

Grant Agreement number: 101094455

Project acronym: FUTURESILIENCE

Project title: Creating future societal resilience through innovative, science-based co-creation labs

Type of action: Coordination and Support Action (CSA)

D1.2 Guide to navigate and use the knowledge base

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Due date	31 October 2025
Actual submission date	31 October 2025
Dissemination Level	Public

Abstract: This deliverable presents the methodology used for the creation, testing and implementation of the FutuResilience Knowledge Base (KB), a dynamic, open-access platform designed to consolidate and structure policy-relevant research and innovation (R&I) outputs related to societal resilience.



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101094455.

Document Revision History

Date	Version	Author/Editor/Contributor	Summary of main changes / Status
18/07/2025	0.1	Fabiola Onofrio (UNIFE)	First draft: structure and content
23/07/2025	0.2	Matias Barberis (EFIS)	First review
26/09/2025	0.3	Fabiola Onofrio (UNIFE)	Second draft
10/10/2025	0.4	Jörgen Sparf (NTNU)	Contribution to Section 2
25/10/2025	0.5	Fabiola Onofrio (UNIFE)	Content and Structure Implementation
30/10/2025	0.6	Matias Barberis (EFIS)	Quality review
31/10/2025	1.0	Christine Neve and Matias Barberis (EFIS)	Final editing and submission

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Executive summary

The FutuResilience project was established to strengthen Europe's capacity to anticipate, respond to, and recover from systemic shocks by fostering resilience at local, regional, and national levels. Central to this endeavour is the FutuResilience Knowledge Base (KB), a dynamic, open-access platform designed to consolidate, structure, and disseminate policy-relevant research and innovation (R&I) outputs. The KB equips policymakers, practitioners, and communities with evidence-based tools to inform decision-making, enhance preparedness, and promote sustainable resilience strategies.

The KB is organised through an intuitive, filter-based structure that enables users to navigate content according to factors such as type of document, societal readiness level, intervention type, sectoral relevance, and crisis phase. This design allows stakeholders to adapt knowledge to their specific contexts, bridging the gap between theoretical insights and practical application.

The KB's role was tested and validated through ten FutuResilience Labs, each operating in distinct local and regional contexts. The Labs employed the KB to identify and evaluate policy instruments, innovative practices, and tested solutions aligned with their thematic priorities. Case studies from Portugal, Slovenia, and Spain illustrate how the KB supported early policy mapping, informed scenario planning, guided wind tunnelling exercises, and facilitated the development of policy cards for stakeholder workshops. Feedback confirmed its value not only as a repository but as a decision-support instrument that encouraged cross-sectoral collaboration, speculative policy design, and comparative policy evaluation.

While the KB was widely regarded as user-friendly and impactful, several gaps were identified in thematic coverage, including energy, biodiversity, housing, food security, education – reflecting potential gaps on these areas introducing societal resilience as guiding or intersecting policy design principle. Nonetheless, the platform's adaptable and evolving structure positions it as a resource capable of continual refinement and expansion.

In conclusion, the FutuResilience Knowledge Base represents a significant step towards embedding resilience into European research and innovation systems. Its continued maintenance as a dynamic, independent platform will ensure sustained impact beyond the project's lifetime, contributing to an inclusive, evidence-informed, and future-oriented resilience agenda for Europe.



1 Introduction

Over the past two decades, multiple and interconnected crises—such as pandemics, climate disasters, energy disruptions, and large-scale migration—have become increasingly frequent. These events have exposed profound inequalities within civil society and underscored the urgent need for preparedness, adaptability, and coordinated action across all institutional levels. In response, the concept of resilience has become central to policy, planning, and governance. Resilience refers to the capacity of individuals, communities, institutions, and systems to withstand, adapt to, and recover from disruptions—emerging stronger and more capable of facing future challenges.

Research and Innovation (R&I) plays a pivotal role in this context. It provides a foundation for more responsive and flexible systems, inform policy development through evidence-based insights, and strengthen institutional decision-making and long-term preparedness. By leveraging R&I outputs, societies can better anticipate and address crises before they unfold. In this light, the FutuResilience project was launched to enhance the economic and social resilience of Europe, strengthening its ability to swiftly and effectively respond to future shocks. This goal is being pursued through the facilitation of timely uptake of policy-relevant R&I findings across national, regional, and local levels. To achieve this goal, the FutuResilience project prototyped and developed a Knowledge Base (KB)—a centralised and dynamic online platform that enables stakeholders, researchers, and policymakers to access a broad spectrum of policy-relevant R&I findings and best practices. The rationale behind the KB lies in the need to consolidate, structure, and make accessible the large body of outputs from EU-funded and national R&I initiatives around resilience. In this direction, the project:

- 1) Mapped tested, policy-relevant outcomes from research projects that build capacity for resilience and future preparedness, or projects working on thematic areas underpinning challenges that support resilience-building processes.
- 2) Mapped and included also policy recommendations developed by recognised international organisations (UNDRR, UNESCO, OECD, UNCTAD, etc.)
- 3) Identified good practices from cities and regions actively engaged in resilience initiatives, including those aligned with the Sustainable Development Goals (SDGs).

These findings have been integrated into the KB, which organises content according to multiple filters: type of document, area of interest, type of intervention, Societal Readiness Level (SRL), intensity of change, and shock phase. This structure allows users to tailor their searches and extract relevant information suited to their unique needs – usually filters associated with typically relevant dimensions of policy design targeting resilience. The KB enhances access to critical knowledge and promotes transfer of innovation, while serving as a strategic tool for designing, benchmarking, and implementing resilience policies across Europe.

Looking forward, the long-term ambition is to maintain the KB as an independent and open-access platform, continually updated and refined to meet evolving challenges. This ensures that the knowledge and innovations generated by the FutuResilience project remain accessible, actionable, and impactful well beyond the project's formal conclusion. Supporting this goal, the PARATUS project has integrated the Knowledge Base as part of the [Disaster Resilience Stakeholders Hub](#), contributing to the sustainability of this key outcome.



2 Methodology

The development of filters for the FUTURESILIENCE Knowledge Base was grounded in an integrated theoretical framework combining policy design literature with resilience scholarship. Drawing on Linder and Peters' approach¹ to policy design as a boundedly rational planning process informed by political feasibility, we established a systematic methodology for selecting and classifying policy instruments that could strengthen societal resilience. This theoretical foundation enabled us to move beyond ad-hoc selection processes and instead apply consistent, evidence-based criteria across the diverse range of policy tools identified through our **mapping exercise**. The filter architecture was designed to serve dual purposes: first, to ensure only relevant, tested, and implementable policy solutions entered the Knowledge Base, and second, to enable future users to navigate the database effectively according to their specific resilience challenges and contexts, following diverse conceptualisations of resilience, as reported in D1.1 (See [D1.1 Report on mapping policy relevant R&I findings](#)).

The results from the mapping exercise were analysed by a working group that **further cleaned the data**, assessing whether the results met the criteria for inclusion, and working in cross-check groups to verify the mapping entries. The work implied reviewing the titles of the documents and including the name (acronym) of Horizon 2020 or Horizon Europe funded projects for research-based inputs or verifying the correctness of titles for policy recommendations emerging from other sources. Furthermore, the team extracted or developed dedicated abstracts for the entries, facilitating the reading, understanding and uptake of the results. This exercise resulted in over 600 documents upload to the Knowledge Base (rejections from the mapping were based on few duplications or high level of technicality of proposed entries), complemented with over 50 entries related to results from the FutuResilience labs.

2.1 Functionality testing

In order to verify the quality and functionality of the Knowledge Base by potential end-user profiles and situations of use, the study team organised a quality test exercise, carried out by diverse project experts.

2.1.1 Text of the assignment

Put yourself in the role of a knowledge base user, e.g., a policymaker, a crisis management professional, or a researcher. Imagine you are dealing with a specific topic, as listed below.

Example of topics:

- a. Your region experiences forest fires, and the community is looking to launch a new urban plan (**recovery situation**).

¹ Linder, S. H., & Peters, B. G. (1984). Policy formulation and the challenge of conscious design. *Evaluation and Program Planning*, 13(3), 303-311. [https://doi.org/https://doi.org/10.1016/0149-7189\(90\)90061-Z](https://doi.org/https://doi.org/10.1016/0149-7189(90)90061-Z)



- b. Your region is experiencing an increasing financial crisis with high public debts. Local policymakers are looking for more resilient solutions to overcome the crisis (**emergency situation**).
- c. Your country is having increased migration waves after the explosion of two regional wars. Policymakers would like to obtain recommendations on how to deal with this (**emergency situation**).
- d. A revolution in the digital economy seems to be hitting the labour market, with a lack of skilled workers adapting to new job requirements. Local businesses are asking policymakers to provide resilient solutions to this (**mitigation situation**).
- e. You are a group of citizens willing to collaborate in an area prone to earthquakes and would like to understand which solutions could be applied to better prepare citizens for future adverse events (**prevention situation**).

Your task in this test is to try finding solutions in the Knowledge Base and report on the following questions for each topic:

- Which keywords have you used for searching? Did the keywords provide results?
- Do the titles and descriptions of the results seem appropriate for the search?
- Which filters did you use?
- How do the filters influence the original results in terms of numbers and refined quality?

2.1.2 Results

Different team members picked the suggested topics and completed a dedicated Microsoft Form that included the questions of analysis. Main results are presented in the table below.

Dimension of Analysis	Main results
Keywords search	<ul style="list-style-type: none"> • All experts reported that their chosen keywords yielded results. However, several noted that longer or more complex keyword strings performed poorly. • Suggestions: Prefer simple, single-word searches (e.g., “migration” instead of “migration policy framework”). • Typical issues: Some keywords (e.g. “human mobility”) returned no results; multi-word combinations reduced precision.
Titles and descriptions	<ul style="list-style-type: none"> • All agreed the titles and descriptions were generally clear and appropriate. • One expert highlighted that shorter descriptions occasionally made it harder to assess relevance. • Positive feedback emphasised clarity and ease of understanding.
Filtering	<ul style="list-style-type: none"> • Filters most used: Type of document, Area of interest, SRL, and Type of innovation. • Two participants didn’t use filters, one mentioned trying several but later removed them.



Dimension of Analysis	Main results
	<ul style="list-style-type: none"> Perceived impact: filtering improved accuracy and relevance of results. However, in some cases it reduced the number of results to zero. Experts appreciated the logic and structure of filtering options.
Interface	<ul style="list-style-type: none"> General feedback was positive: “Very intuitive” and “filters work as they should.” Minor issue: limited truly “accurate” matches, suggesting scope for improved relevance scoring. This was then discussed with IT developed and improved in the AND/OR searches for better results.

2.2 Simulation exercise: validation

As part of the project validation exercise, the Knowledge Base was included among the project dimensions for testing. The FutuResilience validation exercise employed an observational simulation study to examine how decision-makers engage with evidence-based policy tools during societal disruptions. The internal testing phase took shape over several months through iterative development, involving a series of meetings with the task group, various project members, and policy design experts.

As part of the internal preparation, a team of NTNU SR researchers extracted case-relevant policy instruments from the Knowledge Base. The task group systematically assessed these instruments against validation goals and their applicability to the simulation scenario. The team **developed 15 policy cards** covering three standard types of policy interventions defined in policy literature: Regulation, Information, and Expense (five cards per intervention type). Each policy card was designed using a standardised one-page template that included: the name of the policy instrument, description, purpose, guidance on when/where, and how to use it, target users, beneficiaries, cost coverage, and implementation requirements.

2.2.1 Results

Core reflections from the simulation (reported fully under D1.4 Report on Validation Phase), include:

- Participants noted a lack of detailed information about existing policies and the aftermath of the simulated disaster, which led to the need for explicit assumptions. This uncertainty was seen as both a challenge and a realistic reflection of real-world policymaking under crisis conditions. This represents a challenge in the use of structured databases such as the FutuResilience Knowledge Base, even if filtered and presented in a simpler way through policy cards.
- Facilitators observed that participants relied heavily on personal experiences and core values to guide their decision-making, with emotional and research-based arguments playing supporting roles. The policy cards provided were used despite being perceived



as complex and/or generic, and participants made efforts to align them with their objectives. This represents a reading of how a Knowledge Base could be – or not – supportive to policymaking design processes. While these results can't be generalised, the notion of “wider evidence” comes to the centre of analysis when designing policy solutions in crises settings, or under time constraints.

- As one participant noted, this process offered an effective way to teach politicians about policy design. It is important to remember that policymaking is inherently political, and politicians—who are generalists—are often required to make decisions on complex issues they may not fully understand. Institutionalising a process that brings together diverse stakeholders to evaluate and debate policy interventions, even complex ones, can greatly support evidence-based policymaking. In this direction, a Knowledge Base could play a supportive role, but the collaborative spirit and co-creation come to be central in the process, beyond the role of evidence per se.



3 Guidelines for navigating the Knowledge Base

Supporting users, the following guidelines indications were included in the introductory section of the Knowledge Base, explaining in detail the diverse filters users can use for efficient understanding and navigation. To note that filters are easy to understand also for general public with sound knowledge on the policy and resilience fields.

3.1 Direction for use

The Knowledge Base Guide serves as your compass, providing step-by-step instructions on how to navigate and harness the full potential of this database. This guide is designed to streamline your journey through the FutuResilience website, ensuring seamless access to the KB as a wealth of resources and findings. You can access the KB by clicking on the top bar menu of the FutuResilience website or directly by following this link: <https://futuresilience.eu/knowledge-base>.

The main page of the KB will appear as follow:



3.1.1 Search function

To start searching for documents, you can freely type words related to your search (e.g. migration, floods, finance, mobility, etc.) in the search box. The system will search for your word in the title and the description from the list of policy documents. Once you start typing, the page will automatically update the number of results matching the proposed search. The final number of results is displayed on the top part of the search. You can order the results by alphabetical order (ascending-descending) or by date (referring to the date when the entry was included in the KB, from recent to older ones).

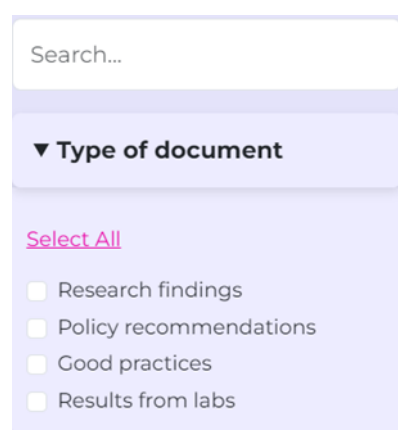


3.1.2 Applying filters

From the main page of the website, you may apply filters for a more efficient search. The filters can be found as: “Type of document”; “Area of interest”; “Type of intervention”; “Societal Readiness Level (SRL)”; “Intensity of change” and “Shock phase”. You can find an explanation of those filters below.

3.1.2.1 Type of document

The first filter allows you to select diverse documents based on the main purpose and type of information contained in the document, ranging from research findings including policy actions, to good practices, results from the project labs or policy recommendations:



- *Research findings*: results from scientific research (notably H2020 and Horizon Europe), including policy actions and solutions.
- *Policy recommendations*: policy brief and/or policy documents directly recommended for policymakers; guides for addressing crises underlying factors;
- *Good practices*: examples of different ‘good practices’ and approaches to build resilience.
- *Results from labs*: results from the 10 FutuResilience Labs

3.1.2.2 Area of interest



The classification of solutions adopted by FutuResilience builds on the idea of breaking down ‘silos’ of understanding crises as standalone events and widen the analytical perspective to the set of capacities and vulnerabilities at the societal level that makes crises have a smaller or larger impact.

Therefore, we have proposed a classification of research findings and policy recommendations in multiple categories, all areas typically hit by crises. Indeed, we understand that policy mixes in one or multiple areas could reinforce the societal fabric and provide a greater capacity to absorb, adapt and transform in face of different crises, independently of its nature and with no time constraints. Thus, the second filter allows the user to navigate different “Area(s) of interest”, focusing on concrete categories of topics directly related to the societal fabric intended to be reinforced to increase preparedness and build resilience in the long term.

Planet

- *Environment and Biodiversity*: solutions in this area will help to mitigate the environmental impact and biodiversity protection, including measures to reduce pollution, protect water basins and forests, reduce land degradation, etc.
- *Agriculture and Food*: this category includes agricultural, farming and fisheries solutions, including planning in rural areas, land use planning, and technology for efficient and low carbon emission production. It includes measures from the supply side of food production (including industrial processes) and the demand for food.
- *Materials and Energy*: solutions in this area will support the extraction or import of raw materials as a basic part of developing key industrial sectors and technological innovation. Relevant solutions also include proposals that reinforce the production, distribution and appropriate regulation of energy consumption, considering both supply and demand for energy.

Prosperity

- *Industries*: this area includes solutions that allow industries to keep running during critical periods through market-oriented measures that allow the maintenance of a threshold of productivity and increased competitiveness;
- *Local business*: this area includes solutions that support and protect small and medium enterprises to navigate challenging periods and recover from adverse events. Solutions include adopting sustainable business models, practices and technologies, market access, and value chain integration;
- *Labour Market*: in this area, solutions aim to support stability and growth in the labour market, such as unemployment insurance and developing skills for market inclusion;
- *Finance*: this category refers to solutions that will facilitate access to finance for different key stakeholders of the financial system; it includes solutions in the banking sector. It also includes management of public accounts, public debt and monetary management;
- *Mobility and Transport*: solutions in this area include managing transport networks and options that guarantee people's mobility through affordable and sustainable means. Relevant solutions also include measures to guarantee continuity in the supply chain.

People

- *Digitalisation*: solutions in this area aim at ensuring access, continuity and integration of digital technologies. Relevant solutions address the digital infrastructure set-up, market dynamics and investments in digitalization and skills for digital integration;
- *Education and Training*: solutions in this area aim at ensuring the continuity and improvement of the education system, including solutions related to access to education and training opportunities and education infrastructure;



- *Health and Well-Being*: this area includes solutions geared towards ensuring access to healthcare and health services, promoting well-being, managing health data and ensuring access to critical material for the functioning of the health system;
- *Housing*: this category refers to solutions that guarantee access to affordable and sustainable housing. It includes solutions in urban planning and economics, such as housing market, housing conditions and affordability;
- *Services of Public interest*: solutions in this area are related to the effective provision of basic services during crises, including water, waste management, basic sanitation provision, and access to electricity (see Energy). It includes appropriate urban and territorial planning and market solutions.
- *Good Governance*: this is a cross-cutting area for societal resilience and includes solutions concerning effective governance models as well as solutions that facilitate administrative and policy capacity and access to civil rights. Relevant themes include open government, access to political participation, inclusive voting, an open policy-making system, transparency, government accountability, and the ability to redress government.

3.1.2.3 Type of intervention

The third filter refers to the “Type of intervention”, which specifically indicates the type of solutions and actions recommended in the document. The same document could contain a diversity of interventions, with the idea that robust and effective policy mixes could increase preparedness for future crises.

Following, the explanation of each category.

- *Regulatory/standard/target measures*: encompasses policies and regulations designed to enhance resilience, focusing on setting standards and targets to achieve this goal.
- *Market-base mechanism*: refers to strategies that utilise market forces and incentives to foster social resilience. They leverage economic mechanisms to address challenges and promote resilience within communities.
- *Resource allocation*: involves managing budgetary and other resources to address vulnerabilities and build capacity to withstand crises
- *Awareness raising*: involves activities aimed at increasing understanding and consciousness of key issues related to resilience. It includes efforts to generate knowledge, inform stakeholders, and transfer information to empower individuals and organizations to respond effectively to crises.



▼ **Type of intervention**

[Select All](#)

- ☐ Regulatory/standards/targets measures
- ☐ Market-based mechanisms
- ☐ Resource allocation
- ☐ Awareness raising
- ☐ Knowledge creation
- ☐ Knowledge transfer
- ☐ Building relationships

- *Knowledge transfer*: refers to projects or documents that aim to disseminate information and best practices to facilitate communication, data sharing, and collaboration among various stakeholders. It emphasizes the exchange of knowledge to enhance collective resilience efforts.
- *Building relationships*: entails fostering networks, partnerships, and connections as essential components of enhancing social resilience. It emphasizes the importance of cultivating strong relationships among diverse actors to effectively address and respond to crises and disasters.

3.1.2.4 Societal Readiness Level (SRL)

▼ **Societal Readiness Level (SRL)**

[Select All](#)

- ☐ SRL 1-3 Research phase
- ☐ SRL 4-5 Demonstration
- ☐ SRL 6-7 Validation
- ☐ SRL 8-9 Deployment

The fourth filter is “Societal Readiness Level (SRL)”. SRL is a way of assessing how well thought out a policy tool is ahead of its adoption and implementation: has it been tested? Has it been revised? Have stakeholders been included in this process? The KB includes most documents with a minimum of SRL 4, which means that solutions have been at least tested in pilot cases (e.g. pilots funded through European research projects).

The table below explains shortly the meaning of each level of SRL.

Table 1: SRL explanation by SRL category

SRL Level	Explanation
SRL 1-3 Research phase	<ul style="list-style-type: none"> • SRL 1 - Identifying problems and identifying societal readiness; • SRL 2 - Formulation of a problem, proposed solution(s) and potential impact, expected societal readiness; identifying relevant stakeholders for the project; • SRL 3 – Initial testing of proposed solution(s) together with relevant stakeholders.
SRL 4-5 Demonstration	<ul style="list-style-type: none"> • SRL 4 – Problem validation through pilot testing in relevant environment to substantiate proposed impact and societal readiness; • SRL 5 – Proposed solution(s) validated, now by the relevant stakeholders in the area
SRL 6-7 Validation	<ul style="list-style-type: none"> • SRL 6 – Solution(s) demonstrated in a relevant environment and in cooperation with relevant stakeholders to gain initial feedback on potential impact; • SRL 7 - Refinement of project and/or solution and, if needed, retesting in relevant environments with relevant stakeholders.



SRL Level	Explanation
SRL 8-9 Deployment	<ul style="list-style-type: none"> • SRL 8 – Proposed solution(s) as well as a plan for societal adaptation • complete and qualified; • SRL 9 - Actual project solution(s) proven in a relevant environment

3.1.2.5 Intensity of change

The fifth filter is the “Intensity of change” which indicates the degree of change that the proposed solution will more likely have at societal level:

▼ Intensity of change

[Select All](#)

☐ Absorption
☐ Adaptation
☐ Transformation

- Absorption, which represents the capacity of a community to cope with the impacts of a crisis situation.
- Adaptation, which refers to the capacity of a society to adjust and be flexible facing uncertain new situations.
- Transformation, which refers to the ability to learn from experience and make intentional and positive changes to reduce vulnerability and enhance overall resilience.

1.1.2.6 Shock phase

▼ Shock phase

[Select All](#)

☐ Preparedness
☐ Response
☐ Recovery

The sixth filter is the “Shock phase” which indicates the kind of response the document is aimed to achieve based on the stage of a crisis. Three different shock phases are presented:

- *Preparedness* is a series of actions that could be deployed to prevent and mitigate potential impacts of crisis.
- *Response* is the group of policy strategies and actions implemented to address and mitigate the impacts of a hazardous event once this happens.
- *Recovery*, that refers to the series of policy measures undertaken to rebuild communities, infrastructures and systems that may have been affected or damaged by the impact of the crises.

4 Download the document

By clicking on the link to a document, the database automatically will show you the download page. The download is automatic; you may select the download folder (or a different folder) to save the document. All the documents are in pdf. Multiple documents will lead to a download page of CORDIS or Zenodo, while other links may redirect you to documents stored on pages of international organisations (e.g. OECD, World Bank, etc.). Due to the evolving nature of storage systems, some links may have changed location. In case a link is not working, we would appreciate you communicate to the project team by writing a note through the website contact form.

BuildERS - Building European Communities' Resilience and Social Capital - Innovation policy recommendations

📅 14 Dec 2023

This report, a key deliverable of Work Package 5 in the BuildERS project, provides an overview of innovations aimed at enhancing the resilience of European communities to disasters. Focusing on three types of innovations—process, market, and research—it offers practical policy strategies and tools. The document details seven process innovations, three market innovations, and one research innovation, providing policy recommendations to support their effective utilization. The aim is to contribute to societal resilience by improving risk awareness, reducing vulnerabilities, and building social capital.

Environment and Biodiversity Good Governance
Regulatory/standards/targets measures Awareness raising Building relationships Preparedness



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This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101094455.

5 Use cases

The Knowledge Base was not only a foundational resource, but also a practical and widely used tool during the implementation phase of the FutuResilience Labs. Each Lab, operating in a different local or regional context, utilised the KB to identify relevant policy tools, innovative solutions, and tested practices aligned with their thematic focus areas. Stakeholders—including municipal planners, regional authorities, and civil society representatives—actively used the platform to filter content by societal readiness, intervention type, and sectoral relevance. This allowed them to tailor resilience strategies to their unique societal context. In several cases, the KB helped validate ongoing initiatives, inspire cross-sector collaborations, or guide the adaptation of existing measures to local needs. Its role as a decision-support instrument was repeatedly cited by Lab participants as both practical and necessary for evidence-informed planning.

- **FICTIONS Case**

The KB was instrumental in supporting **reflexive learning** throughout the FutuResilience project's life cycle. As underlined by [FICTIONS](#) direct experience, for example, it enabled the Lab to map the policy landscape with a focus on instruments and strategies deployed by the Portuguese Government in areas central to the Labs—namely employment, upskilling, reskilling, digitalisation in manufacturing, and occupational safety and health. This early-stage inquiry provided both conceptual grounding and practical orientation for the Labs, ensuring that their thematic work streams were embedded within, and responsive to, ongoing policy directions.

- **The SCRL Case**

The Knowledge Base functioned as a central resource throughout the duration of the [Slovenian Cyber Resilience Lab](#), with particular significance at two key stages. At the outset, the KB facilitated a **comprehensive review of national and regional policies** in the field of cyber resilience, thereby providing the Lab with an informed foundation for framing the challenge and understanding broader trends. Following the scenario development stage, the KB was revisited to identify and select relevant policies, which were subsequently incorporated into the windtunnelling exercise. Overall, the platform proved to be both accessible and functional, although some participants without prior academic training initially encountered minor difficulties in navigation; these challenges, however, were quickly overcome as familiarity with the resource increased. Indeed, during the second workshop, policymakers expressed strong interest in the tool, leading to its dissemination among relevant governmental stakeholders. As a result, the KB's influence extends beyond its immediate project role, now serving as a reference point for Slovenian policymakers engaged in the domain of cyber resilience.

- **The MURCIA Case**

During the [MURCIA Lab](#), the research team employed the Knowledge Base (KB) to identify policies spanning diverse domains relevant to climate change adaptation in urban contexts.



Initial searches yielded only two projects containing pertinent results; however, subsequent in-depth exploration expanded this number to ten projects, from which policies were integrated into the Lab's third workshop. These policies were further supplemented by measures previously compiled during earlier phases of the project, including those adopted within the Region of Murcia and Spain, as well as policies derived from other related initiatives. As result, a mixed of interventions emerging from the Knowledge Base and local sources were collated into a catalogue of 35 policy interventions within the MURCIA Lab.

Further insights from the FutuResilience Labs included:

- The KB gave Labs the opportunity to have access to policies in the preparedness phase, widening the understanding of interventions beyond emergency periods (quite usual for crisis management)
- The KB offered the opportunity to think about speculative design policies, in particular, it was useful to learn about different policies in similar contexts, and allowing Labs to compare existing policies with their needs and objectives;
- The KB was also a tool used in policy testing and policy evaluation phases: having real life examples helped Labs to have a grounded theoretical scenario for their policies implementation;
- The balance of empirical evidence and stakeholder expertise let them to facilitate the decision-making process and the policy discussion.



6 Learnings and areas of improvement

The development and implementation of the FutuResilience KB represent a significant step forward in equipping policymakers, practitioners, and communities with the tools necessary to build systemic resilience across Europe. The KB has proven to be not only a repository of information but a practical instrument for evidence-based decision-making. Its integration into the work of the FutuResilience Labs enabled localised experimentation, comparison of approaches, and strategic planning across varied contexts.

While user feedback highlighted some thematic gaps in certain fields, the platform's flexibility and evolving structure offer strong potential for continued improvement. This reduced number of certain resources could be explained by the lack of connection of some topics with the field of resilience (core criteria in the mapping exercise), as well as the potential lack of testing of solutions in pilots or at societal scale (also core criteria for inclusion).

One limitation of the Knowledge Base – and indeed of several thematic databases used for policymaking – lies in the evolving nature of societies and related policy challenges. The solutions included in a Knowledge Base should be interpreted within the context and timeframe in which they were developed. They can serve as valuable references, but in all cases should be adapted to new or changing circumstances. The types of solutions within certain fields may evolve as rapidly as science itself, requiring regular updates. In this sense, a Knowledge Base could easily become outdated and should therefore be regarded as a long-term repository of ideas rather than a static collection of solutions.

The following table summarises potential limitations and mitigation measures:

Limitation	Description	Possible Solution
Obsolescence	Rapidly changing science and policies render content outdated.	Automated updates, scheduled reviews, and integration with open data sources.
Fragmentation	Disconnected datasets and lack of cross-sector links.	Interoperable taxonomies and metadata standards.
Engagement	Users treat KBs as static archives rather than living tools.	Introduce interactive forums, feedback loops, and training modules.
Resource	Continuous curation demands funding and human expertise.	Hybrid models combining institutional support with community contributions.

Declaration of generative AI and AI-assisted technologies in the writing process: the authors have used the AI language model developed by OpenAI to help improve the grammar and refine the language of the report. The authors declare that their use of generative AI and AI-assisted technologies is fully compliant with the 'Living guidelines on the responsible use of generative AI in research' (European Commission, April 2025).



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101094455.