



# SMART MATURE RESILIENCE

DISSEMINATION AND COMMUNICATION STRATEGY 2

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## EXECUTIVE SUMMARY

The Smart Mature Resilience project responds to the need for enhanced resilience in European cities. Effective communication is essential to the success of the Smart Mature Resilience project. While the first communication strategy version focused on presenting the project and its aims, the second version focuses on promoting the purposes and applications of the project's tools and research to ensure that these are widely taken up.

This document lays out the approach and methods to be utilised by the project in external communications.

Primary attributes, added value and keywords are defined, as well as a justification and clarification of the project's tagline or claim, "Smart Mature Resilience – for more resilient cities in Europe". The document lays out the project's target groups and the way in which the project will communicate with these groups. The project's tactics are described, that is, the relevant communication channels and communication products that will be utilised. Finally, a timeline and reference tables for the use of communication products and the submission dates for communications-related deliverables is provided.



# 1. INTRODUCTION

Effective communication and dissemination procedures are crucial to the success of the Horizon 2020 project “Smart Mature Resilience”. Dissemination activities are necessary in order to make research outcomes accessible to a wider audience and to ensure that the project’s outputs have a broad impact on the scientific community and on political decision-making. Furthermore, the project’s internal and external communication is essential to the project’s cooperation with its partner cities (San Sebastian, Kristiansand, Glasgow, Riga, Bristol, Rome and Vejle) and to the development of further two groups or ‘tiers’ of cities that will to varying degrees participate in and benefit from the project. These further tiers are namely cities in resilience networks (e.g. UNISDR) and other European cities.

This document sets out a communication strategy for the Smart Mature Resilience project. This updated strategy continues to guide on the branding, target messaging and dissemination channels and activities established in the first version of the strategy, while updating elements that have changed to reflect the progress in the project.

A timetable provides an overview of when relevant communication activities should take place and which partner is responsible for these activities. All consortium partners are invited to use this feature as a guideline and for orientation.

The dissemination and communication strategy was prepared under task 7.1, the main responsibility of which lies with the ICLEI European Secretariat (hereafter ICLEI). The communication and dissemination tasks of the project (WP7) began in month 1 and will run until month 36. Beyond the end of the project, the Exploitation Plan (See Annex) establishes a vision for how the results will continue to be applicable and used beyond the end of the project.



## 2. COMMUNICATION OBJECTIVES AND GOALS

The main communication objectives of the Smart Mature Resilience project were derived on the basis of the proposal, Grant Agreement, on the basis of feedback from partners via a communication questionnaire circulated in summer 2015, and based on internal discussion in ICLEI, the work package leader for WP7. The main objectives can be summarised as follows:

- **Raise awareness** of cities' need for resilience<sup>1</sup>
  - of cities' maturity levels
- **Share knowledge** between cities of how to implement resilience policies
  - of existing approaches and literature
  - of project results
- **Maximise impact** with widespread uptake of the project's outputs
  - through support of tool useability

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<sup>1</sup>Project literature distinguishes between the capitalised "CITIES", referring to project cities, and "cities", referring to cities in general.



## 3. SITUATION ANALYSIS

### 3.1 COMMUNICATION ENVIRONMENT

To maximise the impact and relevance of the project's communication activities, an analysis was carried out of the project's communication environment. We have identified the major communication-related challenges that our chosen communication approach will take into account. Similarly, the project's key strengths and the risks as identified in the Grant Agreement were used as a starting point. This analysis was then supported by information provided by Tecnun, Bristol, DIN, Rome, Strathclyde, Kristiansand and Vejle in a communication questionnaire. This questionnaire was circulated to each partner institution in summer 2015 and each organisation was requested to provide input.

#### Challenges

##### Terminology

As the project focuses on the concept of resilience, the use of the term in project communication is significant. Resilience intersects with political priorities including emergency preparedness, crisis and disaster management, cyber security, and Critical Infrastructure Protection. Additionally, the term 'resilience' is widely used outside of this semantic framework. The existence of conflicting usages necessitates the careful consideration of the project's definition of 'resilience' when using the term in the context of project communication. The term is further clarified at the end of this chapter.

##### Data Availability

The scientific novelty of the field along with the vague and ambiguous definition of underlying concepts brings with it the challenge of limited data which comes from heterogeneous sources and needs to be interpreted in the respective contexts.

##### Standardisation

The project aims to develop transferable, standardised methods to improve European resilience. Since the concept in itself is open and allows for adaptation to emerging challenges and trends, it is not yet possible to precisely define the extent to which standardisation will be possible and its nature in terms of tools, guidelines, or applications. This is in line with the fact that the research conducted is innovative and new grounds will be explored.





## Strengths

### Holistic Approach

The field of resilience planning is disproportionately represented by local, isolated measures leading to silo thinking. Smart Mature Resilience offers a transferable, Europe-wide approach.

### Coherence

As the project takes into account cities' progress towards resilience maturity, it offers a recognisable frame of reference for cities and builds on existing approaches and assets.

### Innovation

The project's approach is ambitious and scientifically new.

### Terminology: Clarification

The topic call defines resilience as “the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions”.

The project has developed a slightly updated definition of city resilience, which is as follows:

“City Resilience has been defined as “is the ability of a CITY or region to resist, absorb, adapt to and recover from acute shocks and chronic stresses to keep critical services functioning, and to monitor and learn from on-going processes through city and cross-regional collaboration, to increase adaptive abilities and strengthen preparedness by anticipating and appropriately responding to future challenges”.



## 4. KEY MESSAGES

The project's key messages provide guidance on how partners should explain and communicate the project overall in person, in print and in any external communication about the project to external parties. While the key messages during the first phase of the project focussed on the project's motivations and objectives, the second phase of the project aims to promote the use and uptake of the tools. Therefore, custom key messages for each tool have been developed, which all partner should consistently use to communicate the project's useful and applicable outputs and encourage immediate uptake.

### **Claim: "SMART MATURE RESILIENCE – for more resilient cities in Europe"**

The project claim is a universal tagline for the project, and was chosen during the project's first phase by partner vote. The claim concisely summarises the most direct goal of the project as well as the motivation behind the work the project is undertaking.

### **Key Messages: Project overall**

The project's key messages have been updated to reflect the project's latest communication aims.

- ➔ Cities need to become more resilient.
- ➔ Resilience relies on adaptable critical infrastructures, dynamic social interactions and the capacity to withstand and accommodate to the effects of climate change.
- ➔ A holistic approach can enhance resilience in Europe.
- ➔ The SMR project develops tools to assess and build cities' resilience.
- ➔ The SMR project results advise the decision-making process towards enhanced resilience.

### **Key Messages: Custom messages for each tool**

Project partners should explain and communicate the tools in a language focussed on users when communicating with city stakeholders.



**The Resilience Maturity Model:**

- ➔ helps cities identify their level of resilience maturity
- ➔ helps cities to identify suitable policies to implement to develop resilience
- ➔ provides a point of reference for self-assessing effectiveness of resilience development
- ➔ is useable as part of strategic planning
- ➔ helps cities prioritise resilience policy implementation on the basis of diagnosis and assessment
- ➔ can provide cities with justification for need for funding for specific measures

**The Risk Systemicity Questionnaire:**

- ➔ is a discussion guidance and facilitation method for cities for risk awareness
- ➔ can bring topically different departments together and focus their discussion to share their knowledge of risk from different municipal departments
- ➔ can involve multistakeholder groups, including citizens
- ➔ complements the existing resilience tools and methods in cities
- ➔ updates and compliments the existing EU guidelines with respect to Risk Assessment and Disaster Management
- ➔ allows cities to monitor and compare their progress through periodic re-assessment
- ➔ does not require expert knowledge or research



#### **The Resilience Information Portal:**

- ➔ aims at building a collaborative environment in order to facilitate awareness and engagement among key partners in resilience building
- ➔ enables cities to improve their own IT systems
- ➔ is provided as a toolbox which shows desired functionality for implementing the design principles summarized next
- ➔ allows different levels of permissions and users
- ➔ can complement and enhance the platforms and software that cities already have in place

#### **The System Dynamics Model:**

- ➔ is an interactive online learning game
- ➔ can be used as part of strategic planning
- ➔ 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.
- ➔ supports deep understanding of reasons for budgetary decisions for resilience strategising and the logic behind prioritising policies
- ➔ supports deep understanding on the impact of the temporal order in which the policies should be implemented
- ➔ supports understanding of the Resilience Maturity Model



### Added Value

- **European dimension:** The project leverages European cities' collective resilience capabilities. This project facilitates integrated and holistic collaborative progress, ultimately leading to more efficient and sustainable use of resources and enhanced resilience in cities. The ultimate goal is the overall improved level of resilience in Europe as a whole, which is not possible exclusively by means of localised methods.
- **Resilience scale:** The concept of a resilience scale for cities and the possibility of objectively evaluating and comparing cities' resilience maturity is scientifically novel.
- **Interdisciplinarity:** Experienced and renowned experts represent theory, practice, standardisation and communication.

### Keywords

The keywords below are recommended for use as thematic categories for online and print dissemination for the project. They are suitable tags for online posts related to the project.

#### Fixed EC Keywords

- ➔ Risks assessment
- ➔ Modelling and impact reduction
- ➔ Security
- ➔ Crisis management
- ➔ Population protection

#### Free Keywords

- ➔ Resilience Management Guidelines
- ➔ Operational Tools
- ➔ Policies
- ➔ Resilience Diagnosis Monitoring Management
- ➔ Maturity Model
- ➔ Community Resilience
- ➔ Resilience Backbone



## 5. TARGET AUDIENCE

### 5.1 PRIMARY TARGET GROUPS

#### 5.1.1 CITIES

The project has defined the following stakeholders, which are also the target groups for project communication. Below, they are listed according to the stage at which they become involved in the resilience process:

##### **Starting**

- ➔ Local government; Emergency services; Critical infrastructures

##### **Moderate**

- ➔ Public-private companies; NGOs; Volunteers; Regional government

##### **Advanced**

- ➔ Media; Citizens; Academic and scientific entities; National government

##### **Robust**

- ➔ European policymakers

##### **VerTebrate**

- ➔ International organisations

#### 5.1.2 THE RESEARCH COMMUNITY

The project will contribute to resilience research and will be highly visible in the research community at conferences and with regular journal publications and dedicated special issues<sup>2</sup>.

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<sup>2</sup> Journal Technological Forecasting and Social Change Special Issue



## 5.2 COOPERATION WITH RELATED PROJECTS

Collaboration on communication activists including a shared newsletter, to the first of which the DARWIN and RESISTAND projects contributed content, invitations to common events, exchange of news and updates. A coordination call between dissemination managers for each project funded under the DRS7 call was initiated by Clara Grimes (ICLEI) by circulating a Doodle poll, and a teleconference was held on 11 May. Minutes are included as an annex. Monthly communication calls will be continued with the following actors, who have already been positively engaged:

- RESILENS: Realising European ReSilience for Critical Infrastructure
- DARWIN
- IMPROVER: Improved risk evaluation and implementation of resilience concepts to critical infrastructure
- RESOLUTE: RESilience management guidelines and Operationalization applied to Urban Transport Environment
- RESIN
- RESISTAND
- DRIVER: Driving Innovation in Crisis Management for European Resilience



## 6. TACTICS

### 6.1 PROJECT COMMUNICATION CHANNELS

#### EVENTS

Events are a major communication channel for the project. Events and meetings organised by the project and external events attended by project partners where SMR is represented will be an effective communication channel.

- Workshops and webinars: Training workshops and review webinars were held throughout the second year of the project. Events during the third year will focus on testing the Resilience Management Guideline. Dates are still to be decided.
- Stakeholder Dialogue targeted at Tier 2 cities: Planned to take place in a location to be decided (likely in Athens) in November 2017
- Stakeholder Workshop targeted at Tier 3 cities: Planned to take place in Brussels as part of the successful Breakfast at Sustainability's event series run by ICLEI Europe in March 2018
- Final conference: Planned to take place on 24<sup>th</sup> April in collaboration with DARWIN, RESOLUTE, Resilens and potentially other projects as a pre-event to Open European Day at Bonn Resilient Cities.

#### WEBSITE

The project website is currently integrating an interactive version of the project's central tool: the Resilience Maturity Model. The prototype is available at <http://smr-project.eu/tools/maturity-model-guide>.

**Key performance indicator: 5000 visits**

**50 articles on website**





## MAILING LIST

The Smart Mature Resilience project distributes quarterly newsletters. The project has so far coordinated one joint newsletter, to which the DARWIN and RESISTAND projects contributed.

**Key performance indicator: 350 subscribers**

## SOCIAL MEDIA

The project maintains a LinkedIn and Twitter account.

**Key performance indicator: 250 followers**



## 6.2 COMMUNICATION PRODUCTS

### TEMPLATES FOR PROJECT REPORTS

A generic project reporting template for Microsoft Word has been developed by ICLEI through an external designer. This has been shared with partners and is used as a standard template for project reports.

### POWERPOINT TEMPLATE

A generic project template for PowerPoint presentations has been developed by ICLEI through an external designer and shared with all project partners. This template can be used for any presentations representing the project at conferences or other meetings.

### LEAFLET

A project leaflet providing the primary points about the project has been developed by ICLEI through an external designer and was updated after the first year to reflect the updated tool names and to add a 'Join SMR' Call to Action to invite Tier 3 cities.

### BANNER

A branded banner representing the project has been developed by ICLEI through an external designer.

### NEWSLETTER

An e-newsletter will be distributed to the project mailing list on a quarterly basis. The design for the newsletter is consistent with the other design products.

### BROCHURE

A brochure template for publications targeted at external stakeholders, e.g. policy briefs D7.3, has been developed by ICLEI through an external designer. The brochure is also used for the Maturity Model handbook.

Media	Channel	Target Groups	Content	Month
Print/ Electronic	Magazines and websites	CITIES	Results obtained and activities developed in the project	12/24/36
Electronic	Project website	General public, CITIES	Project progress, results, deliverables, dissemination materials	6-36
Social Media	LinkedIn	General public	Activities carried out, results obtained, project news	6-36
Print/ Electronic	Scientific journals	Scientific Community	Research articles explaining the research methodologies applied and the results obtained	24/30/36
Presentations/ oral	Research conferences	Scientific Community	Conference presentations, co-development of sessions	24/36
Electronic	Project newsletter	Tier 3 and Tier 4 CITIES, multi-level governance	Activities carried out, results obtained, project news	12/24/36
Electronic	Policy briefs	European policy level	Policy-relevant project results	24/35
Oral	Standardization Workshop	City representatives and relevant stakeholders	Discussion of standardization potential within the project	24
Print	CWA business plan	Relevant stakeholders	Description of the planned standard	26
Conference presentation	Final conference	Tier 1, Tier 2, Tier 3, Tier 4 CITIES	Sessions on main results of the project	36



## MATURITY MODEL HANDBOOK

A handbook is under development to support understanding and use of the Resilience Maturity Model. A first version of the handbook was distributed during the Bonn Resilient Cities conference.

## MATURITY MODEL POSTER

A poster format for the Resilience Maturity Model has been developed. This poster is available for download at [http://smr-project.eu/fileadmin/user\\_upload/Documents/Resources/WP\\_3/SMR-maturity-model-table.pdf](http://smr-project.eu/fileadmin/user_upload/Documents/Resources/WP_3/SMR-maturity-model-table.pdf).

## SUPPORTING VIDEO CLIPS

Video clips to provide online guidance for the Resilience Maturity Model, Risk Systemicity Questionnaire and System Dynamics model are being prepared.



## 7. VISUAL IDENTITY

A visual identity has been developed for the project by a professional designer as part of Deliverable 7.1. A logo and colour scheme has been designed for the Smart Mature Resilience project to be used in all communications products and in official documents. The design of the logo, website and document templates including headers and tables are corresponding and apply the same colours, angles, lines and fonts, ensuring a recognisable and coherent visual identity for the project.

### LOGO



Image 7.1 SMR logo



The logo consists of three main parts:

### **Isotype**

The isotype is a symbol representing a combination of challenges and solutions. The blue element stands for critical infrastructure, green for climate change and sustainability planning and orange represents societal and systemic challenges and solutions. The symbol represents both physically robust infrastructures, as it forms a shape resembling a spanner or cog system, and also resembles vertebrae of a spinal column, referring to the project's theme of a resilience 'backbone'.

The shapes are interlinked, forming an upwards-facing arrow, indicating growth, development and the evolution towards adaptation maturity.

The colours are not divided by lines or arrow shapes but blend together in a gradient, as the issues and challenges are interdependent and interconnected, as are the solutions and structures that address them. This reflects the project's holistic approach.

The central node can also be interpreted to represent any given city working towards resilience, as each city is supported by other cities' resilience development. Further, it represents the mutual benefits of European cities developing their adaptation maturity, as this helps to support and maintain other cities' resilience development.

### **Structure**

The structure is the shape of a city skyline, as cities are central to the project; as active partners, subjects of study, objects of pilot testing and a primary target group. The overall shape mirrors the upward-facing arrow of the logo, again indicating progress and development. The shape includes trees and open space rather than only a blocked skyline, referring to the multi-functionality of resilience approaches that combine climate change mitigation measures and adaptation measures.



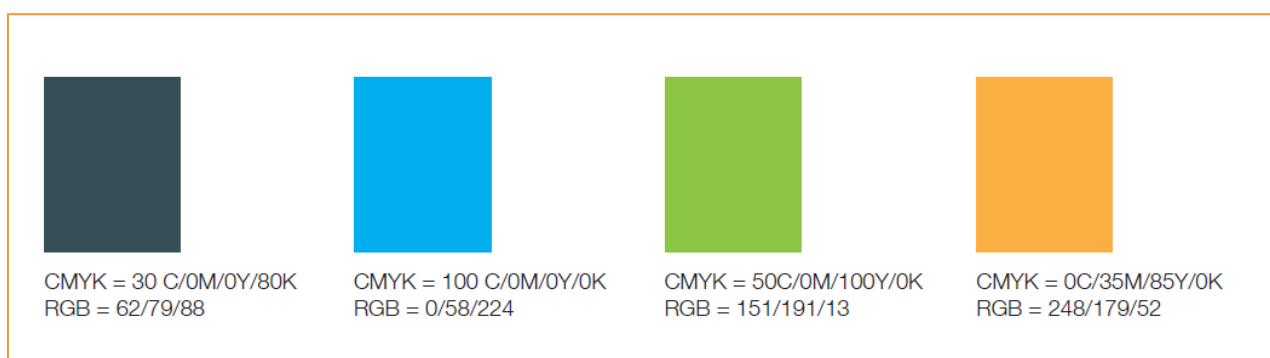
## Text

The logo integrates the project's acronym SMR written in graphic bold (SMR grey) and the full name, Smart Mature Resilience, in graphic light.



Image 7.2 Black and white logo version

## COLOUR SCHEME





## 8. EVALUATION OF COMMUNICATION ACTIVITIES

ICLEI will conduct internal evaluation and revision where necessary of the following aspects of the communication activities:

- ➔ Website user experience
- ➔ Event organisation

Evaluation will be conducted for each event organised by ICLEI and following major website updates, for example the addition of new online tools. Feedback will be applied to change or update processes where deemed necessary.





## 9. ROLES AND RESPONSIBILITIES

All partners will be involved in awareness-raising activities within their specific networks and areas of influence.

The following deliverables are required to be produced as part of WP7<sup>3</sup>:

- **Dissemination and communication strategy**
- **Project website**
- **Two policy briefs**
- **Report on Stakeholder Dialogue**
- **Report on Stakeholder Workshop**
- **Exploitation strategy**
- **Report on Final Conference**

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<sup>3</sup> See Description of Work, Annex 1 p.7-8



ICLEI as a work package leader will coordinate and is in charge of the following tasks<sup>4</sup>:

Task	Name	Contributing partners
T 7.1	Dissemination and communication strategy and dissemination material	n/a
T 7.2	Project website	n/a
T 7.3	Involvement of a tier-2 'Circle of Sharing and Learning'	TECNUN, CIEM, Strath, LiU
T 7.4	Advocacy and networking with relevant stakeholders	TECNUN, CIEM, Strath, LiU, Donostia, Kristiansand, Glasgow, Vejle, Bristol, Rome, Riga, DIN
T 7.5	Exploitation of project results	TECNUN, CIEM, Strath, LiU, DIN
T 7.6	Final Conference	TECNUN, CIEM, Strath, LiU, Donostia, Kristiansand, Glasgow, Vejle, Bristol, Rome, Riga, DIN

<sup>4</sup> See Description of Work, p.34-35

## 10. TIMELINE

	Deliverable Title	Type	Due Date	Milestone
D7.1	Dissemination and Communication Strategy 1	Report	M4	MS25
D7.2	Project website	Website	M6	MS26
D7.3	First policy brief	Report	M24	
D7.4	Dissemination and Communication Strategy 2	Report	M24	
D7.5	Report on Stakeholder Dialogue	Report	M30	MS27
D7.6	Report on Stakeholder Workshop	Report	M33	MS28
D7.7	Second policy brief	Report	M35	
D7.8	Exploitation strategy	Report	M33	MS29
D7.9	Report on Final conference	Report	M36	MS30

## 11. ANNEX 1

### RELEVANT PROJECTS

Abbreviation	Full name	Funding body
SEC	Risk Assessment and Mapping Guidelines for Disaster Assessment	European Commission
Disaster 2.0	Disaster 2.0: Using Web 2.0 applications and Semantic Technologies to strengthen public resilience to disasters	CIPS
CRISADMIN	Critical Infrastructure Simulation of ADvanced Models on Interconnected Networks Resilience	CIPS
emBRACE	Building Resilience Amongst Communities in Europe	FP 7
HARMONISE	A Holistic Approach to Resilience and Systematic Actions to Make Large Scale Urban Built Infrastructure Secure	FP7
PEP	Public Empowerment Policies for Crisis Management	FP 7
ENHANCE	Enhancing risk management partnerships for catastrophic natural disasters in Europe	FP 7
ACRIMAS	Aftermath Crisis Management System-of-systems Demonstration	FP 7
DRIVER	Driving Innovation in Crisis Management for European Resilience	FP 7
TURAS	Transitioning towards Urban Resilience and Sustainability	FP 7
RESILENS	Realising European Resilience for Critical Infrastructure	H2020
IMPROVER	Improved risk evaluation and implementation of resilience concepts to critical infrastructure	H2020



RESOLUTE	RESilience management guidelines and Operationalization appLied to Urban Transport Environment	H2020
RESIN	Climate Resilient Cities and Infrastructures	H2020

## OTHER RELEVANT BODIES AND APPROACHES

Abbreviation	Full name	Funding body
SEC	Risk Assessment and Mapping Guidelines for Disaster Assessment	European Commission
Disaster 2.0	Disaster 2.0: Using Web 2.0 applications and Semantic Technologies to strengthen public resilience to disasters	CIPS



## 12. ANNEX II

The publication procedure is designed to guide the Smart Mature Resilience consortium in the development and submission of publication material throughout the lifespan of the project.

### 1.1 DELIVERABLES

The responsibility for the publication of publishable deliverables lies with the respective work package leaders.

### 2.1 PUBLIC DISSEMINATION MATERIAL

The text content for the following communication products to be produced as part of WP 7 will be made available for comments and revisions to all partners for a fixed time frame.

- Website content
- Flyer content

Partners may submit news items and event listings of direct relevance and interest to the project's target audience<sup>5</sup> for addition to the website by sending the details via email to ICLEI Europe or by adding to SharePoint and notifying ICLEI of this. These should be posted within 2 weeks of submission. Amendments to other sections of the website are subject to approval by ICLEI and by the coordinator.

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<sup>5</sup> See D7.1 Dissemination and Communication Strategy, ch.6 Target Audience



## 3.1 SCIENTIFIC PUBLICATIONS

This section lays out a guideline for process of publishing research resulting from the Smart Mature Resilience project.

### PITCHING AN IDEA FOR A PAPER TO PARTNERS

Prior notice of any planned scientific publication shall be given to the other Parties before the publication is submitted. Any objection to the planned publication shall be made in writing to the Coordinator and to the author. If no objection is made, the publication is permitted.

Recommended practice: It is preferable that scientific papers are planned together with the consortium partners with a greater lead in the following way:

- Partners develop and propose ideas on which topic they want to publish a paper/ want to present results on a conference (with possible journals, conferences, audience) and send it to all partners by e-mail or upload to SharePoint.

Ideally, partners should inform the consortium about their ideas on publications as early as possible to guarantee a smooth cooperation and high quality outputs.

All partners involved in the findings to be referenced in publications should be asked if they want to contribute to a paper or presentation for a journal/for a conference on this topic. It should be clarified who will be involved and who will be the responsible person for the publication. The project coordinator (Tecnun) as well as the leader of WP7 “Dissemination and communication” (ICLEI Europe) should be informed about each planned publication and the contributing authors.

### GENERAL PRINCIPLES FOR AUTHORS

If possible, Smart Mature Resilience papers should be published in Open Access journals to make the results available to as wide an audience as possible.

Each author named on a manuscript should have:

- 1 Made substantial contributions to conception and design, OR acquisition of data, OR analysis and interpretation of data, AND
- 2 Drafted the manuscript OR revised it critically for important intellectual content, AND



### 3 Approved the final version to be published.

All persons designated as authors should meet conditions 1, 2 AND 3, and all persons who meet all three conditions should be listed as authors. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content. Acquisition of funding, collection of data, or general supervision of the research group alone does not constitute authorship.

## IMPLEMENTATION

The first author will normally be the person who has made the largest substantial intellectual contribution to the work. The first author will also normally be expected to coordinate the circulation, editing, submission and revision of the manuscript.

The first author will propose, in consultation with the leader of the relevant work package (if that is a different person), an ordered list of authors to be named on the manuscript. Manuscripts will be described as having been written on behalf of the Smart Mature Resilience consortium. If possible, Smart Mature Resilience investigators who do not qualify for authorship will be listed separately under a heading such as Contributors or Acknowledgements, as will other members of the Smart Mature Resilience team who have made non-authorial contributions to the manuscript. How this will be accomplished varies according to the format and policy of the target journal. An indicative example is as follows:

Authors: Postdoc A, Student B, on behalf of the Smart Mature Resilience consortium

Acknowledgements: The authors led the study on behalf of the Smart Mature Resilience consortium ([www.smr-project.eu](http://www.smr-project.eu), <list of investigators>) funded by the Horizon 2020 Programme of the European Commission (grant agreement 653569). A.N. Other assisted with data collection.

The first author will circulate the final version of the manuscript to the Scientific Committee (SC) at least five working days before submitting it for publication so that the board is aware of the manuscript, its contents and authorship and has the opportunity to comment. Non-response may be taken to indicate assent to proceed. However, in the event of disagreement about the authorship or content of a manuscript, the SC has the right to veto submission pending further discussion and revision.





## REQUIRED ACKNOWLEDGEMENTS IN PUBLISHED MATERIAL

For any dissemination activity, it must be indicated which partner contributed to the research being reported and to the writing of the publication itself. The publishing partner shall ensure the following statement is included in any publications relating to the Project:

“The research leading to these results has received funding from the European Union’s Horizon 2020 Research and Innovation programme under Grant Agreement no. 653569.”

## PUBLISHING

The partner in charge of the paper/presentation will coordinate the publication submission, the adherence with the standards within the consortium and the adherence with the requirements of the editors of the journal/conference. To keep the relevant partners in the loop, the email to the journal containing the submission of a paper should bcc in the co-authors, contributors, Tecnun and ICLEI.

If the paper is accepted for publication:

- ask before the paper is published, about the journal's policy on copyright and reprints, the circulation figure, publication date and whether there are other conditions of publication;
- inform co-authors, contributors, Tecnun and ICLEI (for record-keeping).

If the paper is rejected:

- inform co-authors, contributors, Tecnun and ICLEI (for record - keeping);
- submit to the next journal on the list making sure that you meet the submission requirements.



## 13. ANNEX III

### DRS7 DISSEMINATION WORKING GROUP

Teleconference

11/05/2017 11.00-12.00

#### PARTICIPANTS

Clara Grimes (ICLEI – Local Governments for Sustainability): SMR project

Lucile Mendoza (HUMANIST): RESOLUTE project

Mark Mulcahy (Skills for Justice): Resilens project

Eddie Shaw (Carr Communications) DARWIN project

- 1 Project introductions and update on dissemination objectives per project
- 2 Introduction to joint resilience newsletter and call for sharing content.
- 3 Best methods for sharing updates and events were discussed. Shared Google documents were considered, but finally it was agreed to share information on an ad-hoc basis via email.
- 4 Ideas for a shared final conference: SMR proposes a pre-event to Open European Day in Bonn. The conference would be 1 day and would take place on 24 April 2017. The projects present were in favour of a joint conference. The programme would be decided by a programme committee with representatives of each project, and the following tasks should be divided and shared as applicable between the projects: 1) registration form, abstract submission and conference website 2) visual identity 3) participant invitations 4) management and communication with participants 5) logistics and catering 6) promotion and marketing 8) note-taking at the event and 8) follow-up report.
- 5 The benefits of attending the Community of Users event were discussed and SMR and RESOLUTE are planning to attend.
- 6 Monthly calls were agreed to plan the conference and share main updates. The next call is scheduled for 23<sup>rd</sup> June 2017.



## 14. ANNEX IV

# SMART MATURE RESILIENCE

## PROVISIONAL EXPLOITATION PLAN

ICLEI European Secretariat | May 2017

Deliverable	Exploitation Plan (provisional)
Deliverable No.	7.8
Work Package	7
Dissemination Level	Private – Updated version to be made public on official submission date in M33
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Co-author(s)	Robrecht, Holger - ICLEI Europe, Latinos, Vasileios - ICLEI Europe, Hernantes, Josune – TECNUN, Labaka, Leire – TECNUN, Sarriegi, Jose Maria – TECNUN, Howick, Susan – University of Strathclyde, Eden, Colin - University of Strathclyde
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Funded by the Horizon 2020  
programme of the European Union



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# 1. INTRODUCTION

The Smart Mature Resilience (SMR) project responds to the need for more resilient cities in Europe. The project's tools are designed to support policymakers in making informed decisions to develop their cities' resilience.

The project's tools complement and build on existing work in the area of European city resilience in a number of ways. One core project city, Glasgow, and three tier 2 cities; Rome, Bristol and Vejle, participate in the 100 Resilient Cities network by the Rockefeller Foundation. The project's work in the area of raising awareness of the importance and value of resilience-building within city and municipal administrations as well as among the general public and the private sector is related to this work.

Feedback from the cities has indicated that their work as part of 100 Resilient Cities has helped the cities develop a policy framework and gain political commitment to resilience-building. Further, city partners of the SMR project who are part of the 100RC network have expressed their impression that the SMR project's scientific research and tool development goes further than the work done as part of 100 Resilient Cities. The development of tools, which as a result of co-creation are designed to be directly applicable to the resilience-building process, provides cities with a means to implement the aims laid out in resilience strategies and similar strategic plans and to convert their goals into concrete action.

The SMR project, similarly, goes further than theoretical research into resilience as its co-creation process means that scientific outputs are informed by input from the city partners. The end users of the SMR project tools are practitioners and decision makers involved in municipal strategic decision making across all sectors and departments of municipalities. The tools are also useable by further stakeholders in the areas of critical infrastructure, crisis management and investment.



## 2. RESILIENCE MANAGEMENT GUIDELINE

### USER JOURNEY: DRAFT

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

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

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

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

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

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

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



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

**5. Map policies for priority implementation for both resilience and risk:** strategic management

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

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

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

**7. Integrate communication platforms:** strategic management and IT department

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





The Resilience Management Guideline will influence and support:

1. **Directly: City Representatives** engaged in sustainability, climate adaptation, resilience, environmental planning, strategic planning by providing guidance and training on resilience
  1. Target Groups to benefit from each tool
  2. Ad hoc committees and working groups
2. **Indirectly:** inform **Decision Makers** (EU, national, regional, local) and **CI managers** by improving the current EU guidelines
3. **Indirectly:** involve **Citizens, NGOs, Associations, Volunteers** by supporting their local decision through providing knowledge and tools
  1. Encourage and describe the creation of smaller discussion groups, committees to involve citizens

#### Additional elements to the resilience management guideline

- Commonly accepted guidelines on resilience building in CITIES (EC, local/regional level at least for the 7 partner CITIES)
- Additional co-creation exercises for municipal staff and stakeholders
  - Stakeholder mapping, back casting, breaking-the-ice exercises, adaptation options
- User manuals, tutorials, links to videos and the website online applications
- Guidelines for dissemination – communication strategy (press releases, identification of communication streams)



## 3. TOOL DESCRIPTION

### 3.1. RISK SYSTEMICITY QUESTIONNAIRE

#### Tool type

- The Risk Systemicity Questionnaire (RSQ) presents a series of possible risk scenarios that a city might need to respond to. Scenarios are presented in either text or using diagrams. Each scenario depicts a chain of events/risks that come together to form a potential stress requiring resilience in a city. Many of these scenarios represent vicious cycles where the stress on the city escalates over time.
- As the scenarios are assessed, the RSQ reflects an interaction between them – the answer to one scenario affects the potential impact of other scenarios and also whether other scenarios need to be assessed. The RSQ is presented using Excel to enable background programming of these interactions and continual calculations of the risk levels in response to answers.
- The RSQ covers 9 topics where the answers in one topic affect the significance of answers in other topics.
- The RSQ is not a predictive tool. The risk scenarios represent valid possibilities but they must be assessed in the national and local context.

#### Benefit and added value

- The tool is designed to encourage respondents to think about interacting risks rather than individual risks. Thus, it is primarily designed to provide a group of respondents with a vehicle for focused discussion which can bring together a range of expertise and experience from members of the group.
- Groups using the RSQ may be key policymakers, those who advise policymakers, and stakeholders who have expertise and experience that will enhance understanding of risk.

#### Exploitation opportunities

- Strategic planning
- Staff training



- Can be used without paid facilitation as the tool is available through green access from the SMR website and supporting videos will be developed

### 3.1.1. RSQ BUSINESS MODEL

#### **Key Partners**

Experts in facilitation, municipal departments in cities

#### **Key Activities**

Providing 1-day training in person to groups in municipal departments as part of support and evaluation of carrying out resilience projects in the city

'Train the trainer', where one initial group would be introduced to using the tool, and a responsible person in the city could thereafter carry out follow-up implementations of the assessment

#### **Key Resources**

- Network of cities and close relationships through SMR project
- Readily useable tool
- Supporting video clips

#### **Value Proposition**

- Designed to encourage respondents to think about interacting risks rather than individual risks.
- Provides a group of respondents with a vehicle for focused discussion about risks which can bring together a range of expertise and experience from members of the group.
- Groups using the RSQ may be key policymakers, those who advise policymakers, and stakeholders who have expertise and experience that will enhance understanding of risk.
- Cities can monitor and compare their progress through periodic re-assessment
- Does not require expert knowledge or research

Time-efficient method to bring topically different departments together and focus their discussion to share their knowledge of risk from different municipal departments (or stakeholders' perception of risk, e.g. citizens)



### **Customer Relationships**

Long-term relationships with short periods of more intensive interaction before and after trainings

### **Customer Segments**

Municipal project teams

Resilience Office team

New staff working on risk or resilience topics

### **Channels**

Direct selling

Word of mouth

Recommendations through other cities and city networks

### **Cost Structure**

Minimal overheads

Alternative use of tool without facilitation would be free for cities (green access open source)

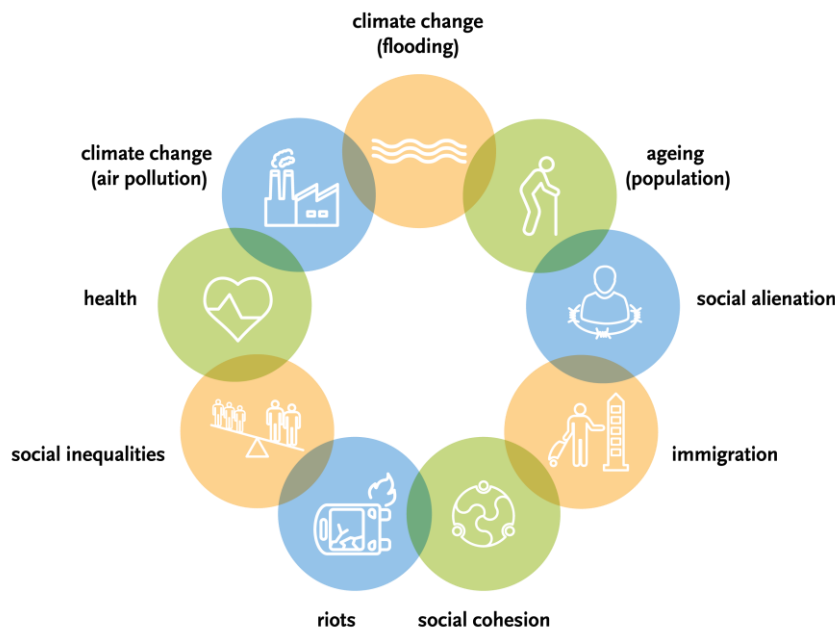
### **Revenue Streams**

Facilitators' fees

## **3.1.2. TOOL SUMMARY**

The Risk Systemicity Questionnaire is an Excel based tool where users are asked to consider the relative likelihood of a broad range of risks in their cities. These risks are spread across nine topics

and are considered as networks of interrelated risks:



These networks of risks are presented as risk scenarios, some of which result in vicious cycles. Users progress through the tool by completing questions, which ask them to consider whether defined risks scenarios are likely or not to occur in their cities.

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

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



### 3.1.3. EXPECTED WAYS USING THE RSQ

#### **Project Teams**

**Use:** The RSQ may be used to promote and facilitate a designed and structured discussion about risk assessment and risk mitigation across teams that are working on city projects that bring together a range of stakeholders from across the city. The process would be expected to help develop consensus and to flush out different perspectives on resilience.

The project team leader would facilitate the group through completion of the RSQ. The process would highlight those areas, which require most attention by the project team and support discussion about the development of risk mitigation strategies with respect to the likely risk scenarios. This can be supported through discussion about the portfolios of initiatives that have been successful in other cities.

**Timing:** The RSQ should be carried out at the beginning of a project in order for the team to think differently about risks that may affect the success of their project. The RSQ can help to guide discussions considering interconnections between potential risks outside of the obvious project risks, and to arrive at a consensus on the awareness of different risk and their systemic impact on other aspects of the city. Subsequently, the questionnaire should be re-used periodically to appraise the issues raised during the initial application and discussion in order to evaluate and monitor risk mitigation.

#### **Resilience Office Team**

**Use:** The RSQ could be used regularly by the resilience office team to monitor the changing impact of risk scenarios on the city's resilience strategy. The RSQ could help to identify those areas of the city that require most attention with respect to resilience and thus help the team prioritise limited resources.

**Timing:** Use every 6 months in order to address a changing world.

#### **Engagement with City Stakeholders**

**Use:** the RSQ can be used as a way of consciousness raising among a wide set of city stakeholders. The RSQ would be the basis for focus group meetings involving, for example, pressure and voluntary groups seeking to help the city become more resilient. In particular, given the significance of social cohesion as a force for making a city more resilient, the RSQ could be used to



promote discussion about the potential risks to social cohesion. This can help to build social capital with respect to resilience and risk.

**Timing:** periodically when opportunities arise. The city could use the same target group periodically to compare possible improvements. A good facilitator is needed.

## 3.2. RESILIENCE MATURITY MODEL

### Tool type

- Framework that shows the ideal path in the resilience building process.

### Exploitable value

- Useable as part of strategic planning
- Facilitates common and holistic understanding of resilience concept
- Enhances communication, engagement and awareness level of the city stakeholders
- Enhances the identification of resilience-strengthening strategies
- Assists cities in assessing their current maturity stage
- Provides a guideline about the steps to follow in the resilience building process, providing policies and indicators to monitor the progress
- Cities can monitor and compare their progress through period re-assessment

### Exploitation opportunities

- Strategic planning
- Services and consultancy
- Staff training
- Can be used without paid facilitation, as the tool is available through green access from the SMR website (<http://smr-project.eu/tools/maturity-model-guide>) and with the support of audio-visual guidance available on the SMR website.

### 3.2.1. BUSINESS MODEL: RESILIENCE MANAGEMENT PACKAGE

Combining Resilience maturity model, resilience policies and system dynamics model



### **Key Partners**

Experts in facilitation and in strategic resilience management taking a holistic perspective

### **Key Activities**

Providing training in person to strategic managers in municipal departments to inform long-term strategic planning for resilience in the city.

Continuing relationships with training groups and revisiting periodically to update city resilience strategy.

Five-stage process of application of the tools, which should be repeated periodically after implementation of policies:

- 1) Assess resilience maturity level according to Resilience Maturity Model
- 2) Explore repercussions and benefits of implementing certain policies before others in order to accurately assess the impact of the implementation order of the policies in the resilience building process by using the System Dynamics Model
- 3) Research case studies, examples and literature as a basis for replication of policies through the Resilience Policies tool
- 4) Strategise and implement selected policies
- 5) Repeat process after implementation period to establish the most effective next policies to implement

### **Key Resources**

Network of cities and close relationships through SMR project

Readily useable tools

Supporting handbook, poster and online tools

Authority and image through expertise of project's partners

### **Value Proposition**

System dynamics model provides a training tool

Consultancy and training for strategic decisionmakers for resilience planning, where many cities have no established methods or departments for resilience planning





Can involve multistakeholder groups, including citizens

Can inform multiple departments coherently from a top-down management level

Does not require prior knowledge of resilience

Cities can monitor and compare their progress through periodic re-assessment

In the case of the System Dynamics Model: Supports decision-makers in confirming the value of prioritising certain resilience policies over others on the basis of their assessment of their current maturity stage

### **Customer Relationships**

Long-term relationships with short periods of more intensive interaction before and after trainings

### **Customer Segments**

Managers and politicians in local, regional and national governmental departments establishing and coordinating resilience management strategies

Resilience Office team

### **Channels**

Direct selling

Word of mouth

SMR website

ICLEI website, ICLEI communication channels and ICLEI network

Recommendations through other cities and city networks

### **Cost Structure**

Minimal overheads

### **Revenue Streams**

Facilitators' fees



Fee for customised assessment and policy recommendation report provided by facilitators following training

### 3.2.2. TOOL SUMMARY

The Maturity Model is a strategic tool that provides a roadmap about how the resilience process may be through the policies defined in each stage. The Maturity Model enables, from a strategic level, the identification of areas that need to be improved in each city and reflect these in policymaking and planning.

This tool also helps enhancing the communication among stakeholders since it facilitates a continuous process of discussion and participation of the city stakeholders, which increases their awareness, engagement and commitment on the resilience building process. This tool also helps increasing common understanding of resilience understanding resilience as a multidimensional objective.

The SMR Maturity Model defines five maturity stages: Starting, Moderate, Advanced, Robust, and verTebrate. Each of these maturity stages includes a description of the objectives of each stage, the actors/stakeholders involved in each maturity stage, in addition to a list of policies that should be developed in order to achieve the objectives defined in each maturity stage. The implementation of these policies will allow the CITY to move forward from one stage onto the next.

These policies have been classified considering four resilience dimensions: Leadership & Governance, Preparedness, Infrastructure & Resources and Cooperation **Error! Reference source not found.** Using these dimensions, an analysis of the city resilience level can be done independently for each dimension as cities can be at different maturity stages depending on each policy dimension. Additionally, a set of indicators are proposed to monitor the level of implementation of the policies.

The tool can be applied to develop a diagnosis of the current maturity level of the city based on the four resilience dimensions. Cities could be aware in this way about the level of their capabilities, thereby positioning themselves within one of the maturity stage (S-Starting, M-Moderate, A-Advance, R-Robust and V-VerTebrate) for each dimension described in the model. This process can be repeated periodically to evaluate the city progress in the resilience building process.

The tool is already available in its online version whereby users can filter the extensive information in the form to find policies that apply to them. The tool is available at <http://smr-project.eu/tools/maturity-model-guide/>. The next stage will be the integration with the Resilience Policies tool, which will allow



cities to find case study examples of policies that have been implemented by other cities, and that they can take as replication examples.

The screenshot shows the SMR website interface. At the top is the SMR logo and a navigation menu with links: Home, About, Resources, Cities, and News. Below the menu is a 'Tools' section. The main content area is titled 'RESILIENCE MATURITY MODEL'. It features a 4x4 grid with the letters S, M, A, R, T in the first row and L, P, I, C in the second row. To the right of the grid is a description of the model and a list of its benefits.

**RESILIENCE MATURITY MODEL**

The Resilience Maturity Model provides a common understanding of the resilience building process. Using the Resilience Maturity Model, CITIES are asked to consider CITY's current status of resilience. The model then helps to identify the correct policies to implement in order for the CITY to evolve and move to the next maturity stage.

**The Resilience Maturity Model:**

- can be used as part of strategic planning
- helps cities identify their level of resilience maturity
- helps cities to identify suitable policies to implement to develop resilience
- provides a point of reference for self-assessing effectiveness of resilience development
- helps cities prioritise resilience policy implementation on the basis of diagnosis and assessment
- can provide cities with justification for need for funding for specific measures

**Stage:** S M A R T

**Stakeholder:** [Icons representing various stakeholders: city, industry, academia, research, community, government, etc.]

































**Dimension:** [Icons representing various dimensions: economic, social, environmental, etc.]

**Subdimension:** [Icons representing various subdimensions: innovation, digital, etc.]

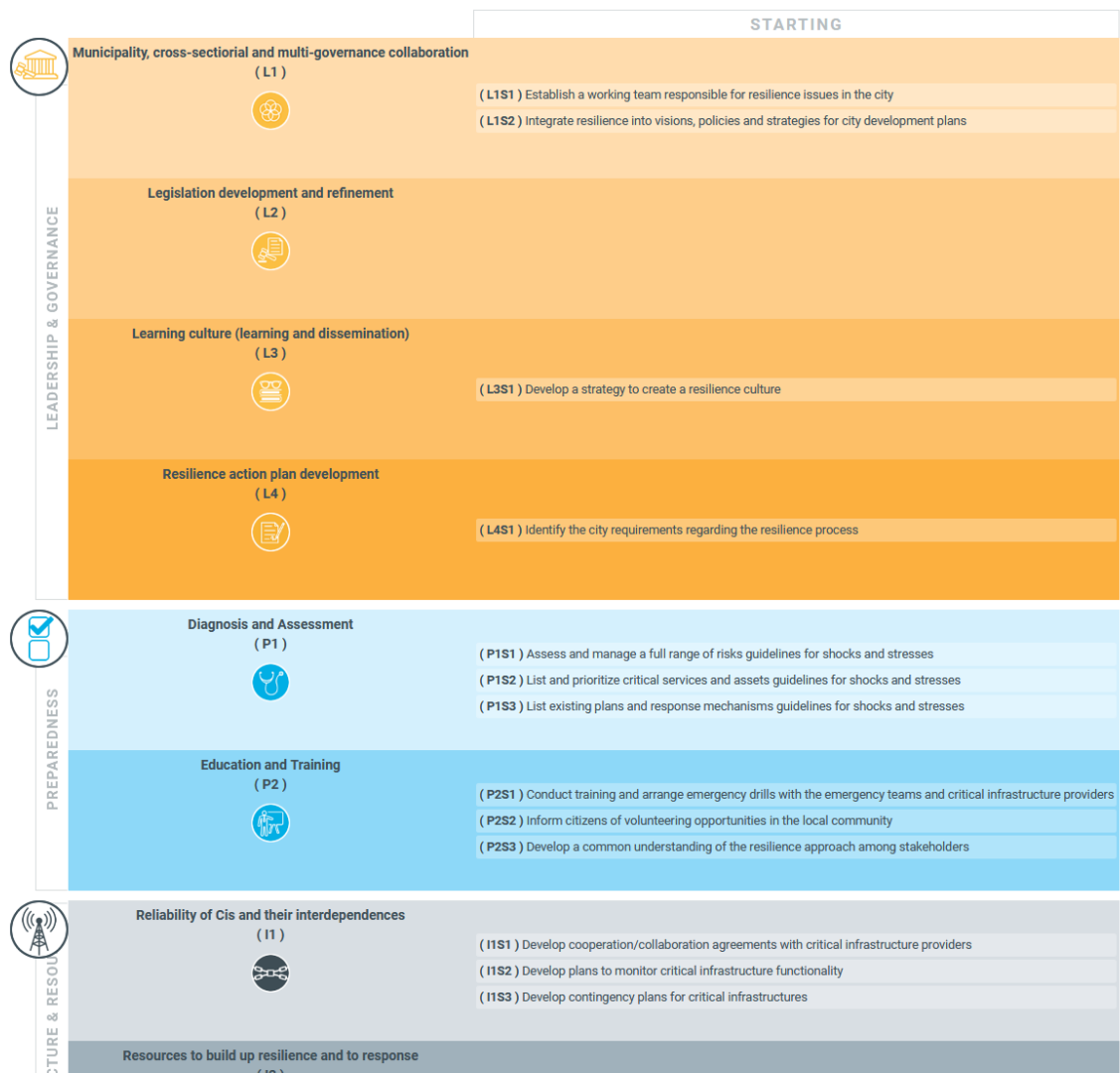
## Tools

## RESILIENCE MATURITY MODEL

Click on an icon to find relevant policies

Stage	    
Stakeholder	            
Dimension	   
Subdimension	         

✕ Reset





### 3.2.3. EXPECTED WAYS USING THE RESILIENCE MATURITY MODEL

**Resilience management in cities, strategic planners in cities in cross-departmental teams, critical infrastructure providers**

**Timing:** The Maturity Model can be used as a tool to guide the resilience building process when a city starts defining its resilience strategy. Once this strategy is already being implemented, this tool also helps cities to assess their progress, providing an ideal roadmap of the policies that need to be implemented to move on to a more advanced maturity stage.

**Use:** The Maturity Model assists cities in assessing current maturity stage and identifying future resilience demands and capacities in order to advance to a more mature level. It also allows end users to understand resilience as a multidimensional objective, gaining a holistic understanding of each dimension and their interrelationships

The Maturity Model may also be used as a training tool to help new employees grasp city resilience issues.

The process to follow in order to assess the city's current maturity stage is the following. The city stakeholders should research, categorise and record policies that have been implemented in their cities related to resilience. Afterwards, a training session can be held where the Maturity Model purpose and structure is explained. The participants of this session would categorise the policies that have been implemented or are in place in their cities, relate them to policies in the maturity model, and on that basis, make a self-assessment of their maturity level for each dimension included in the Maturity Model: Leadership & Governance, Preparedness, Infrastructure & Resources and Cooperation.

#### **Resilience Officer**

**Timing:** Use every 6 months in order to address a changing world.

**Use:** by the Resilience Officer as part of biannual evaluation of resilience planning and informed adjustment of strategic planning

#### **Politicians**



**Timing:** systematically when a new city council or government is elected and annually before budget decisions

**Use:** to inform decision making prior to establishment of budgets

**Other organisational Stakeholders:** businesses, utilities etc

**Timing:** as per own initiative to identify where cities or regions may benefit from certain measures

**Use:** as argument to 'sell' the value of prioritising measures in their interest over others Stakeholders according to resilience maturity level

### 3.2.4. STAKEHOLDERS INVOLVED

#### **Starting**

Local Government, Emergency services, CIs

#### **Moderate**

Local Government, Emergency services, CIs

**Public-private companies, NGOs, Volunteers, Regional government**

#### **Advanced**

Local Government, Emergency services, CIs

Public-private companies, NGOs, Volunteers, Regional government, Media

**Citizens, Academic and scientific entities, National government**

#### **Robust**

Local Government, Emergency services, CIs

Public-private companies, NGOs, Volunteers, Regional government, Media

Citizens, Academic and scientific entities, National government

**European policymakers**

#### **Vertebrate**

Local Government, Emergency services, CIs

Public-private companies, NGOs, Volunteers, Regional government, Media

Citizens, Academic and scientific entities, National government

European policymakers

**International organizations**



### 3.3. SYSTEM DYNAMICS MODEL

#### Tool type

- Training tool
- Online game

#### Exploitable value

- Supports interactive learning
- Supports in budgeting the resources needed for the resilience building process and also analysing budgetary deviations during the development of resilience.
- Supports deep understanding of reasons for budgetary decisions for resilience strategising and the logic behind prioritising one policy over another
- Supports deep understanding on the impact of the temporal order in which the policies should be implemented
- Useable as part of strategic planning of the resilience building process
- Applicable at any governmental level: local, national and international
- Useable by CI providers
- Useable by municipal staff outside of facilitated environment to support learning for resilience decisionmaking
- Supports understanding of Maturity Model
- Builds understanding of prioritising policies and how the temporal order of policies implementation

#### Exploitation opportunities

- Supporting tool for understanding how to use the Maturity Model
- Services and consultancy
- Training activities based on the model
- Use to teach resilience concepts e.g. to university audience
- Use to teach the interrelationships among the policies and their impact

The aim of the System Dynamics model is to explain the structure that develops the behavior that the cities should achieve during the Resilience Building process. The model will allow the cities to



understand the precedence relationship of the policies included in the Maturity Model and it will provide a learning environment to better understand how the Maturity Model works, and how the Maturity Model should be implemented.

The System Dynamics Model should accompany use of the Maturity Model to help to link the Maturity Model's abstract concepts to a decisionmaking and budgeting mindset. First of all, the users need to calibrate the model determining the values of the most important parameters of the model: the implementation cost of the policies, the implementation time of the policies and the depletion time of the policies. Once the model has been particularized for each city, the decision making process starts, where the user needs to plan which policies will be implemented yearly. At this stage, they have identified which policies they need to identify, and are ready to find some examples using the Resilience Policy tool. the Model runs simulations of the effects of implementing certain policies over a realistic timeframe (yearly to a total of 40 years). When users implement the policies in the appropriate, wise and effective order, they achieve effective results and their resilience level increases eventually until reaching 100% in each of the resilience dimensions.

#### **Expected use of the System Dynamics Model:**

The System Dynamics Model is an online game where initially the users need to calibrate the tool for their cities by determining the values for the main parameters of the model. Then, the users, based on their resilience building planning, select their current level of investment in different types of policies as a starting point. Using this as a basis, they 'invest' units of budgetary resources in some policies, and run a simulation. The result of this simulation shows the effects of their choices as progress compared to their starting point. The results will be effective when the policies are implemented in the proper order, otherwise, the resilience level of the city won't increase. They once more 'invest' in other policies, and continue the process for 40 sets of 1-year simulations.

The goal is to have the overall maturity level improve across all of the dimensions and increase in maturity stage. If unwise investment choices are selected, the user will not progress, and can start again to see how other choices would have resulted in more effective outcomes.

**Business model:** combined with Maturity Model (see 2.2).

## 3.4. RESILIENCE POLICIES

### **Tool type**





- Policy collection including case studies and examples from literature
- Planned to be hosted online and searchable using the Maturity Model as a filter tool

### **Exploitable value**

- Useable as part of strategic planning
- Provides references and examples of initiatives undertaken by cities to support policies identified in the Maturity Model
- Provides further detail and links to connect theoretical planning to transformative action
- Clickable online interface that is intuitive and easy to use

### **Exploitation opportunities**

- Services and consultancy
- Training activities based on the model
- Printed versions as marketable products
- Use in cities by municipal staff not involved in strategic planning

The Resilience Policies tool is an extension of the online version of the Maturity Model. It combines custom ways to view policies contained in the Maturity Model with detailed information and examples from initiatives identified in the Risk Systemicity Questionnaire as well as case studies from SMR cities and further details from scientific literature to encompass a comprehensive reference centre for high-level strategic managers in cities as well as municipal workers tasked with implementing the policies that have been planned.

**Business model:** combined with Maturity Model (see 2.2).

## Policies

## POLICY P2S2

Inform citizens about volunteering opportunities in the local community

## Policy description

The local government provides information about different initiatives and activities where they can be involved through the arrangement of workshops, conferences or the city council website. The role volunteering plays in strengthening citizen engagement, social inclusion and building resilient communities is of high importance. It is widely recognised that volunteering opportunities have a positive impact on individuals, organisations and the wider community.

Volunteering seeks to build community well-being, sustainability and respects the dignity of all people; helps tackle social, cultural, economic and environmental issues; and builds a more humane and just society. These initiatives of volunteering refer to activities undertaken independently as an individual to help others (e.g. checking on the wellbeing of an elderly neighbour), or as part of wider community activity in response to an identified issue or need (e.g. care and maintenance of the local environment).

## Topics

1. Case Studies
2. RC 100 Resilient City Strategies
3. Definitions
4. How can this policy be achieved?
5. What is this policy expected to achieve?

## Case studies

## ▼ Case study: Glasgow volunteering strategy



City organisation (Volunteer Glasgow) funded to collate volunteering opportunities across the City and to promote and encourage an increase in volunteer participation. Production of a volunteering strategy.

More information can be found [here](#)

## ➤ Case study: Kristiansand portal for voluntary activities

## ➤ Case study: Fairford Emergency Action Group

## ➤ RC 100 Resilient City Strategies

## Definitions

UN definition of volunteering:

"activities ... undertaken of free will, for the general public good and where monetary reward is not the principal motivating factor."


Based on the General Assembly definition of volunteerism, UNV articulated four types of volunteerism: (1) mutual aid/self-help, (2) philanthropy and service to others, (3) civic participation (4) and advocacy and campaigning.

## ➤ Positive links to volunteering

## ➤ Volunteerism in an emergency and disaster context

## ➤ How can this policy be achieved?

## Filter policies


 Starting

 Moderate


 Advanced


 Robust

 VerTebrate

 Leadership & Governance

 Infrastructure and resources

 Preparedness

 Cooperation

## Resources

Case Study Template can be found [here](#)

Portal to add additional case studies can be found [here](#)

## Further reading and relevant links

[Making Sense of Volunteering: A literature review](#)

Published by Volunteering England on behalf of the Commission on the future of Volunteering, 2007

[The Use and Effectiveness of Online Social Media in Volunteer Organisations](#)

Published by the University of South Florida, Dissertation, 2014

[State of the Worlds Volunteerism Report: Transforming Governance](#)

Published by the United Nations Volunteers (UNV), 2015

[A Review of informal volunteerism in emergencies and disasters: Definition, opportunities and challenges](#)

Published by International Journal of Disaster Risk Reduction, 2015

[What is Social Capital?](#)

Published by OECD

[The OECD measurement of social capital project and question databank](#)

Published by OECD and the UK Office for National Statistics

[Measuring Social Capital: An integrated questionnaire](#)

Published by World Bank, 2004

[Defining and Measuring Social Cohesion](#)

Published by UNDP, 2010



## 3.5. RESILIENCE INFORMATION AND COMMUNICATION PORTAL

### Tool type

- Online platform and re-usable toolbox

### Exploitable value

- Provides software to cities to use as part of their intranet system
- Allows different levels of permissions and users
- Can complement and enhance the platforms and software that cities already have in place
- Online content management system that is easy to use

### Exploitation opportunities

- Software sales or provision to cities
- Use in cities by IT staff initially to be implemented and afterwards maintained with contributions by any level of municipal staff or CITY stakeholders including citizens

The Resilience Information and Communication Portal serves as a toolbox that can complement and enhance the platforms and software that cities already have in place. It allows cities to display data internally or publicly that is already available to the city as it applies to resilience, vulnerability and crisis situations. The portal allows for different levels of users to allow for city managers, critical infrastructure providers, citizens or other stakeholders to be able to contribute information as applies to a given city context. The portal offers added value not available otherwise to cities (as they self-reported), as the cities have multiple (and in Glasgow's case, dozens) of platforms in place in their municipalities for internal communication, but the wealth of information available to them is not integrated, streamlined or fully utilized. Furthermore, the tool includes a number of levels of users, which accounts for the complexity of the network of stakeholders and target groups that are to be considered in building resilience. Lastly, the toolbox format facilitates the practical reality in cities, which is that replacing existing communication systems is impractical and would cause unwarranted disruption. Therefore, providing the platform as a toolbox allows cities to select the elements not



already available to them without undoing or disrupting facilities and channels that already function effectively.

The portal particularly serves two purposes:

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

### 3.5.1. RESILIENCE PORTAL BUSINESS MODEL

#### **Key Partners**

Communicators to sell value of product to cities

#### **Key Activities**

Providing software to cities

#### **Key Resources**

Portal code

Supporting video tutorials

#### **Value Proposition**

Complements existing systems

Adaptable to each city's needs

Allows for interaction of many levels of users

#### **Customer Relationships**

Initial point of contact for implementation of platform

#### **Customer Segments**

IT departments and directors deciding which software to be used for city intranets



### **Channels**

Direct selling

Word of mouth

SMR website

ICLEI website, ICLEI communication channels and ICLEI network

Recommendations through other cities and city networks

### **Cost Structure**

Free use of software: green access through SMR website

### **Revenue Streams**

Software tailored to specific city's needs could be sold as a product

## **3.5.2. STAKEHOLDERS**

The Resilience Information Portal is designed to be applicable by different stakeholders within cities and a system of various roles and permissions has been designed to reflect this. The first user group is likely to be staff working in intranet and website administration for the municipality in cities. All stakeholders in cities may then input information according to the administrative roles assigned to them.



## 4. FURTHER EXPLOITATION APPROACHES

In addition to the above examples of commercialisation potential, the SMR project aims to support the exploitation of the project's results by means of the following approaches:

- 1) Informing further research
- 2) Use of results in education and training
- 3) Informing European policy
- 4) Standardisation
- 5) Uptake in cities of tools

In the following chapter, the approach to each of these aspects will be described. In addition, the exploitation potential of each tool will be defined and its potential use described.

### 4.1. INFORMING FURTHER RESEARCH

The research undertaken is likely to inform and encourage follow-up research. Current follow-up research includes:

- “Blockchain based Collective Awareness Platforms for Resilient Cities in Europe” (BLOCKCAP) project led by SMR city Vejle and involving SMR partners TECNUN, ICLEI and DIN, building on work into resilience established through SMR project
- “Smart Cities and Regions” project led by SMR city Kristiansand and planned to involve SMR partners Glasgow, San Sebastian, Riga, Rome, Vejle, University of Strathclyde and possibly ICLEI
- SEC-21-2017 application involving ICLEI and TECNUN

### 4.2. USE OF RESULTS IN EDUCATION AND TRAINING

#### 4.2.1. RESILIENCE ONLINE

The city of Vejle with the support of ICLEI Europe plans to develop a training programme called ‘Resilience Online’ making use of the project tools.

Resilience Online should provide theoretical and practical knowledge about working with resilience in cities and municipalities. The researchers, in EU-funded Horizon 2020 projects working to develop



ways to make cities more resilient, will be invited to deliver 'TED talks' about the specific issues that they deal with. Later, other researchers and practitioners will be invited to also supply 'TED talks'.

The different TED talks could be included in resilience training, which could be a pure online education and training or a combination of the presence teaching, conferences, etc. In Denmark, several companies have already called for education and training opportunities for the future and current employees. VIA University College has a professional tool to manage online trainings and has received funding to launch a vocational further education in the field of resilience in Denmark – this will be done in cooperation with Resilience Lab Denmark and the upcoming Resilience House in Vejle, where the training takes place.

The object will also be to share the results that are developed in the various projects and thus support the dissemination and exploitation of the projects.

### **Concept and Target Groups**

Resilience Online will focus on the sharing of knowledge, experience and research on resilience. The target groups are as follows:

- Tertiary students who wish to supplement their education with knowledge in this area
- Students in schools where elements of resilience may be included in various subjects in education.
- Graduates for whom the information will complement and enhance their education with knowledge on resilience.
- Organizations and companies working with issues on different kinds of resilience.

Resilience Online must continuously scan the users' needs and at the same time explore and offer online courses or blended learning courses in resilient solutions for these user groups. Online learning (synchrony or asynchrony) will be combined with face-to-face teaching, working in study groups and network both online and face-to-face, guidance, literature search etc.

Resilience Online must reach out and be in dialogue with educational and research institutions, relevant resilience environments and others with a view to developing online learning materials and methods. The training must be designed for the various target groups at the right level and in the right form.



### 4.3. STANDARDISATION

SMR standardisation partner DIN are planning for possible CEN Workshop Agreement processes based on the standardisation activities as part of the SMR project. Outcomes of these activities as detailed in the upcoming reports D6.2, D6.3 and D6.4 will be included in the updated version of the exploitation strategy to be submitted in M33 as originally foreseen in the Grant Agreement.

Exploitation activities to date include an envisaged CWA (CEN Workshop Agreement) concerning the “Functional Specification for a Resilience Information Portal”,