

WP 5 - Strategies for improving/designing resilience of BETs

T5.1 Development of resilience-increasing solutions (i.e. architectural/technological design strategies), evaluated through simulations, and based on the selected metric/KPIs, according to a 4R approach

D5.1.1 Inventory of technical solutions and management strategies for improving/designing resilience of BETs in SLOD (MI) and SUOD (BO) and in combination (PM)

ABSTRACT. As discussed in the previous deliverables, **SUOD and SLOD events are responsible for a significant share of documented accidental fatalities.** Regardless of their scale on time, or their unfolding time, both risks are growing based on the growing population density; nevertheless, they can be reduced or mitigated by undertaking strategic interventions. In fact, the European Commission demands from, and offers funds to, each Member State to contrast the actual trend by implementing available mitigation measures. Starting from WP1 and WP2 results, the purpose of this document is to collect, structure and describe the available risk reduction and mitigation strategies for each SLOD and SUOD events, and their combination, for moving towards a resilient BE. To this end, it also integrates literature review gaps by identifying three **main leading groups of strategies**: morphological factors (to shape the BE), physical-material and construction factors, and dedicated systems aimed at supporting proper users' behaviours and managers' strategies (including evacuation and emergency planning). The deliverable also analyses different case studies of mitigation strategies from the literature highlighting the specific or combined mitigation potential, their extension, and the actual level of implementation. This work is intended to be used as a **risk mitigation strategies pool (portfolio, guidelines) for designers and public administrations.** However, the classification of the mitigation measures is complex due to the influence of several parameters, including the behavioural ones. It must be noted that the effectiveness of measures applied in a specific urban context could be not always suitable for other contexts and vice versa. To overcome this limit, simulation-based tools (see WP4) will support the effective assessment of each strategy and their combination.

