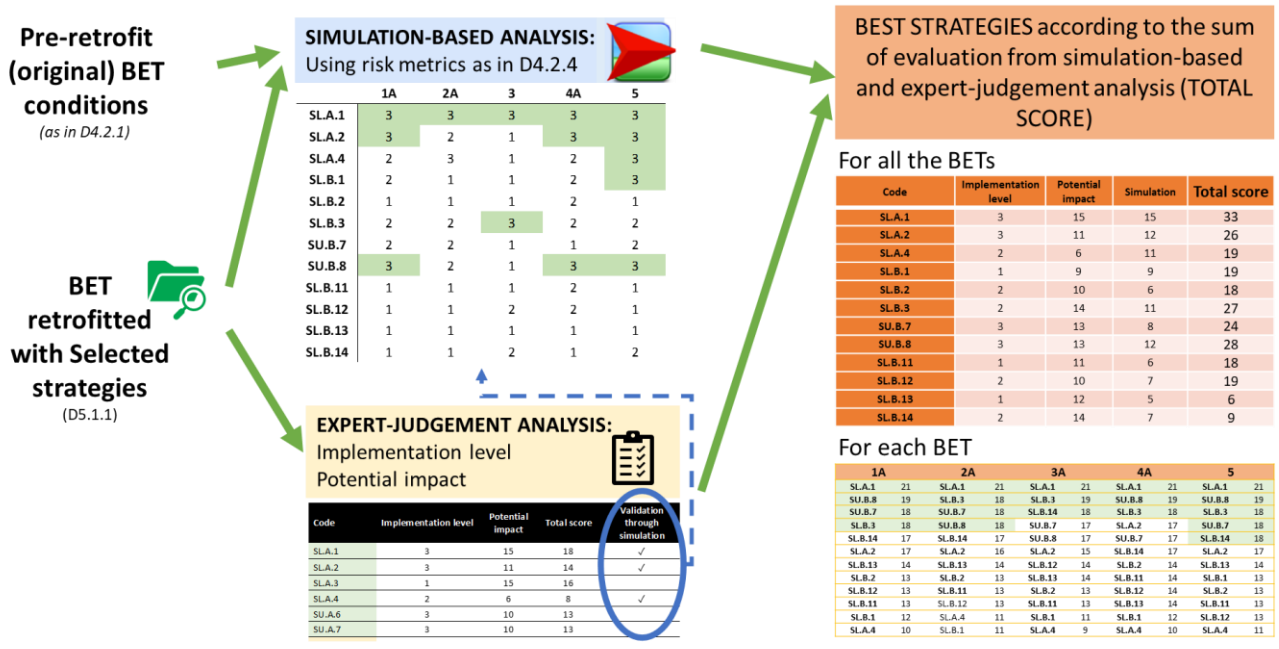
BE S²ECURE
Built Environment Safer in Slow and Emergency Conditions through behavioUral assessed/designed Resilient solutions
Grant number: 2017LR75XK

WP 5 - Strategies for improving/designing resilience of BETs

T5.2 Evaluation of BETs resilience-improving solutions through simulation and in terms of safety/functionality/application impacts and feasibility

D5.2.2 – Selection of the best strategies in SLOD and SUOD and in combination

ABSTRACT. As discussed in the previous deliverables, SUOD and SLOD events affect the built environment. For this reason, a consistent part of this project has been focusing on the definition and selection of mitigation strategies to tackle down these phenomena. In fact, BETs resilience-improving solutions have already been introduced and analysed in D2.2.4 and also in D5.1.1 and D 5.2.1. Thanks to a literature review it has been possible to identify, collect, categorize and analyse several mitigation strategies (D5.1.1). All of them have been divided into three main groups of strategies: morphological factors, physical-material and construction factors and dedicated systems aimed at supporting proper users' behaviours and managers' strategies. The study and the analysis of existing strategies showed that not all mitigation measures act in the same way, and some are more effective in one context than in another. For this reason, this document focuses on presenting which of the strategies are generally most effective regardless of the specific context. Starting from the collection of all mitigation measures defined in D5.1.1 and comprising the simulation-based analysis of strategies effectiveness shown in D5.2.1, this report investigates the most suitable strategies according to different criteria: safety, functionality, application impact and feasibility, impacts on the users. The application on idealised archetypes (BETs) allows to identify the best strategies in a specific context. The BET application offers direction on which strategy to favour based on the BE's specific features. This analysis want to define strategies that ought to be encouraged for their effectiveness, easy integration and the benefits that can be obtained, also taking into account the local characteristics that are essential for good mitigation performance.



	1A	2A	3	4A	5
SLA.1	3	3	3	3	3
SLA.2	3	2	1	3	3
SLA.4	2	3	1	2	3
SLB.1	2	1	1	2	3
SLB.2	1	1	1	2	1
SLB.3	2	2	3	2	2
SUB.7	2	2	1	1	2
SUB.8	3	2	1	3	3
SLB.11	1	1	1	2	1
SLB.12	1	1	2	2	1
SLB.13	1	1	1	1	1
SLB.14	1	1	2	1	2

Code	Implementation level	Potential impact	Total score	Validation through simulation
SLA.1	3	15	18	✓
SLA.2	3	11	14	✓
SLA.3	1	15	16	
SLA.4	2	6	8	✓
SUA.6	3	10	13	
SUA.7	3	10	13	

Code	Implementation level	Potential impact	Simulation	Total score
SLA.1	3	15	15	33
SLA.2	3	11	12	26
SLA.4	2	6	11	19
SLB.1	1	9	9	19
SLB.2	2	10	6	18
SLB.3	2	14	11	27
SUB.7	3	13	8	24
SUB.8	3	13	12	28
SLB.11	1	11	6	18
SLB.12	2	10	7	19
SLB.13	1	12	5	6
SLB.14	2	14	7	9

1A		2A		3A		4A		5	
SLA.1	21	SLA.1	21	SLA.1	21	SLA.1	21	SLA.1	21
SUB.8	19	SLB.3	18	SLB.3	19	SUB.8	19	SUB.8	19
SUB.7	18	SUB.7	18	SLB.14	18	SLB.3	18	SLB.3	18
SLB.3	18	SUB.8	18	SUB.7	17	SLA.2	17	SUB.7	18
SLB.14	17	SLB.14	17	SUB.8	17	SUB.7	17	SLB.14	18
SLA.2	17	SLA.2	16	SLA.2	15	SLB.14	17	SLA.2	17
SLB.13	14	SLB.13	14	SLB.12	14	SLB.2	14	SLB.13	14
SLB.2	13	SLB.2	13	SLB.13	14	SLB.11	14	SLB.1	13
SLB.12	13	SLB.11	13	SLB.2	13	SLB.12	14	SLB.2	13
SLB.11	13	SLB.12	13	SLB.11	13	SLB.13	14	SLB.11	13
SLB.1	12	SLA.4	11	SLB.1	11	SLB.1	12	SLB.12	13
SLA.4	10	SLB.1	11	SLA.4	9	SLA.4	10	SLA.4	11

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