

BE S²ECURE

Built Environment Safer in Slow and Emergency Conditions through behavioUral assessed/designed Resilient solutions

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WP 1 – BE and SUOD: State of the Art (SoA), risks and human behaviour

T1.1 - SoA-based definition and characterization of BE as network of buildings, infrastructures, connecting space in reference to SUOD occurrence and users' typologies

D1.1.2 - CHARACTERIZATION OF SIGNIFICANT REAL SUOD-AFFECTED BE

The present report is focused on the classification of BE according to building-related typological and SUOD features. Based on the identification of the criteria for BE risk-related classification introduced in the previous working report (D111) the research activity focuses on the definition of a form for direct survey of open spaces of the BE.

Since the wide variety of construction culture of the Italian territory, the research activity includes a process for validates the suitability of the form.

The preliminary for is tested on 8 case studies of Areal Space (AS):

case studies of Areal Space (AS):
Caldarola (MC), Matera (MT), Narni
(TR), Ostuni (BR), Rieti (RI), San
Gemini (TR), San Giovanni in
Persiceto (BO), and Trani (BA).
After the validation activity an
optimize form is presented.

Then, in order to choose three representative case studies for the next phases of the research, the analysis and comparison of the collected data on the eight ASs permit to select the most appropriate form based on specific parameters. The values as sum of single parameters are reported, divided into sections and in the total, in the table below. Sections are considered from the second to the fifth one, excluding the first one in which identify the main type of AS according to morphology/measures. Total values as sum of single parameters are reported in the final chart. An analyse with 25% percentile has been conducted.

Starting from this analysis of the values is possible to identify case studies on which we will focus a more detailed investigation.

Among these 3 relevant cases are selected: Narni (value 96), Matera (88) and Caldarola (58).

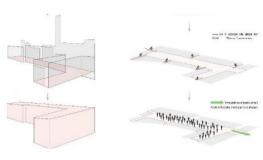
GEOMETRY AND SPACE

CONSTRUCTION

USE

ENVIRONMENT

TOTAL





DEFINITION OF A FORM FOR THE BE SURVEY MAIN TYPE Tending to quadrangle

Elongated with parallel sides

Preliminary survey form for open spaces in the BE

form for Areal open space in the BE

Critical review and definitve survey form

Validation of the

preliminary survey

Tending to triangular and funnel-shaped
Trapezoidal and polygonal
Tending to circular, ovoid and ellipsoid
Composite

CHARACTERIS
TICS of GEOMETRY
and SPACE

CONTENT: Special building; Green area; Porches; Access; Quote difference;
CONTENT: Special building; Canopy; Fontaine; Dehors; Monuments; Quote difference; Green area; Archaeological sites; Underground park; Underground cavities

CONSTRUCTI VE CHARACTERIS TICS

FRONTIER: Homogeneity of built environment age; Homogeneity of constructive techniques; Urban furniture/obstacles.

CONTENT: Pavement materials (i.e. marble, travertine...); Pavement lying (i.e. compact, disjointed, big slabs, small tiles, cobblestones...); Pavement finishing (i.e. smooth, coarse, irregular...); Urban furniture/obstacles

CHARACTERIS TICS OF USE Daily crowding

Special uses of open space

Accessible to

Strategic buildings

Sights

Sensitive targets

ENVIRONME NTAL CHARACTERIS

Climate classification [DPR 412/1993]

Infrastructural network: Primary urbanization; Uncovered pipes: High tension wire: Others.

Hazard assessment: Earthquake; Tsunami; Mass Movement (dry); Volcanic activity; Storm/tornado; ; Flood; Landslide Extreme temperature

CASE STUDY SELECTED OF AREAL BE

