers only to 2030, therefore, the SMR tools can facilitate a process of thinking about resilience in shorter terms, but still trying to achieve long term goals for 2030.

2.3. PEER-REVIEW PROCESS

2.3.1. THE PROCESS IN A NUTSHELL

Following the 3 stakeholder training workshops, ICLEI conducted 3webinars with the tier-2, peer-reviewer CITIES, during which, the implementing CITIES presented the activities and processes conducted so far and provided with detailed feedback on the stakeholder training workshops, while the tier-2 CITIES had the opportunity to ask questions and provide their insights and feedback on the ongoing tool development.

Following the webinars, the peer-review CITIES provided a short report each, summarizing their experience and providing with some recommendations for the further development of the tool. In the case of Donostia-Bristol, the webinar took place separately from the Resilience Building Policies Tool one, while in the cases of Glasgow-Rome-Riga and Kristiansand-Vejle, the proximity between the Stakeholder Training Workshops was the reason to combine the webinar on the System Dynamics Model with the Resilience Building Policies tool webinar.

Therefore, while Bristol has sent *two reports (one on each tool),* the rest of the CITIES have prepared *a longer report that summarizes both the webinars* in which they were involved.

In each case, the reports aimed to include feedback on the tool, based on three guiding topics:

1) Constraints and commonalities that were identified during the webinar presentations and discussions,
2) Comments on usability and transferability and
3) Recommendations for the finalization of the tool.

The most important information from these reports is summarized in the following sub-chapters. The agendas of each webinar can be found in the Appendix of this report. The same goes for the guiding questionnaire, used to guide the tier-2 CITIES. The following table shows the general agenda/plan for all the City Resilience Dynamic Model webinars:

TIME	ACTIVITY	RESPONSIBLE PARTNER
5 min.	Welcome, introduction and technical info	ICLEI
15 min.	Presentation on the System Dynamics Model and what happened in the training session	TECNUN
10 min.	Initial feedback from Tier-1 CITY	Tier-1 CITY

5 min.	Initial feedback from facilitator	ICLEI and TECNUN
35 min.	Discussion prompted by set of questions below*	Tier-2 CITY
15 min.	Learning gained from the implementation process that should be to be carried forward to the other implementation sessions (or to be included in the manual in the case of the final implementation session)	ICLEI - TECNUN
5 min.	Wrap-up and next steps	ICLEI

Table: General agenda for the peer-review webinars

2.3.2. PEER-REVIEW REPORT – BRISTOL

This report is based on the stakeholder training workshop that took place in Kristiansand and the follow-up online webinar/meeting between ICLEI, TECNUN, and the CITIES Donostia/San Sebastian andBristol. The report looks into: constraints and commonalities identified; recommendations for the finalization of the tool, and comments on usage and transferability.

THE BRISTOL REPORT:

ICLEI firstly set out the objectives for the SDModeltool to provide an online gaming environment, supporting interactive learning for strategic planners and crisis managers. TECNUN reminded us of how the SDModel encapsulates the important aspects of the Resilience Maturity Model and has been designed to help the diagnosis, exploration and learning of the path cities need to take to build resilience.

Following a quick overview from TECNUN, we explored the implementation workshop with Donostia, using a series of guiding questions to draw out specific observations on the implementation process and utility of the SDModel. Feedback from DSS is summarised below, supplemented by Bristol where relevant based on our own experiences of using the SDModel.

USAGE & TRANSFERABILITY

- Purpose: The workshop was more inclusive than previous pilot implementation workshops through the use of both Spanish and English. Overall the workshop met participant's expectations, helped to build an understanding of the Resilience Maturity Model and assisted discussions on city resilience. However, those people less familiar with the SMR tools ideally needed more time to build familiarisation. Although time ran-out to complete a full simulation of the resilience pathway the discussions generated by this process were valuable. The difficult balance to strike is providing enough time to run the simulation and allow reflection/debate, whilst not making the session so prohibitively long that it deters attendance.
- Application: More explanation is needed on the RMM policies included in the SDModelto help users. The ability to tailor parameters within the model at the start of the simulation is helpful. However, splitting the workshop into two groups may have led to differences of opinion in specifying these parameters. Being able to adjust the SDModelmore to local characteristics (including the RMM policies) would be beneficial.
- Outputs: Whilst there is an appreciation that the SDModel is a theoretical gaming environment, there is a desire for more 'answers' on resilience rather than just playing with the tool. As a consequence application within municipalities will be somewhat difficult and may limit who ultimately finds value in using the tool. Some users may want to understand more about the mechanics/programming driving the SDM so they can evaluate/understand the consequences of their decisions and see how this influences the resilience maturity trajectory. Revisions to the model which make the pre-sets more transparent (including the ability to specific starting parameters) helps to some extent.

CONSTRAINTS & COMMONALITIES

- Budget & Time: Resilience maturity in the SDModel is strongly centred on finances, requiring users to allocate specific sums to different RMM policies, and estimate the time period for implementation and 'depletion'. However, workshop participants found it difficult to estimate some of these parameters and there wasn't sufficient time to specify all them. Bristol would reiterate Donostia's experience in this regard. Often resilience-building can be done on a 'shoe-string' budget where costs are largely revenue based (as opposed to capital) and the result of

collaboration from many people/organisations. This isn't necessarily easy to convert into tangible sums of money even though the impact of this partnership working can be high. Use of a depletion factor in addition to the implementation time period is quite confusing and impossible to determine in many instances. The SDModel tool needs to be adjusted to local currencies particularly as Tier 3 cities are brought into the project.

RECOMMENDATIONS FOR FINALIZATION OF THE SD MODEL

1. Bespoke: Explore building additional functionality into the SDModel to allow an adjustment to local conditions/characteristics, which is likely to encourage more update of the tool and widen its application within municipalities. For example might it be possible to only select batches of RMM policies rather than running the simulation with the whole suite of policies?
2. RMM Policies: Consider adding supplementary information to explain the policies further.
3. Parameters: Review the use of depletion factor given the uncertainties/complexities of specifying this time period. Consider whether it is possible to select ranges of expenditure rather than absolute figures i.e. small, medium, high, where users specify the ranges for these budget bands and then select which band is appropriate for each RMM policy.

The combined report of Riga and Rome on the City Resilience Dynamics Model and the Resilience Building Policies tool can be found in this report, under chapter 3.3.4.The combined report of Vejle on the City Resilience Dynamics Model and the Resilience Building Policies tool can be found in this report, under chapter 3.3.3.

3. PILOT IMPLEMENTATION OF RESILIENCE BUILDING POLICIES–TOOL INTEGRATION WITHIN THE ERMG

3.1. IN A NUTSHELL

The Resilience Building Policies Tool has been developed and tested in cooperation with the project cities between June and October 2017.During the pilot implementation process in the 3 Tier-1 CITIES, ICLEI and Strathclyde implemented 3 Stakeholder Training Workshops which aimed:

- To validate and collect input on the Resilience Building Policies tool and help the tool developers (Strathclyde, LiU and ICLEI) finalize it
- To support discussion about the development of the European Resilience Management Guideline that is ongoing, and to show how the SMR resilience tools interact with each other and integrate within the ERMG
- To enable the stakeholders to work on a specific case study that is relevant for the CITY and try to use as many SMR tools as possible in this particular case
- To provides additional examples of case studies that my be added to the Resilience Building Policies Tool

In order to enable testing among different citizen/stakeholder groups, and validate the usability and transferability of the tool, each CITY worked on a case study related to the security sector (T5.2). The following table shows the case study for each CITY, and also the tools that were co-tested in the workshop, together with the Resilience Building Policies Tool.

STAKEHOLDER TRAINING WORKSHOP	CASE STUDY	TOOLS TESTED
GLASGOW	Major flooding event, with direct and indirect effects that flooding causes, in particular: roads/ traffic disruption, impact on critical infrastructure, impacts on the local economy like destruction of shops and businesses, impacts on housing, on building resilience and preparing future city plans for infrastructure, impacts on land use; as well as indirect effects upon the physical, mental health and wellbeing of citizens.	Resilience Building Policies Tool Risk Systemicity Questionnaire Resilience Information Portal

		Resilience Maturity Model
KRISTIANSAND	***Major loss of water supply***, resulting in half the population of Kristiansand left without water in their houses, with impacts on critical infrastructure mechanism, impacts on the local economy as restaurants and other business are not able to offer their services, impacts on housing, on building resilience and preparing future city plans for infrastructure, as well as increased lack of trust in the local government's capacity to maintain the city's functions in times of emergency and crisis, with negative political consequences for the leading political party at local level	Resilience Building Policies Tool
		Risk Systemicity Questionnaire
		Resilience Information Portal
		Resilience Maturity Model
		City Resilience Dynamics Model
DONOSTIA/SAN SEBASTIAN	Large flooding event that lasts for 3 days in a row and results in the collapse of main critical infrastructure mechanisms, impacts on the local economy like destruction of shops and businesses, impacts on housing, on building resilience and preparing future city plans for infrastructure, impacts on land use, as well as the cause of injuries among the population	Resilience Building Policies Tool
		Risk Systemicity Questionnaire
		Resilience Information Portal
		Resilience Maturity Model

Table: Case studies selection and tools tested in tier-1 CITIES trainings

Therefore, the training workshops aimed to help testing and validating the Resilience Building Policies tool, while also initiated stakeholder thinking on how it could fit within the European Resilience Management Guideline and how the SMR tools interact with each other. Each workshop was facilitated by ICLEI and started with a presentation on the Smart Mature Resilience Project, followed by a presentation on the under developmentEuropean Resilience Management Guideline, its scope and overview of the operational steps for local resilience planning that it provides.. The linkages between the tools were highlighted, while the tier-1 CITIES' partners were also involved in the workshops, having a co-facilitator role.

3.2. STAKEHOLDER TRAINING WORKSHOPS

3.2.1. METHODOLOGY

Each workshop was facilitated by ICLEI and started with a presentation on the Smart Mature Resilience Project, followed by a presentation on the European Resilience Management Guideline and the Resilience Building Policies Tool (both in power-point and as an online tutorial, following the links from the Resilience Maturity Model to the Resilience Building Policies Tool.

3.2.2. MAIN FEEDBACK AND RESULTS FROM SAN SEBASTIAN

The 3rd and last Stakeholder Training Workshop on the Resilience Building Policies Tool took place on the 2nd of October 2017 in Donostia/San Sebastian; the workshop lasted for approximately 6 hours, while the agenda can be accessed at the Annex of this report.

The session in San Sebastian reinforced the points made regarding the use of the RBP from the two previous WP5 events. Overall, the group liked the Web-based interface of the RBP and they found it easy to use. They also believed that it was helpful to see what other cities are doing in the context of resilience, and in such sense they found the RBP being very useful, especially when used in combination with the RMM. Moreover, participants expressed interest in contributing more case studies to the RBP.

In this workshop, the participants were divided in two groups and mainly focused on the Infrastructure and Resources dimension of the RMM and RBP; the participants found many case studies relevant to the case study of the day and also discussed a lot about the policies the CITY would still need to implement in order to move from the beginning of the MODERATE stage of the resilience building

process. The stakeholders were quite critical at the presentation of the ERMG, as they believe that while it provides with a framework that is much needed in the CITY, they are a bit skeptical about the fact that while frameworks and processes have been made available to the CITY in the past, many remained in paper and were never implemented, due to changes in the political administration and agenda that took place in the past (following the financial crisis of 2008), and also due to lack of financial resources and general crisis mode and austerity practices that followed. In general, the tool's online platform was considered as useful and easy to use. The participants highlighted the necessity to complete the examples and improve the definitions of the policies. In response to the relevant question, the Resilience Building Policies Tool should have Wikipedia functionalities and the CITIES should be able to continuously update the tool, following the need of the SMR project.

Regarding the Risk Systemicity Questionnaire testing, the participants proposed to add percentages next to the answers: Possibly, unlikely etc., in order to provide clear differentiation between. Additionally some of the new Excel functions, like the provision of mitigating actions needed debugging, something that was shared with the tool developers just after the workshop end. The presentation on the Resilience Information Portal was received quite positively, and the discussion focused on how the Portal can reinforce transparency in Donostia; the participants argued that the Portal could be used as a potential means of communicating resilience and local sustainability efforts and engaging with volunteers and utilities.

3.2.3. MAIN FEEDBACK AND RESULTS FROM KRISTIANSAND

The 2nd Stakeholder Training Workshop on the Resilience Building Policies Tool took place on the 26th of September 2017 in Kristiansand; the workshop lasted for approximately 6 hours, while the agenda can be accessed at the Annex of this report.

In overall, participants found the RMM/RBP a helpful tool for thinking strategically about resilience in their cities, and an effective systematic way of discussing the state of the organisation. Participants recognized a need for tools which support strategic thinking. The consideration of the RMM/RBP helped participants realize the difficulty of getting leadership to work long-term, and so engage in long range planning which considers how to progress to higher resilience maturity stages. Moreover, with respect to the RMM/RBP, participants acknowledged the impact of people working in silos on an ability to develop long-term strategy. For example, they realised how difficult it was to move from moderate to advanced maturity stage because of the silo problem. Another question considered

during the session was the importance of focussing attention on the shortage of resources to support strategic thinking. They thought that the RBP helped to address this problem; however they would like to see more information on resource requirements. They also found too many repeat case studies when navigating through the RBP. Finally, they welcomed enthusiastically an ability to add new case studies to the RBP, and expressed interest in the possibility of adding more case studies to the RBP. The RBP tool can facilitate discussion about the future of resilience in the CITY. Kristiansand has a master plan that future challenges but the real problem starts with the fact that there is no long term strategy under the same scheme; local politicians follow different strategies each year even, as the political agenda changes always priorities: today resilience may be trending, but tomorrow this would be the case for immigration, industrialization etc. Finally, all stakeholders agreed that the SMR tools could enhance cross-sectoral collaboration and make a significant effort in breaking the silos

3.2.4. MAIN FEEDBACK AND RESULTS FROM GLASGOW

The 1st Stakeholder Training Workshop on the Resilience Building Policies Tool took place on the 18th of September 2017 in Glasgow; the workshop lasted for approximately 4,5 hours, while the agenda can be accessed at the Annex of this report. The main questions that the stakeholders had to consider for the training, in order to get results as relevant as possible for the Glasgow City Council and their work in the whole field of resilience and sustainability were the following: How can the city best use these tools? Is there guidance? Can each team use or do they have to go through Resilient Glasgow team? Also, when will the tools be available?

In overall, participants thought that the RBP was well-structured and easy to navigate. They believed that it may be particularly useful for cities which are only starting their resilience journey, as it gives them rich examples of policies which they can implement. However, more broadly, the RBP can be helpful in understanding the different resilience maturity stages and what can be done to progress the city.As part of possible changes to the tool, participants suggested a feature which would allow users to tick the policies which they have already implemented. Participants also provided comments regarding how the RBP should be communicated in the ERMG manual, which will be taken into account, therefore, the main conclusions were that the tools developers should:

- Make it clear that the RMM/RBP is dedicated to baseline assessment of the particular aspect of city resilience in question.
- Emphasize the importance of communication of RMM policies to politicians as their support is

required to implement the policies.

- It needs to be communicated clearly that the tools will have to be tailored by the cities. Tools are frameworks that need to be tweaked to the cities' needs by the cities.

The workshop in Glasgow was used as a great test-bed to check upon the usage and relevance of all the SMR tools that were tested.

In the Resilience Maturity Model and the Resilience Building Policies tool, the terminology needs to be defined for each city (dependant on local context) for example "Manage" can mean anything from jotting down or actively managing the risks. The Policy tool can be useful to pull out long term issues i.e. climate change and learn from what other cities are doing in the field. Also, the participants argued that there is significant need to more clearly detail the need to "bounce forward" or "build back better". The general consensus was that it would be helpful if the mm was available as an online interactive tool which could be used to collate opinions from multiple stakeholders. Everyone agreed that it would be useful to produce a leaflet showing how each tool comes into the process – this could of course be the Guideline itself. Also, it would be helpful if the mm asked for evidence to show that each stage had been completed by the city – this would then allow the city to collate an evidence base to validate their maturity level. The outputs of the mm should produce an improvement plan which shows what next steps the city needs to take to become more resilient. In overall the mm was positively received and it was felt that the city could make use of the tool (with some clarifications/ context setting). There would be a need to define terms and caveat that this needs to be considered in a city context. It is felt it would also be useful as an individual self audit.

The participants discussed with Strathclyde whethertimescales have been being as part of RSQ and it was noted that this needs to be defined by the city at the outset.It would be useful to amend some of the text to meet city specific context, while it was considered as rather important to be able to amend terminology, when this appears inappropriate or controversial and adapt it to each CITY's issues or causes. Finally regarding the RSQ trainings, it was considered as quite unlikely that every stakeholder will be present in the room at one time – as a result the output page is key so that others can understand the thinking and the RSQ tool would be useful to take issues back to another group in the city or regionally for discussion. The colour coding of results is useful, however this should not correspond to red, amber, and green as this gives the impression that green means that the situation is good or under control and red gives the impression of the opposite.

The participants ended the session on the agreement that if a CITY is committed to creating a culture of resilience then need to start with information to inform citizens"

3.3. PEER-REVIEW PROCESS

3.3.1. THE PROCESS IN A NUTSHELL

Following these 3 stakeholder training workshops, ICLEI conducted 3webinars with the tier-2, peer-reviewer CITIES, during which, the implementing CITIES presented the activities and processes conducted so far and provided with detailed feedback on the stakeholder training workshops, while the tier-2 CITIES had the opportunity to ask questions and provide their insights and feedback on the ongoing tool development.

Following the webinars, the peer-review CITIES provided a short report each, summarizing their experience and providing with some recommendations for the further development of the tool. In the case of Donostia-Bristol, the webinar took place separately from the City Resilience Dynamics Model one, while in the cases of Glasgow-Rome-Riga and Kristiansand-Vejle, the proximity between the Stakeholder Training Workshops was the reason to combine the webinar on the City Resilience Dynamics Model with the Resilience Building Policies tool webinar. Therefore, while Bristol has sent two reports (one on each tool), the rest of the CITIES have prepared a longer report that summarizes both the webinars in which they were involved.

Time (mins)	Activity	Responsible Partner
5 min.	Introduction to the activities of the webinar	ICLEI
15 min.	A brief factual explanation of what happened at the implementation workshop (for the benefit of the Tier-2 CITY)	Strathclyde University

10 min.	Initial feedback from Tier-1 CITY	Tier-1 CITY
5 min.	Initial feedback from facilitator	Strathclyde University
35 min.	Discussion prompted by set of questions below*	Tier-2 CITY
15 min.	Learning gained from the implementation process that should be to be carried forward to the other implementation sessions (or to be included in the manual in the case of the final implementation session)	Strathclyde University
5 min.	Wrap-up and Next Steps	ICLEI

Table: General Agenda for the Resilience Building Policies Webinars

3.3.2. PEER-REVIEWREPORT – BRISTOL

This report is based on the stakeholder training workshop on the Resilience Building Policies/ERMG and SMR Tools that took place in San Sebastian and the follow-up online webinar/meeting between ICLEI, Strathclyde, and the CITIES San Sebastian and Bristol. The report looks into: constraints and commonalities identified; recommendations for the finalization of the tool, and comments on usage and transferability.

THE BRISTOL REPORT

The half-day workshop in Donostia with six external stakeholders, presented the under-development ERMG which has moved from a ‘user journey’ format to an integrated management system providing guidance, measurable targets, an operational framework and operational steps for local resilience

building. Participants were provided with some training on the RMM, RSQ, resilience portal and the policy tool. The tools were used to explore the 2011 floods in DSS as a case study for assessing resilience maturity.

USAGE & TRANSFERABILITY

- Case study: The group discussed the impacts of the 2011 floods e.g. environmental and socio-economic; and the remedial actions taken. Participants liked using the case study as a resilience lens.
- RMM & Policy tool: The two groups of stakeholders had different approaches to the exercise – one focusing on a specific dimension, the other going for a broad overview across dimensions. Using the tool highlighted low levels of citizen participation and the persistence of silos which are hampering resilience building and collaboration. The purpose of the Policy tool was clear to workshop participants.
- RSQ: Although this was the least familiar tool, there was agreement on the possibilities for using the RSQ, both valuing the holistic approach and exploration of vicious circles.
- Usage: Overall, the tools were relatively easy to use but more supporting information is needed to explain certain definitions. The citizen representative felt the workshop had changed their thinking/appreciation of resilience.

CONSTRAINTS & COMMONALITIES

- Language: There was the familiar theme of language problems due to the predominant use of English. However, DSS's SMR city representative had translated the RMM into Spanish which helped understanding of its content.
- Groups: Experts represented different areas so there was limited cross-examination/challenge of professional opinions.
- Time: More time was needed for reflection and discussion amongst experts.
- RMM & Policy Tool: There was a consensus on the level of resilience maturity but some definitions needed to be explained.
- RSQ: It was felt that this was largely a conversational tool, and it didn't necessarily bring about a shift in resilience thinking. However, this is likely to vary with different levels of experience.
- Tool integration: Insufficient time was spent on this aspect of the ERMG to provide comment.

RECOMMENDATIONS FOR FINALIZATION OF THE SMR TOOLS

- Purpose: Workshops need to be clear on purpose and allow deeper reflection on this e.g. having a clear political mandate and vision for resilience work. Being clearer on purpose will help with tailoring workshops to meet participants' needs.
- RMM & Resilience Building Policies Tool: Update website using pages from RMM handbook and validate the final set of RMM policies. Provide fewer but stronger cases studies which demonstrate examples of resilience for the three SMR focus areas: critical infrastructure, climate change and social problems. Provide supporting definitions.
- RSQ: Provide definitions for likelihoods – 'likely', 'possibly' & 'unlikely' – and add a percentage range for each to assist with scoring. Explore scope for cities tailoring the RSQ to local circumstances.

3.3.3. PEER-REVIEW REPORT – VEJLE

This report is based on the stakeholder training workshop on the Resilience Building Policies/ERMG and SMR Tools that took place in Kristiansand and the follow-up online webinar/meeting between ICLEI, TECNUN, Strathclyde and the CITIES Kristiansand and Vejle. The report looks into: constraints and commonalities identified; recommendations for the finalization of the tool, and comments on usage and transferability.

THE VEJLE REPORT

The feedback, which we gave during the webinar, addresses not only the tools; but also the target group, the application method and other tool-external conditions.

- In order for the tools to be used by a wide group of employees in the municipality and by politicians, the tools must be translated into the mother tongue.
- The tools must be adaptive so that municipal-specific elements can be incorporated. The tools thus become more specific and targeted to the current challenges and it will also increase ownership of the tools.
- The tools focus on elements and challenges that lie across the various municipal administrations, which is strength of the SMR project in total.

- The strength of the tools is that they can help create a realistic burning platform for an event before it occurs. The challenge is to make the scenario realistic for both politicians and citizens who choose those politicians. Here the press has an important role to play.
- By using the tools, the individual municipality can have a tool to prioritize action areas based on objective information based on professionals across the municipality as an organization and with the involvement of relevant actors in the municipality or in the region.
- In connection with the tools, attention must be focused on the prevention and / or mitigation aspects as it can be difficult to make realistic and long-term strategies. This can be due to several factors - politicians who have to allocate resources are elected for a shorter period (in Denmark 4 years) and the political priorities do not always coincide with the need for the right long-term plans. There are not always funds for the necessary measures; but always funds the day after the disaster.
- The tools can help to think holistically - for example, by identifying and pointing 'vicious circles'.
- It is important that the tools can be used by and used by ordinary citizens and volunteers - it is especially important in relation to the target group that the challenges and solutions are made present, understandable and relevant. It is therefore important that the content is both language and content adapted to this target group, which includes both illiterate and migrant people who speak different languages.
- It would be a great advantage if the tools could suggest a list of relevant actors in relation to the various disaster and stress incidents and that it takes ‘black swans’ into account.
- In order to involve as much of the city's citizens as possible it is important that the elements and examples included in the tools are recognizable. For example, achieved by incorporating various ongoing projects and identifying the projects resilient and sustainable angle.
- For future use of the tool it is recommended that workshops using the tool are planed together with stakeholders, so that everybody knows why they are together and using the tool.
- The tools should be organized in such a way that the different municipalities can compare to each other and thus be inspired by each other to initiate relevant actions and that the toll is flexible and changeable.
- In addition to the tools must have a manual that suggests how it can be used, by whom, how often and when?

3.3.4. PEER-REVIEW REPORT – ROME&RIGA

This report is based on the stakeholder training workshop on the City Resilience Dynamics Model and Resilience Building Policies/ERMG and SMR Tools that took place in Glasgow and the follow-up online webinar/meeting between ICLEI, TECNUN, and the CITIES Glasgow, Rome and Riga. The report looks into: constraints and commonalities identified; recommendations for the finalization of the tool, and comments on usage and transferability.

THE ROME REPORT

Discussion on tool integration results will foster policy consideration process by increasing focus on maturity issues within next planning period for both the cities. In general, the stakeholder training workshop results matched our expectations and met our objectivesinto placing the SMR tools in local strategy planning processes in the future, and also in a user-friendly manner.Especially per tool, the general recommendations and feedback can be summarized as follows:

CITY DYNAMICS MODEL:

Usability:

- The tool is well conceived, designed and easy to utilize.

Transferability:

- No problems. The tool is intuitive. Graphic rendering helps a lot the comprehension.

Constraints:

- The tool is linked to the Maturity Model, therefore it cannot include differences arising from unexpected (or un-projected) city specific assessments. Sometimes these variations can be wide and can lead to out-of-range, or dissimilar, budget allocations. The case of Rome is noteworthy, because of a municipality of abnormal geographical width. In some cases this can lead to difficulties while trying to compare it with smaller municipalities[1].

[1]The issue of city physical dimension is of general recurrence, while applying urban resilience tools: criteria to define a municipality, a city, or a metropolitan area can vary a lot at European level and worldwide. As an example, for Rome the municipality does almost include the entire metropolitan area,

- It is not said that the spending for resilience improvement (in general) should come from the municipal budget only. In many cases a variety of resources can be found (e.g. from the private sector). This case should be considered.

RESILIENCE MATURITY MODEL

Usability:

- The tool is easy to utilize; it is an outstanding tool for getting a clear picture of the urban resilience status, and also to delineate different scenarios.
- Since the tool cannot be designed as a simple questionnaire, thorough instructions are needed.

Transferability:

- In some cases, there is a need to better define terms; this can be done by the instructions, as above mentioned.

Constraints:

- It is sometimes difficult to define the correct stage of resilience policies already in place (e.g.: an early warning system for heavy precipitation can be framed in a starting stage, as for the governance dimension, but this same system is also an advanced instrument when considered in preparedness).
- In our opinion, there is a slight underevaluation of some resilience actions as defined in the starting stage (e.g.: to "deploy a disaster relief fund for emergencies" can be well ahead of a starting stage, because it is something that needs for a prior assessment, where emergencies are assessed and evaluated).

RISK SYSTEMICITY QUESTIONNAIRE

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while in Paris the metro area is distributed over several smaller municipalities (and this is the general case. Rome is an exception): as a result, looking at the city data without paying attention to this feature, the municipality of Rome can seem bigger than that of Paris, which is not the case, obviously. This observation heavily affects comparisons among cities, when it is a matter of data and budgeting, in particular.

Usability:

- The tool is intuitive and well designed. The methodology adopted allows the detection of many unexpected and inter-dependent risks.

Transferability:

- No problems. An online version of the tool would be very useful, also for communication/dissemination reasons.

Constraints:

- The range of risks considered by the RSQ is very wide, but it is far to be complete. Of course, what is important is the methodology, and it is not possible to include risks of whatsoever origin, but some customization functions would help cities to fine tune the RSQ to their own specific situation (e.g.: we have cited the case of heat waves, which is among major risks for Rome, because it is combined with an ageing population, in particular)

RESILIENCE BUILDING POLICIES TOOL

Usability:

- The relevant section of the website is well designed, although it is not of immediate comprehension. May be a first page where all the items are explained could help: it cannot be taken for granted that common users correctly understand the meaning of resilience related terms of "maturity stage" or "dimensions and sub-dimensions", for example.

Transferability:

- Considering what said above, language can be an issue. Actually, it is not the case of a complete translation of the tools in other languages (English comprehension is of sufficient level among final users); but the correct lexicon and the significance of terms should be explained.

Constraints:

- Basically, the Policy Tool is a "sub-tool" of the Maturity Model, where policies are listed and detailed. Therefore, constraints are almost the same of the MM, as far as the contents are concerned. For the moment, in the SMR website, the tool is accessible

through the MM pages, but there isn't a specific link within the home page (same observation for the City Dynamics Model).

4. OUTLOOK

4.1. SUMMARY OF THE REVIEW WORKSHOP INPUT

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 Commission, 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 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 an SD 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. Finally, on day 3 of the workshop, DIN organised a session dedicated to the standardization possibilities within 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 (aka System Dynamics Model at the time that the workshop took place) and the Resilience Building Policies Tool. 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. More information on the agenda, the sessions and the outcomes of the 3rd Review Workshop can be found in the SMR project deliverable D5.7.

4.2. ASSESSMENT OF STRENGTHS AND WEAKNESSES OF THE TOOL

The following tables summarize the strengths and the weakenesses for each one of the two tools that were reviewed in the Glasgow workshop (City Resilience Dynamics Model and Resilience Building Policies tool).

The strengths and weaknesses for each tool were used on the one hand to inform the exploitation messages for the respective tool, and on the other informed the tool developers on what exactly they would need to pay attention to, when updating and tailoring the tools. The exploitation messages aimed to present the unique selling points for each tool and were then introduced to presentations on the project and the Resilience Toolbox that were used and presented in a variety of conferences (Resilient Cities, ISCRAM etc.). More information on how the outcomes of the workshop informed the finalization of the tools can be found in the project deliverables: D3.4 and D3.5.

STRENGTHS	WEAKNESSES
CITY RESILIENCE DYNAMICS MODEL	
The tool, (but also the RMM and the ERMG) Sets out a useful structured approach towards resilience and builds a case for what a city needs	There would be a challenge to capture what the City Resilience Dynamics Model parameters are / this could actually apply to all tools

to improve to reach targets

The tool inserts the brainstorming element for financial management hand-in-hand with resilience planning, therefore, puts resilience in the heart of a CITY's sustainability or strategic planning agenda.	The tool should provide with a bit more clarity on what is expected of the assessment process – the opening page of the tool should provide more information on the City Resilience Dynamics Model itself, as it seems now as an overview of the RMM
The tool is user-friendly, and it can be used by any individual even without strong background in spatial planning or resilience – this of course would require looking into the training guide/handbook that will come together with the Model	The tool aims to strengthen management and protection of (critical) infrastructure – it should therefore be more connected to continuous productivity processes and other development investments
Estimations provided by the Model might be used in both public and private sector as a decision making tool that provides understanding between various policies and cross-sectoral interaction process.	The tool should promotes education and capacity building – a detailed handbook should be created to emphasize on this element and reinforce the importance of the tool for resilience planning

STRENGTHS	WEAKNESSES
RESILIENCE BUILDING POLICIES TOOL	
The case studies provide with a useful point for starting out the resilience building process / the tool can be useful for cities at zero resilience level	A bit more clarity is required on what is expected of the scoring and assessment process

The RBP is a web-based, interactive tool which comprises of a portfolio of case studies and supporting information which has been tailored to the resilience policies available in the RMM	The online version of the RBP needs to provide with more clarity on navigation and also on how it links to the Maturity Model policies. Icons like in the RMM should be used in the case of the RBP too.
The advantage of the RBP in this strategic process is placed on the need for collaboration and communication between relevant stakeholders, including politicians, and careful consideration of the required resources for the implementation of resilience policies.	Some of the case studies are more developed and detailed, while other not. It is also not clear if all the policy tabs will include
the RBP enhances the interactivity, and so the usability, of the Web-based version of the RMM as it enables the city users to access additional information with respect to the RMM policies which appear to be of high relevance to	The tool does not yet have been integrated well in the consistent brand and marketing strategy that the SMR project follows so far (especially for the RMM and the RSQ) – this of course may change in the future
The RBP is seen as a promising tool which provides a practical contribution to the ERMG, and it particularly adds value to the future use of the RMM - the RBP meets specifically the objective 5 of the SMR project, and it is seen as a promising tool with respect to the future implementation of the ERMG in cities.	In some cases, the wording and the use of terminology needs greater care – stakeholders including politicians will fasten onto phrasing of the case studies that will be added in the tool
The RBP has been developed through close collaboration between the SMR partners including LiU, Strathclyde, TECNUN, ICLEI, and the partner cities. As a result of this work, not only does the RBP practically illustrate, and elaborate, the resilience policies included in the SMR tools, but it also enhances the navigation	The link from the online Resilience Maturity Model to the Resilience Building Policies Tool should be more prevalent in the website – also as the tool is not self-explanatory, additional videos and promotional material should be created and disseminated in the next months

and interactivity of the online version of the RMM	
The RBP, combined with the RMM, offers helpful support to think more strategically about resilience in cities, and it enables both a broad overview of relevant policies as well as the ability to explore those policies in more detail.	

4.3. GENERAL RECOMMENDATIONS FOR THE FINALIZATION OF THE TOOLS

Having collected the input from all partners and CITIES involved in the project, the following table summarizes some recommendations for the finalization of the Resilience Building Policies Tool and the System Dynamics Model.

TOOL	RECOMMENDATIONS
RESILIENCE BUILDING POLICIES TOOL	The tool should be open access and reinforce sharing of knowledge between cities. **Action taken**: the tool was made open access; all case studies are publicly available for cities, while a wiki function was added so that cities can continue uploading case studies and good practices, also following the end of the project. ICLEI will be the facilitator of this process and will handle the wiki page.
	The Resilience Building Policies Tool is linked particularly strongly with the RMM which is at the heart of the SMR tools. On this basis, the Resilience Building Policies Tool will support the implementation of the RMM by illustrating policies at different maturity stages throughpractical real-life examples

	from cities.
	Through the integration with the RMM, the RBP serves as a tool for supporting strategic, long-term thinking about the improvement of resilience level of the city.
	The tool developers should continue gathering information from project partners about their planned further steps related the tools transfer and integration, while best practices and policy recommendations by partner cities should also be uploaded on the RBP database. **Action taken**: until the end of the project, the tool developers continued gathering information through the pilot implementation with the Tier 3 cities, but also through sessions organised in the Stakeholder Dialogue and Workshop by ICLEI, with the involvement of Tier 3 and Tier 4 cities. Many of this information went into the tool in the form of case studies, under the various RMM policies.
CITY RESILIENCE DYNAMICS MODEL	It would be useful to use the RMM and the City Resilience Dynamics Model in an interactive online way to create a baseline assessment of the city – i.e. stakeholders could complete this individually to build up a bigger picture of the city and possibly provide a score on this. **Action taken**: the tools cross-reference each other, while an introduction to the RMM was added in the CRD to discuss the interlinkage between policies across the SMART steps and the dimensions/sub-dimensions.
	The handbook on the Model (available online in PDF format) is quite complicated still – partners should put additional effort in simplifying it and creating a sequence of easy-to-follow

steps. **Action taken**: the handbook on the CRD was simplified and additional effort was made to visualize each step and provide clear guidance to the user. The handbook is available in printed format, but also online here: http://smr-project.eu/fileadmin/user_upload/CRD_-_User_manual/SMR-RBP-manual-WWW.pdf

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The initial page of the City Resilience Dynamics Tool should describe better its scope, usage and effectiveness for the resilience building process, and should focus less on the Resilience Maturity Model (so far it looks like a repetition of the RMM handbook). **Action taken**: this was addressed; the tools cross-reference each other, while an introduction to the RMM was added in the CRD to discuss the interlinkage between policies across the SMART steps and the dimensions/sub-dimensions.

The tool developers should make sure that the policies that exist in the City Resilience Dynamics Model have all some case studies inserted in the Resilience Building Policies Tool following their finalization. **Action taken**: all policies included in the shorter version of the CRD model (with 19 policies) correspond to one of more case studies in the RBP tool.

APPENDIX

APPENDIX I: STAKEHOLDER TRAINING WORKSHOP AGENDAS

STAKEHOLDER TRAINING WORKSHOP – SYSTEM DYNAMICS MODEL / SAN SEBASTIAN / 09.06.2017

TIME	SESSION	RESPONSIBLE
9.30-09:45	**Welcome and Introduction to the activities of the day**	Vasileios Latinos (ICLEI Europe)
09:45–10:00	**Presentation on the SMR project**	Jose M. Sarriegi (SMR Project Coordinator, TECNUN)
10.00-10.15	**Introduction to the System Dynamics Model**	Leire Labaka (TECNUN)
10:15-10:30	**Introduction to the System Dynamics Model – in Tutorial Mode**	Leire Labaka (TECNUN)
10.30 – 11.00	**Participants familiarize themselves with the tool (individual work)**	Leire Labaka (TECNUN)
11:00 – 11:30	**Break**	
11.30 – 12.45	**Exercise in breakout groups**	Leire Labaka (TECNUN), Vasileios Latinos (ICLEI)
12:45-13:00	**Survey and wrap-up**	Leire Labaka (TECNUN), Vasileios Latinos

		(ICLEI)
13.00 – 14.00	**Networking Lunch**	
14.00 – 15.00	**Reflections with the SMR team + preparation for Glasgow training**	

STAKEHOLDER TRAINING WORKSHOP – SYSTEM DYNAMICS MODEL / GLASGOW / 15.09.2017

TIME	SESSION	RESPONSIBLE
	Registration	
9.30-9.40	**Welcome and Introductions**	Vasileios Latinos (ICLEI Europe) Julie Robertson (Glasgow City Council)
9.40-10.00	**Presentation on the European Resilience Management Guideline (ERMG) and the SMR Project Tools**	Vasileios Latinos (ICLEI Europe)
10.00-10.15	**Q&A**	
10:15-10:30	**Tea/Coffee break**	
10.30-10.45	**Presentation on the CITY DYNAMICS TOOL**	Vasileios Latinos (ICLEI Europe)

10.45-11.00	**Presentation: Understanding the Maturity Model and Resilience Building Policies**	Vasileios Latinos (ICLEI Europe)
11.00-12.00	**Group exercise: Testing the** **CITY DYNAMICS TOOL**	Vasileios Latinos (ICLEI Europe) Jaziar Radianti, Mihoko Sakurai (CIEM) – online support
12.00	**LUNCH – END OF TRAINING**	

STAKEHOLDER TRAINING WORKSHOP – SYSTEM DYNAMICS MODEL / KRISTIANSAND / 20.06.2017

TIME	SESSION	RESPONSIBLE
8.45-9.00	**Registration**	
9.00-9.15	**Welcome**	Vasileios Latinos (ICLEI Europe)
9.15-09.30	**Presentation on the ERMG and the SMR Project TOOLS**	Vasileios Latinos (ICLEI Europe)
09.30-09.40	**Q&A**	
09.40-10.00	**Presentation of the Kristiansand Action Plan**	Sigurd Paulsen (Kristiansand)
10.00-11.30	**Group exercise: Training Maturity Model and Resilience Building Policies**	Vasileios Latinos (ICLEI Europe) Sigurd Paulsen (Kristiansand)
11.30-12.00	**Lunch break**	

12.00-13.15	**Group exercise: TESTING THE SYSTEM DYNAMICS MODEL**	Jaziar Radianti, Mihoko Sakurai (CIEM) Vasileios Latinos (ICLEI Europe)
13.15 -13.30	**BREAK**	
13.45-15.00	**Group discussion: Testing the Resilience Information Portal**	Jaziar Radianti, Mihoko Sakurai, Tim A. Majchrzak (CIEM) Vasileios Latinos (ICLEI Europe)
15.00	**END of training**	

STAKEHOLDER TRAINING WORKSHOP – RESILIENCE BUILDING POLICIES / GLASGOW / 18.09.2017

TIME	SESSION	RESPONSIBLE
	Registration	
09.30-09:40	**Welcome and Introduction to the activities of the day**	Vasileios Latinos (ICLEI Europe) Julie Robertson (Glasgow City Council)
09:40–09:55	**Introduction to the European Resilience Management Guideline (ERMG) and the 5 Resilience Tools**	Vasileios Latinos (ICLEI Europe)
09.55-10:10	**Q&A**	
10.10-10:20	**Tea/Coffee Break**	

10:20-11:00	**GROUP EXERCISE: Training for the Maturity Model and the Resilience Building Policies Tool**	Vasileios Latinos (ICLEI Europe) Susan Howick, Igor Pyrko (Strathclyde University)
11:00-11:10	**COMFORT BREAK**	
11:10-12:00	**GROUP EXERCISE: Training for the Risk Systemicity Questionnaire**	Susan Howick, Igor Pyrko (Strathclyde University)
12.00-12:30	**GROUP DISCUSSION: Testing the Resilience Information Portal**	Vasileios Latinos (ICLEI Europe
12:30-13:00	**Final comments and LUNCH**	

STAKEHOLDER TRAINING WORKSHOP – RESILIENCE BUILDING POLICIES / KRISTIANSAND / 26.09.2017

TIME	SESSION	RESPONSIBLE
8.45-9.00	**Registration**	
9.00-09:15	**Welcome and Introduction to the activities of the day**	Vasileios Latinos (ICLEI Europe) and Sigurd Paulsen (Kristiansand)
09:15–09:30	**Introduction to the European Resilience Management Guideline and the 5 Resilience Tools**	Vasileios Latinos (ICLEI Europe)
09.30-09.40	**Q&A**	
09.40-10.00	**Presentation of the Case Study and**	Sigurd Paulsen (Kristiansand)

	the security sector	
10:00-11:00	**GROUP EXERCISE: Training for the Maturity Model and the Resilience Building Policies Tool**	Vasileios Latinos (ICLEI Europe) Colin Eden (Strathclyde University)
11.00 – 11.30	**Lunch Break**	
11:30 – 12:45	**GROUP EXERCISE: Training for the Risk Systemicity Questionnaire**	Colin Eden (Strathclyde University)
12.45 – 13.15	**GROUP EXERCISE: Testing the Resilience Information Portal**	Jaziar Radianti & team (CIEM)
13.15-13:30	**GROUP DISCUSSION: Testing the SD Model for the preparedness dimension**	Jaziar Radianti & team (CIEM)

STAKEHOLDER TRAINING WORKSHOP – RESILIENCE BUILDING POLICIES / SAN SEBASTIAN / 02.10.2017

TIME	SESSION	RESPONSIBLE
8.45-9.00	**Registration**	
9.00-09:15	**Welcome and Introduction to the activities of the day**	Vasileios Latinos (ICLEI Europe) Judith Moreno (Donostia)
09:15–09:30	**Introduction to the European Resilience Management Guideline and the 5 Resilience Tools**	Vasileios Latinos (ICLEI Europe)

09.30-09.40	**Q&A**	
09.40-10.00	**Presentation of the Case Study**	Judith Moreno (Donostia)
10:00-11:00	**GROUP EXERCISE: Training for the Maturity Model and the Resilience Building Policies Tool**	Josune Hernandes (TECNUN) Vasileios Latinos (ICLEI Europe)
11.00 – 11.30	**Coffee Break**	
11:30 – 12:45	**GROUP EXERCISE: Training for the Risk Systemicity Questionnaire**	Vasileios Latinos (ICLEI Europe)
12.45 – 13.30	**GROUP EXERCISE: Testing the Resilience Information Portal**	Nicolas Serrano (TECNUN)
13.30	**END OF TRAINING**	

APPENDIX II: STAKEHOLDER TRAINING WORKSHOP PARTICIPANTS LISTS

STAKEHOLDER TRAINING WORKSHOP – CITY RESILIENCE DYNAMICS MODEL / SAN SEBASTIAN / 09.06.2017

Organisation/Institution	Role/Title	Gender	Internal/External
TECNUN	Ass. Professor	Female	Internal
TECNUN	Professor	Female	Internal
TECNUN	Researcher	Female	Internal

TECNUN	Researcher	Female	Internal
TECNUN	Researcher	Female	Internal
ICLEI Europe	Officer	Male	Internal
Donostia SS City Council	Senior Technician	Female	Internal
Donostia SS City Council	Head of Office	Male	Internal
Donostia SS City Council	Citizen Participation Office representative	Female	External
Donostia SS City Council	Cultural Diversity Office representative	Female	External
Donostia SS City Council	City Councilor for Sustainability/Agenda 21	Female	External
Donostia SS City Council	Technical Support Officer	Male	External
Donostia SS City Council	Energy Efficiency and Environmental Protection Officer	Male	External
Donostia SS City Council	12th Municipal Technical Committee Representative	Male	External
Donostia Fire Department	Firefighter	Male	External
Donostia SS City	City Councilor for	Female	Internal

Council	Social Action

STAKEHOLDER TRAINING WORKSHOP – CITY RESILIENCE DYNAMICS MODEL / GLASGOW / 15.09.2017

Organisation/Institution	Role/Title	Gender	Internal/External
Glasgow City Council	Chief Resilience Officer	Male	Internal
Glasgow City Council	Sustainability and Resilience Officer	Male	Internal
Glasgow City Council	Assistant Manager Sustainable Glasgow	Female	Internal
Glasgow City Council	Sustainability Officer	Male	External
Glasgow Housing Association SA	Project Manager	Male	External
ICLEI Europe	Officer	Male	Internal
Glasgow City Council	Environment and Development Planning Officer	Male	External
Glasgow City Council	Financial Department Officer	Female	External
Glasgow City Council	Resilience/Emergency Management Officer	Female	External
Glasgow Volunteers Association	Volunteer	Male	External
Glasgow City Council	Energy Transition Officer	Female	External
Emergency Services	First responder	Male	External

STAKEHOLDER TRAINING WORKSHOP – CITY RESILIENCE DYNAMICS MODEL / KRISTIANSAND / 20.06.2017

Organisation/Institution	Role/Title	Gender	Internal/External
Municipality of Kristiansand	Crisis Manager	Male	Internal
Municipality of Kristiansand	Urban Planning Advisor	Male	External
Municipality of Kristiansand	Strategy and Policy Office	Female	External
Municipality of Kristiansand	Action Plan of Kristiansand Advisor	Female	External
Fire Brigade	CEO	Male	External
District Authority of Agder	County Governor Officer representative	Male	External
University of Agder	Ass. Professor	Female	Internal
University of Agder	Master student	Male	External
University of Agder	Professor	Male	Internal
ICLEI Europe	Officer	Male	Internal
University of Agder	Head of CIEM Lab	Female	Internal
Agder Energy Company	Project Manager	Male	External
Municipality of Kristiansand	Communications Department	Female	External
Municipality of Kristiansand	Urban Planning Department Officer	Male	External
Municipality of Kristiansand	Urban Planning Department Officer	Female	External
Municipality of Kristiansand	Water Management Department Head	Male	External
Organisation/Institution	Role/Title	Gender	Internal/External

STAKEHOLDER TRAINING WORKSHOP – RESILIENCE BUILDING POLICIES / GLASGOW / 18.09.2017

Organisation/Institution	Role/Title	Gender	Internal/External

Glasgow City Council	Chief Resilience Officer	Male	Internal
Glasgow City Council	Sustainability and Resilience Officer	Male	Internal
Glasgow City Council	Assistant Manager Sustainable Glasgow	Female	Internal
Glasgow City Council	Sustainability Officer	Male	Internal
ICLEI Europe	Officer	Male	Internal
Strathclyde University	Professor	Female	Internal
Strathclyde University	Researcher	Male	Internal
Glasgow City Council	Resilience/Emergency Management Officer	Female	External
Glasgow City Council	Communications Department	Female	External

STAKEHOLDER TRAINING WORKSHOP – RESILIENCE BUILDING POLICIES / KRISTIANSAND / 26.09.2017

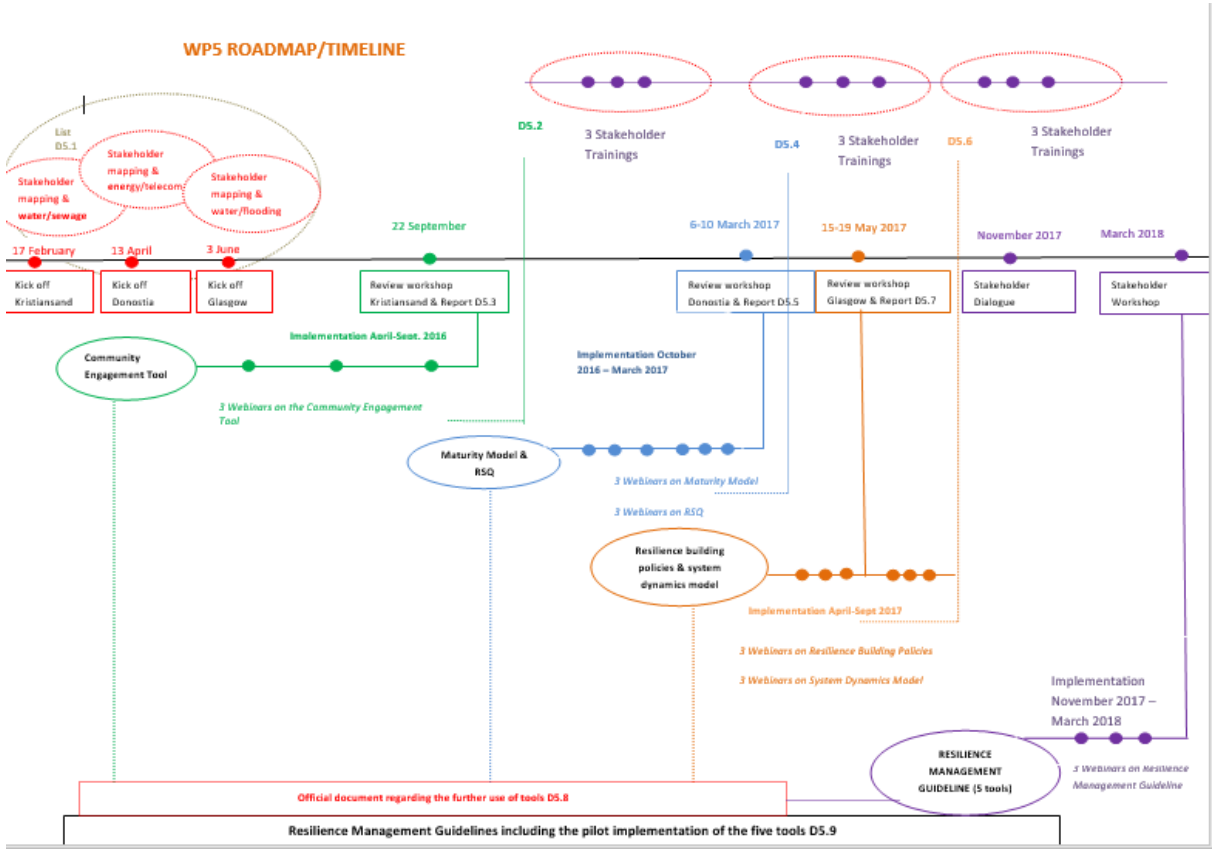
Organisation/Institution	Role/Title	Gender	Internal/External
Municipality of Kristiansand	Crisis Manager	Male	Internal
Municipality of Kristiansand	Urban Planning Advisor	Male	External
Municipality of Kristiansand	KIV Manager	Male	External
Municipality of Kristiansand	KIV Manager	Male	External
Fire Brigade	CEO	Male	External
District Authority of Agder	County Governor Officer representative	Male	External
Citizen	Researcher	Female	Internal
Citizen	Master student	Male	External
Citizen	Retired academic	Male	Internal
Strathclyde University	Professor	Male	Internal

ICLEI Europe	Officer	Male	Internal
University of Agder	Head of CIEM Lab	Female	Internal
Agder Energy Company	Project Manager	Male	External
Agder Authority for Quality of Drinking Water	Senior Inspector	Male	External

STAKEHOLDER TRAINING WORKSHOP – RESILIENCE BUILDING POLICIES / SAN SEBASTIAN / 02.10.2017

Organisation/Institution	Role/Title	Gender	Internal/External
TECNUN	Researcher	Female	Internal
TECNUN	Researcher	Female	Internal
TECNUN	Professor	Male	Internal
TECNUN	Professor	Male	Internal
ICLEI Europe	Officer	Male	Internal
Strategy Office Donostia SS	Senior Technician	Female	External
Strategy Office Donostia SS	Project manager	Male	External
Strategy Office Donostia SS	Assistant	Female	External
Strategy Office Donostia SS	Project Manager	Female	External
Municipal Police - Udaltzaingoa	Police Officer	Male	External
12th Municipal Technical Committee	Member of the Committee	Male	External
Municipality of Donostia SS	Cultural Diversity Officer	Female	External

APPENDIX II: UPDATED TIMELINE FOR THE PILOT IMPLEMENTATION/ROADMAP



APPENDIX III: WEBINAR GUIDING QUESTIONNAIRES

1. RESILIENCE BUILDING POLICIES TOOL/SMR TOOLS INTEGRATION WEBINAR QUESTIONNAIRE

1. Was the implementation session useful for the participants? What was of most benefit? What was of least benefit?
2. Do you think the MM helped the participants to consider policies required to increase the cities maturity level?
3. Did the participants find the policy case studies useful?
4. Do you think that the RSQ prompted participants to think afresh about risks facing the city?
5. Did the participants find that the different tools supported/informed each other?
6. Were the tools easy to use?
7. Did the use of the tools change participants thinking about the issue?

2. SYSTEM DYNAMICS MODEL WEBINAR QUESTIONNAIRE

GENERAL QUESTIONS

1. Were your initial expectations at the training workshop fulfilled? Did the implementation workshop meet its objective?
2. Do you think the System Dynamics tool design matches its purpose, i.e. to familiarize and learn about prioritizing resilience policies in the maturity model in a correct sequence? Ifnot, why?
3. What's the first thing users would want to do on this System Dynamics tool? Can they do that?
4. What, if anything, would make the users (decision makers and relevant stakeholders in the city) want to use this tool frequently?

5. Do the target users (decision makers and relevant stakeholders in the city) feel like this System Dynamics tool was designed for them?

WORKSHOP ORIENTED QUESTIONS

1. Did you find the System Dynamics tool user-friendly?
2. Do you think the System Dynamics tool helps cities to understand the process of building resilience and learn with it?
3. Do you think the exercise regarding parameters estimation was useful to be aware about the required resources and time in order to build city resilience?
4. Do you think the tool helps to make explicit the temporal relationships among the policies? Do you find this useful?
5. What kind of difficulties did you find when using the tool?

APPENDIX IV: QUESTIONNAIRE ABOUT THE CITY DYNAMICS TOOL TO IMPROVE THE CITY RESILIENCE

The aim of this questionnaire is to evaluate the utility of the simulation tool to improve the Resilience of a city with the objective to learn how to develop city resilience. This tool allows to better understand and be aware about the real impact of the implementation of each policy on the resilience building process and the efficiency of the investments.

We would like you to answer to the following questions/statements evaluating them from 1 to 5 (being 1 totally disagree and 5 totally agree):

EASE OF USE

	1	**2**	**3**	**4**	**5**

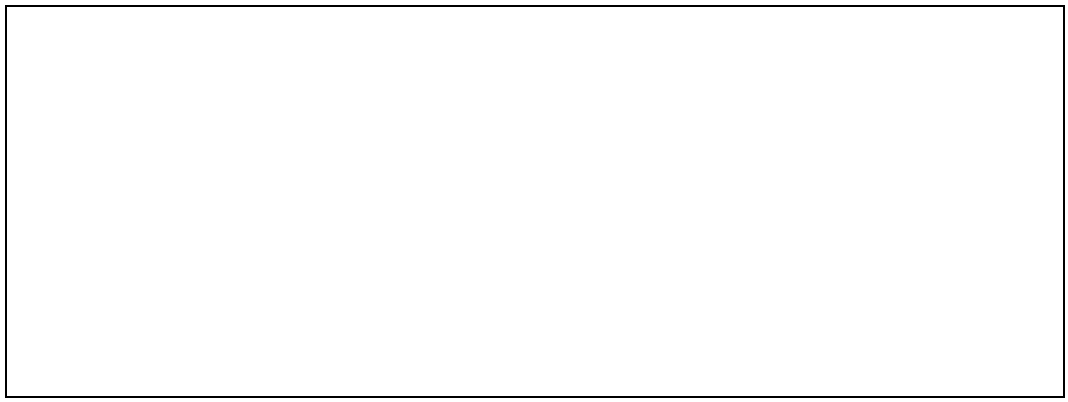
1. Do you think the tool is easy to use?					
2. Do you think the tool enabled you to understand how the city resilience level can be improved?					
Comments:					

TOOL PARAMETERS

What have you learnt? (explain what you noticed when you estimated the tool's parameters)

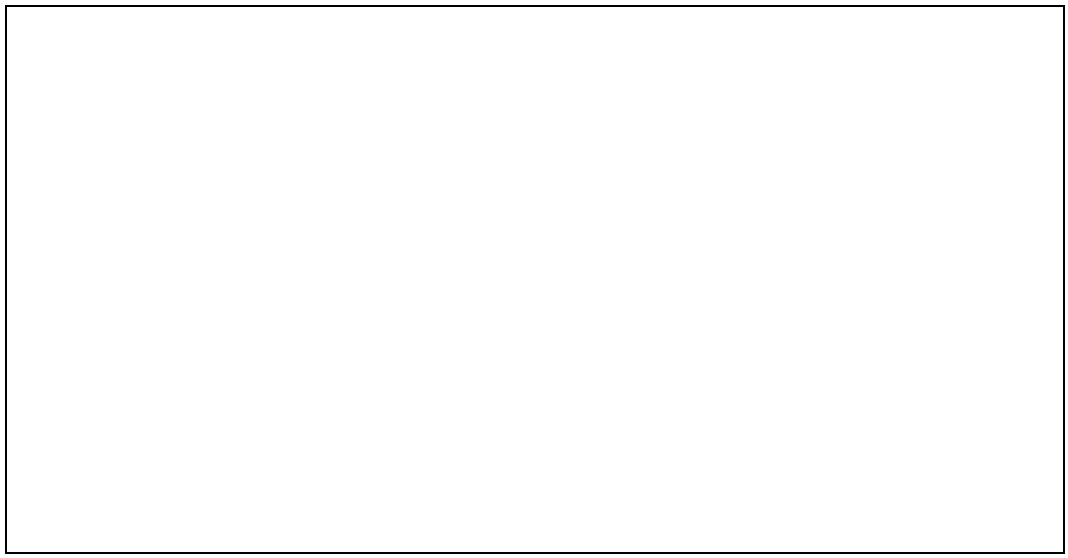
	1	2	3	4	5
3. Estimating the parameters helped me to assess the size of the resilience building process.					
4. The group discussions about estimating the parameters helped me to understand the complexity of the problem and be aware of different points of view.					
5. The tool is flexible enough to be aligned with the specific requirements of my city.					
6. Estimating the parameters has helped me to identify which policies that need more resources and those which need prioritized.					
7. Estimating the parameters has helped me to identify which policies need more time to be implemented.					

Comments:



POLICY IMPLEMENTATION

What have you learnt? (explain what you noticed when you altered which policies to implement in each iteration)					
	1	**2**	**3**	**4**	**5**
8. The ability to amend policy implementation has helped me to have a more holistic point of view of the problem					
9. The ability to amend policy implementation would help me to take decisions concerning the distribution of resources.					
10. The ability to amend policy implementation has helped me to understand that in order to maintain the policy objectives, you must continue allocating resources.					
11. This tool has helped me to better understand the scope of each policy.					
Comments:					



INTER-RELATIONSHIPS AND CHRONOLOGICAL ORDER OF THE POLICIES

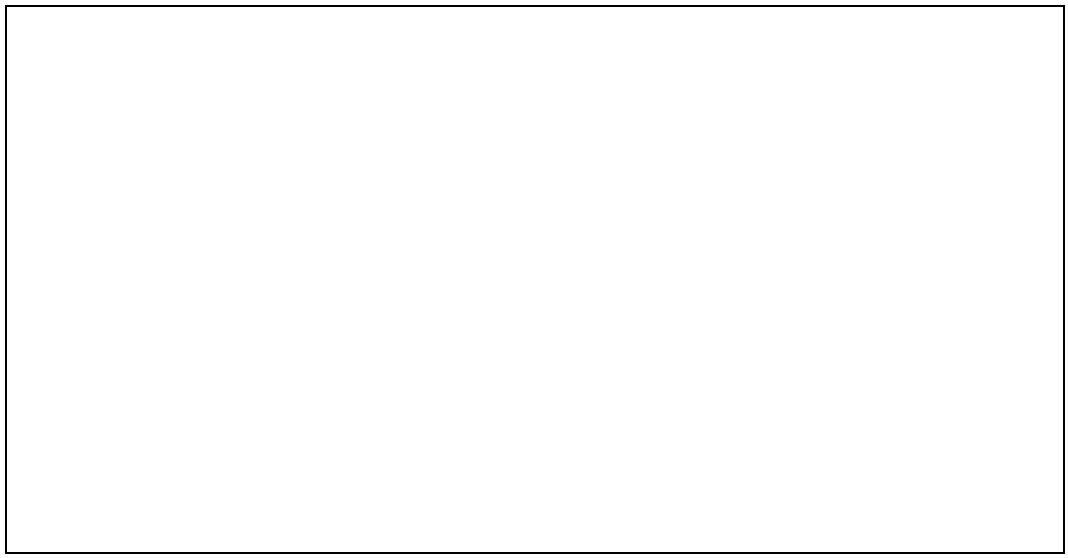
What have you learnt? (explain the things you have learnt about the relationships between policies)

	1	2	3	4	5
12. The tool has helped me to identify the existing relationships between policies.					
13. The tool has helped me to identify the chronological order in which the policies should be implemented to get maximum resource efficiency.					
14. The messages appearing during the simulation helped me to identify relationships between the policies and understand the chronological order in which they should be implemented.					

Comments:

SIMULATION RESULTS

What have you learnt? (explain the things you have learnt based on the results given by the tool)					
	1	**2**	**3**	**4**	**5**
15. The results presented by the tool are close to reality.					
16. Comparing expected results with the results presented by the tool has helped me to better understand how the city resilience building process works.					
17. The results provided by the tool are easily understood.					
18. The results provided by the tool are enough to understand the logic of the simulation.					
Comments:					



DIFFICULTIES AND IMPROVEMENTS

What difficulties did you have while using the tool?
What improvements would you suggest to enhance the tool?

APPENDIX V: PARTICIPANTS LISTS PER WEBINAR

WEBINAR – City Resilience Dynamics Model		DONOSTIA	BRISTOL
Organisation/Institution	Role/Title	Gender	Internal/External
TECNUN	Ass. Professor	Female	Internal
TECNUN	Professor	Female	Internal
TECNUN	Researcher	Female	Internal
TECNUN	Researcher	Female	Internal
TECNUN	Researcher	Female	Internal
ICLEI Europe	Officer	Male	Internal
Donostia SS City	Senior Technician	Female	Internal

Council			
Donostia SS City Council	Head of Office	Male	Internal
Donostia SS City Council	Citizen Participation Office representative	Female	External
Bristol City Council	Project Manager	Female	Internal
Bristol City Council	CRO	Female	Internal
Bristol City Council	Sustainability Manager	Male	Internal
Bristol City Council	Sustainability Manager	Female	Internal

WEBINAR – Resilience Building Policies Tool		**DONOSTIA**	**BRISTOL**
Organisation/Institution	Role/Title	Gender	Internal/External
ICLEI Europe	Officer	Male	Internal
ICLEI Europe	Officer	Male	Internal
ICLEI Europe	Assistant	Female	Internal
Donostia	Senior Technician	Female	Internal
Donostia	Head of Office	Male	Internal
Donostia	Strategy Office assistant	Female	Internal
Donostia SS City Council	Strategy Office assistant	Female	Internal

Bristol City Council	Project Manager	Female	Internal
Bristol City Council	CRO	Female	Internal
Bristol City Council	Sustainability Manager	Male	Internal
Bristol City Council	Sustainability Manager	Female	Internal
Strathclyde Business School	Professor	Male	Internal
Strathclyde Business School	Professor	Female	Internal
Strathclyde Business School	Researcher	Male	Internal

WEBINAR – City Resilience Dynamics Model and Resilience Building Policies		**KRISTIANSAND**	**VEJLE**
Organisation/Institution	Role/Title	Gender	Internal/External
TECNUN	Ass. Professor	Female	Internal
TECNUN	Professor	Female	Internal
TECNUN	Researcher	Female	Internal
TECNUN	Researcher	Female	Internal
TECNUN	Researcher	Female	Internal
ICLEI Europe	Officer	Male	Internal
ICLEI Europe	Assistant	Female	Internal

Kristiansand	Crisis Manager	Male	Internal
Kristiansand	Project Manager	Female	Internal
Vejle	Project Manager	Female	Internal
Vejle	Director	Male	Internal
Vejle	Project Manager	Male	Internal
Strathclyde Business School	Professor	Male	Internal
Strathclyde Business School	Professor	Female	Internal
Strathclyde Business School	Researcher	Male	Internal

WEBINAR – City Resilience Dynamics Model and Resilience Building Policies		**GLASGOW**	**ROME; RIGA**
Organisation/Institution	Role/Title	Gender	Internal/External
TECNUN	Ass. Professor	Female	Internal
TECNUN	Professor	Female	Internal
TECNUN	Researcher	Female	Internal
TECNUN	Researcher	Female	Internal
TECNUN	Researcher	Female	Internal
ICLEI Europe	Officer	Male	Internal
ICLEI Europe	Assistant	Female	Internal
ICLEI Europe	Officer	Female	Internal

Glasgow City Council	Sustainability and Resilience Officer	Male	Internal
Glasgow City Council	Sustainability Officer	Female	Internal
Glasgow City Council	CRO	Male	Internal
Risorse per Rome	Project Manager	Female	Internal
Risorse per Rome	Head expert	Male	Internal
Risorse per Rome	Project Manager	Male	Internal
Riga Energy Agency	Director	Male	Internal
Riga Energy Agency	Project Manager	Male	Internal
Strathclyde Business School	Professor	Male	Internal
Strathclyde Business School	Professor	Female	Internal
Strathclyde Business School	Researcher	Male	Internal